

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	613	845	238	417	422	176
v/c Ratio	0.19	0.72	0.69	0.10	0.76	0.43
Control Delay (s/veh)	16.8	26.1	61.5	4.9	55.8	9.3
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.8	26.3	61.5	4.9	55.8	9.3
Queue Length 50th (ft)	115	480	89	27	156	0
Queue Length 95th (ft)	41	467	132	42	200	59
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3178	1179	375	3991	642	445
Starvation Cap Reductn	0	49	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.75	0.63	0.10	0.66	0.40

Intersection Summary

APPENDIX 5.9:

E+P (PHASE 1 + PHASE 2) OFF-RAMP QUEUING ANALYSIS

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Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	304	294	275	415	841	857	571
v/c Ratio	0.90	0.71	0.59	0.99	0.39	0.79	0.66
Control Delay (s/veh)	65.3	30.9	15.8	65.5	4.5	34.1	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.3	30.9	15.8	65.5	4.5	34.1	6.5
Queue Length 50th (ft)	177	106	41	~264	77	230	0
Queue Length 95th (ft)	#335	#218	125	m#360	m87	303	80
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	340	415	472	419	2172	1102	863
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.71	0.58	0.99	0.39	0.78	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	337	369	894	731	361	979
v/c Ratio	0.86	0.79	0.86	0.80	0.93	0.48
Control Delay (s/veh)	53.9	34.3	39.8	12.5	58.0	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.9
Total Delay (s/veh)	53.9	34.3	39.8	12.5	58.0	8.2
Queue Length 50th (ft)	189	138	256	39	225	106
Queue Length 95th (ft)	#340	#284	#371	#226	m#322	m128
Internal Link Dist (ft)		1588	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	409	481	1045	912	400	2050
Starvation Cap Reductn	0	0	0	0	0	722
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.77	0.86	0.80	0.90	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	918	733	960	67	606
v/c Ratio	0.93	1.02	0.36	0.24	0.87
Control Delay (s/veh)	44.5	68.0	3.8	43.5	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.5	68.0	3.8	43.5	18.7
Queue Length 50th (ft)	211	~479	70	21	0
Queue Length 95th (ft)	#425	#721	112	41	#173
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	984	718	2676	342	713
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.93	1.02	0.36	0.20	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	592	162	281	42	296	328	335	35
v/c Ratio	0.59	0.79	0.18	0.26	0.78	0.85	0.81	0.07
Control Delay (s/veh)	34.4	64.6	15.0	44.7	24.1	55.1	50.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.4	64.6	15.0	44.7	24.1	55.1	50.1	0.3
Queue Length 50th (ft)	174	100	44	25	27	204	206	0
Queue Length 95th (ft)	248	#202	65	57	#123	#315	306	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	1010	223	1601	203	412	447	479	562
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.73	0.18	0.21	0.72	0.73	0.70	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	204	466	279	1010	570	453
v/c Ratio	0.41	0.90	0.84	0.51	0.54	0.59
Control Delay (s/veh)	27.3	44.6	46.3	14.8	30.1	6.5
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay (s/veh)	27.3	44.6	46.3	15.0	30.1	6.5
Queue Length 50th (ft)	89	193	173	194	151	0
Queue Length 95th (ft)	146	#353	m179	m204	215	82
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	575	582	380	1982	1057	773
Starvation Cap Reductn	0	0	0	318	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.80	0.73	0.61	0.54	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	566	231	1014	289	468
v/c Ratio	1.01	0.35	0.95	1.07	0.26
Control Delay (s/veh)	73.0	4.8	47.2	119.1	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.0	4.8	47.2	119.1	11.6
Queue Length 50th (ft)	~330	0	273	~193	47
Queue Length 95th (ft)	#544	49	#407	#356	98
Internal Link Dist (ft)	1339		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	560	655	1071	269	1831
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.01	0.35	0.95	1.07	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	238	233	218	783	1139	469	119
v/c Ratio	0.69	0.63	0.51	0.86	0.36	0.27	0.23
Control Delay (s/veh)	45.4	35.6	17.6	36.8	4.3	25.8	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.4	35.6	17.6	36.8	4.3	25.8	5.7
Queue Length 50th (ft)	126	102	40	234	52	64	0
Queue Length 95th (ft)	#298	#262	126	#335	20	71	34
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	344	367	429	914	3505	2352	646
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.63	0.51	0.86	0.32	0.20	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	299	286	272	1512	488	131	694
v/c Ratio	0.74	0.64	0.52	0.52	0.51	0.53	0.23
Control Delay (s/veh)	40.8	25.7	11.5	18.9	3.9	55.5	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.8	25.7	11.5	18.9	3.9	55.5	2.1
Queue Length 50th (ft)	162	108	36	175	0	36	39
Queue Length 95th (ft)	231	180	98	235	60	m53	8
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	531	564	630	2895	965	256	2982
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.51	0.43	0.52	0.51	0.51	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	909	454	499	188	241	510	503
v/c Ratio	0.27	0.41	0.22	0.12	0.54	0.82	0.81
Control Delay (s/veh)	11.8	2.6	17.2	0.2	39.2	28.7	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.8	2.6	17.2	0.2	39.2	28.7	27.9
Queue Length 50th (ft)	96	0	138	0	159	187	181
Queue Length 95th (ft)	169	53	202	0	193	266	260
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	3401	1109	2267	1530	718	834	829
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.41	0.22	0.12	0.34	0.61	0.61

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	440	751	257	324	356	162
v/c Ratio	0.14	0.65	0.66	0.08	0.73	0.44
Control Delay (s/veh)	8.9	8.1	58.0	4.1	55.3	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.9	8.1	58.0	4.1	55.3	10.4
Queue Length 50th (ft)	39	155	96	18	128	0
Queue Length 95th (ft)	43	496	134	30	171	58
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3244	1164	435	4109	566	399
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.65	0.59	0.08	0.63	0.41

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	379	372	342	288	916	871	504
v/c Ratio	0.90	0.76	0.70	0.94	0.46	0.76	0.61
Control Delay (s/veh)	58.6	32.0	26.0	77.4	20.0	32.0	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.6	32.0	26.0	77.4	20.0	32.0	5.7
Queue Length 50th (ft)	216	150	110	155	244	231	0
Queue Length 95th (ft)	#391	#296	216	m#296	m323	303	71
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	426	498	495	306	1990	1143	831
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.75	0.69	0.94	0.46	0.76	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	268	369	881	518	321	1173
v/c Ratio	0.73	0.89	0.74	0.60	0.82	0.53
Control Delay (s/veh)	44.5	49.7	31.9	5.8	28.9	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	44.5	49.7	31.9	5.8	28.9	4.1
Queue Length 50th (ft)	141	156	247	0	99	38
Queue Length 95th (ft)	#255	#331	#351	79	m176	m70
Internal Link Dist (ft)		1671	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	389	436	1196	857	453	2220
Starvation Cap Reductn	0	0	0	0	0	224
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.85	0.74	0.60	0.71	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1144	494	809	89	785
v/c Ratio	1.02	1.08	0.36	0.14	1.09
Control Delay (s/veh)	57.4	101.3	8.1	32.4	77.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.4	101.3	8.1	32.4	77.4
Queue Length 50th (ft)	~298	~354	108	23	~300
Queue Length 95th (ft)	m#486	#552	140	44	#533
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	1118	457	2260	636	718
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.02	1.08	0.36	0.14	1.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBR
Lane Group Flow (vph)	619	77	250	16	152	478	478	38
v/c Ratio	0.58	0.60	0.18	0.12	0.54	0.97	0.91	0.06
Control Delay (s/veh)	32.2	57.5	14.7	43.4	13.0	68.1	55.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.2	57.5	14.7	43.4	13.0	68.1	55.4	0.2
Queue Length 50th (ft)	176	49	36	10	0	313	305	0
Queue Length 95th (ft)	248	#113	55	30	49	#530	#507	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	1068	129	1401	290	411	494	528	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.60	0.18	0.06	0.37	0.97	0.91	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	226	268	300	735	804	701
v/c Ratio	0.75	0.56	0.86	0.31	0.56	0.71
Control Delay (s/veh)	51.0	10.2	49.5	5.0	23.2	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.0	10.2	49.5	5.0	23.2	8.2
Queue Length 50th (ft)	122	8	145	90	190	28
Queue Length 95th (ft)	194	72	m173	m113	262	160
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	361	521	381	2379	1424	983
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.51	0.79	0.31	0.56	0.71

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	384	244	969	328	702
v/c Ratio	0.86	0.45	0.85	0.96	0.34
Control Delay (s/veh)	51.2	8.1	34.8	66.6	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.2	8.1	34.8	66.6	9.9
Queue Length 50th (ft)	204	14	245	~197	73
Queue Length 95th (ft)	#325	69	#383	#345	144
Internal Link Dist (ft)	1341		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	514	601	1136	342	2053
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.75	0.41	0.85	0.96	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	229	229	209	514	572	1169	329
v/c Ratio	0.78	0.76	0.47	0.83	0.17	0.46	0.40
Control Delay (s/veh)	53.5	49.0	8.3	38.4	0.6	20.7	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.5	49.0	8.3	38.4	0.6	20.7	4.0
Queue Length 50th (ft)	126	124	0	146	2	146	0
Queue Length 95th (ft)	#241	#240	60	207	4	177	52
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	321	330	469	694	3373	2597	824
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.69	0.45	0.74	0.17	0.45	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	130	310	307	930	459	435	1126
v/c Ratio	0.39	0.81	0.78	0.37	0.51	0.78	0.35
Control Delay (s/veh)	31.6	38.9	35.8	20.8	4.7	53.4	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.6	38.9	35.8	20.8	4.7	53.4	1.7
Queue Length 50th (ft)	65	127	118	108	0	107	13
Queue Length 95th (ft)	111	220	205	155	70	163	16
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	438	467	483	2516	894	655	3198
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.66	0.64	0.37	0.51	0.66	0.35

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1218	624	646	175	260	733	732
v/c Ratio	0.56	0.64	0.44	0.11	0.32	0.89	0.89
Control Delay (s/veh)	29.5	5.5	37.7	0.1	18.1	35.9	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.5	5.5	37.7	0.1	18.1	35.9	36.4
Queue Length 50th (ft)	252	0	182	0	107	403	403
Queue Length 95th (ft)	298	85	291	m0	163	#615	#624
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	2183	976	1456	1530	866	875	871
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.64	0.44	0.11	0.30	0.84	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	620	888	238	422	435	176
v/c Ratio	0.20	0.76	0.69	0.11	0.78	0.43
Control Delay (s/veh)	15.6	28.5	61.5	4.8	57.5	9.5
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.6	28.8	61.5	4.8	57.5	9.5
Queue Length 50th (ft)	117	436	89	28	160	0
Queue Length 95th (ft)	m37	505	132	40	212	60
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3166	1177	375	3975	631	440
Starvation Cap Reductn	0	50	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.79	0.63	0.11	0.69	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 5.10:

E+P (BUILDOUT) OFF-RAMP QUEUING ANALYSIS

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Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	304	294	275	421	841	859	571
v/c Ratio	0.90	0.71	0.59	1.00	0.39	0.79	0.66
Control Delay (s/veh)	65.3	30.9	15.8	68.6	4.5	34.2	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.3	30.9	15.8	68.6	4.5	34.2	6.5
Queue Length 50th (ft)	177	106	41	~271	77	230	0
Queue Length 95th (ft)	#335	#218	125	m#365	m85	303	80
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	340	415	472	419	2172	1102	863
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.71	0.58	1.00	0.39	0.78	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	337	381	901	731	361	981
v/c Ratio	0.86	0.82	0.86	0.80	0.93	0.48
Control Delay (s/veh)	53.9	36.7	40.3	12.5	57.9	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.9
Total Delay (s/veh)	53.9	36.7	40.3	12.5	57.9	8.2
Queue Length 50th (ft)	189	147	259	39	224	106
Queue Length 95th (ft)	#340	#302	#376	#226	m#319	m128
Internal Link Dist (ft)		1588	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	409	481	1045	912	400	2050
Starvation Cap Reductn	0	0	0	0	0	722
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.79	0.86	0.80	0.90	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	920	733	967	67	616
v/c Ratio	0.93	1.02	0.36	0.24	0.88
Control Delay (s/veh)	44.8	68.0	3.9	43.5	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.8	68.0	3.9	43.5	18.8
Queue Length 50th (ft)	213	~479	71	21	0
Queue Length 95th (ft)	#426	#721	113	41	#176
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	984	718	2676	342	722
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.93	1.02	0.36	0.20	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	594	162	285	42	296	328	335	35
v/c Ratio	0.59	0.79	0.18	0.26	0.78	0.85	0.81	0.07
Control Delay (s/veh)	34.4	64.5	14.9	44.6	24.3	55.1	50.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.4	64.5	14.9	44.6	24.3	55.1	50.1	0.3
Queue Length 50th (ft)	175	100	45	25	28	204	206	0
Queue Length 95th (ft)	250	#202	66	57	#125	#315	306	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	1010	223	1597	203	411	447	479	562
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.73	0.18	0.21	0.72	0.73	0.70	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	218	466	283	1011	573	453
v/c Ratio	0.44	0.90	0.84	0.51	0.55	0.59
Control Delay (s/veh)	27.8	44.6	46.3	14.8	30.3	6.6
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay (s/veh)	27.8	44.6	46.3	15.0	30.3	6.6
Queue Length 50th (ft)	95	193	176	194	153	0
Queue Length 95th (ft)	156	#353	m181	m204	216	82
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	575	582	380	1982	1051	772
Starvation Cap Reductn	0	0	0	320	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.80	0.74	0.61	0.55	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	566	245	1022	289	484
v/c Ratio	1.01	0.37	0.96	1.07	0.26
Control Delay (s/veh)	74.1	4.9	47.9	118.6	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.1	4.9	47.9	118.6	11.9
Queue Length 50th (ft)	~330	0	277	~193	51
Queue Length 95th (ft)	#544	50	#413	#356	103
Internal Link Dist (ft)	1339		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	558	662	1071	269	1831
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.01	0.37	0.95	1.07	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	243	238	221	783	1139	471	119
v/c Ratio	0.69	0.64	0.50	0.86	0.36	0.28	0.24
Control Delay (s/veh)	44.5	36.1	17.5	36.8	4.5	26.3	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.5	36.1	17.5	36.8	4.5	26.3	5.8
Queue Length 50th (ft)	128	106	42	234	52	65	0
Queue Length 95th (ft)	#307	#274	128	#335	20	71	34
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	354	374	438	914	3505	2352	646
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.64	0.50	0.86	0.32	0.20	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	299	286	272	1512	492	131	710
v/c Ratio	0.74	0.64	0.52	0.52	0.51	0.53	0.24
Control Delay (s/veh)	40.8	25.7	12.3	18.9	3.9	55.1	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.8	25.7	12.3	18.9	3.9	55.1	2.1
Queue Length 50th (ft)	162	108	40	175	0	35	39
Queue Length 95th (ft)	231	180	103	235	60	m53	8
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	531	564	624	2895	967	256	2982
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.51	0.44	0.52	0.51	0.51	0.24

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	926	458	515	188	241	522	515
v/c Ratio	0.28	0.42	0.23	0.12	0.51	0.83	0.82
Control Delay (s/veh)	12.7	2.8	18.7	0.2	37.2	30.1	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.7	2.8	18.7	0.2	37.2	30.1	29.3
Queue Length 50th (ft)	104	0	147	0	156	205	198
Queue Length 95th (ft)	178	56	213	0	188	281	274
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	3329	1097	2219	1530	718	827	822
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.42	0.23	0.12	0.34	0.63	0.63

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	440	765	257	326	366	166
v/c Ratio	0.14	0.66	0.66	0.08	0.72	0.44
Control Delay (s/veh)	8.8	8.6	58.0	4.3	55.0	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.8	8.6	58.0	4.3	55.0	10.0
Queue Length 50th (ft)	38	172	96	19	132	0
Queue Length 95th (ft)	35	532	134	32	173	58
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3233	1162	435	4096	572	406
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.66	0.59	0.08	0.64	0.41

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	379	372	342	301	919	872	504
v/c Ratio	0.90	0.76	0.70	0.95	0.46	0.78	0.61
Control Delay (s/veh)	58.6	32.0	26.2	77.3	20.0	33.0	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.6	32.0	26.2	77.3	20.0	33.0	5.8
Queue Length 50th (ft)	216	150	110	165	246	231	0
Queue Length 95th (ft)	#391	#296	216	m#308	m324	303	71
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	426	498	494	318	1990	1140	830
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.75	0.69	0.95	0.46	0.76	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	268	375	897	518	321	1174
v/c Ratio	0.73	0.90	0.76	0.61	0.82	0.54
Control Delay (s/veh)	43.7	50.7	32.7	5.8	28.9	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	43.7	50.7	32.7	5.8	28.9	4.5
Queue Length 50th (ft)	141	161	253	0	100	38
Queue Length 95th (ft)	#255	#338	#361	79	m176	m70
Internal Link Dist (ft)		1671	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	390	436	1185	854	453	2213
Starvation Cap Reductn	0	0	0	0	0	224
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.86	0.76	0.61	0.71	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1145	494	823	89	791
v/c Ratio	1.02	1.08	0.36	0.14	1.10
Control Delay (s/veh)	57.6	101.3	8.1	32.4	80.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	101.3	8.1	32.4	80.6
Queue Length 50th (ft)	~300	~354	110	23	~308
Queue Length 95th (ft)	m#488	#552	143	44	#541
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	1118	457	2260	636	718
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.02	1.08	0.36	0.14	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	621	77	265	16	152	478	478	38
v/c Ratio	0.58	0.60	0.19	0.12	0.54	0.97	0.91	0.06
Control Delay (s/veh)	32.3	57.4	14.3	43.4	13.0	68.1	55.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.3	57.4	14.3	43.4	13.0	68.1	55.4	0.2
Queue Length 50th (ft)	177	49	37	10	0	313	305	0
Queue Length 95th (ft)	248	#113	56	30	49	#530	#507	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	1068	129	1397	290	411	494	528	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.60	0.19	0.06	0.37	0.97	0.91	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	232	268	315	738	805	701
v/c Ratio	0.77	0.56	0.88	0.31	0.58	0.72
Control Delay (s/veh)	51.7	10.2	49.1	5.0	24.0	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.7	10.2	49.1	5.0	24.0	8.7
Queue Length 50th (ft)	125	8	144	90	197	32
Queue Length 95th (ft)	200	73	m#187	m111	263	168
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	361	521	386	2372	1390	969
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.51	0.82	0.31	0.58	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	384	250	1003	328	710
v/c Ratio	0.86	0.46	0.87	0.98	0.35
Control Delay (s/veh)	51.2	8.8	36.1	70.7	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.2	8.8	36.1	70.7	10.0
Queue Length 50th (ft)	204	18	257	~158	76
Queue Length 95th (ft)	#325	75	#404	#345	146
Internal Link Dist (ft)	1341		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	514	598	1150	335	2053
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.75	0.42	0.87	0.98	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	232	232	209	514	575	1170	329
v/c Ratio	0.79	0.76	0.47	0.83	0.17	0.46	0.40
Control Delay (s/veh)	53.9	49.8	8.3	38.3	0.6	20.8	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.9	49.8	8.3	38.3	0.6	20.8	4.0
Queue Length 50th (ft)	127	126	0	146	2	147	0
Queue Length 95th (ft)	#246	#247	60	207	4	177	52
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	322	330	470	694	3370	2593	823
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.70	0.44	0.74	0.17	0.45	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	130	310	307	933	474	435	1134
v/c Ratio	0.39	0.81	0.78	0.37	0.52	0.78	0.35
Control Delay (s/veh)	31.6	38.9	35.8	20.9	4.8	53.3	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.6	38.9	35.8	20.9	4.8	53.3	1.6
Queue Length 50th (ft)	65	127	118	108	0	106	13
Queue Length 95th (ft)	111	220	205	156	71	162	16
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	438	467	483	2516	903	655	3198
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.66	0.64	0.37	0.52	0.66	0.35

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1251	640	654	175	260	740	740
v/c Ratio	0.58	0.65	0.45	0.11	0.32	0.89	0.89
Control Delay (s/veh)	30.1	5.6	38.3	0.1	17.9	36.5	37.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.1	5.6	38.3	0.1	17.9	36.5	37.1
Queue Length 50th (ft)	262	0	203	0	106	412	414
Queue Length 95th (ft)	308	87	294	m0	163	#652	#689
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	2166	983	1444	1530	867	874	870
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.65	0.45	0.11	0.30	0.85	0.85

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	623	917	238	423	442	176
v/c Ratio	0.20	0.78	0.69	0.11	0.79	0.43
Control Delay (s/veh)	13.9	30.1	61.5	4.9	57.7	9.4
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.9	30.5	61.5	4.9	57.7	9.4
Queue Length 50th (ft)	110	452	89	28	163	0
Queue Length 95th (ft)	m37	525	132	40	215	60
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3159	1176	375	3968	632	440
Starvation Cap Reductn	0	51	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.82	0.63	0.11	0.70	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 5.11:

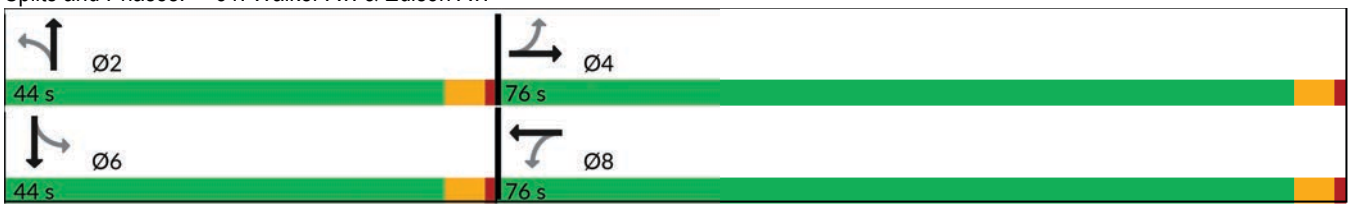
E+P (PHASE 1) INTERSECTION ANALYSIS WITH IMPROVEMENTS

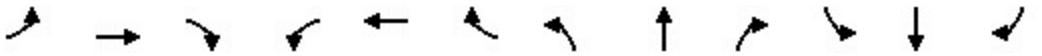
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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	12	121	241	273	21	197	96	119
Future Volume (vph)	12	121	241	273	21	197	96	119
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	76.0	76.0	76.0	76.0	44.0	44.0	44.0	44.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		55.6		55.6		33.6		33.6
Actuated g/C Ratio		0.56		0.56		0.34		0.34
v/c Ratio		0.16		0.89		0.71		0.79
Control Delay (s/veh)		11.0		34.0		36.5		50.0
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		11.0		34.0		36.5		50.0
LOS		B		C		D		D
Approach Delay (s/veh)		11.0		34.0		36.5		50.0
Approach LOS		B		C		D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.1	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 35.2	Intersection LOS: D
Intersection Capacity Utilization 97.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	121	7	241	273	136	21	197	151	96	119	26
Future Volume (veh/h)	12	121	7	241	273	136	21	197	151	96	119	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	13	134	8	268	303	151	23	219	168	107	132	29
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	104	858	49	374	366	174	78	280	204	200	220	41
Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.54	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	68	1576	90	534	673	319	45	936	681	381	737	136
Grp Volume(v), veh/h	155	0	0	722	0	0	410	0	0	268	0	0
Grp Sat Flow(s),veh/h/ln	1734	0	0	1526	0	0	1663	0	0	1253	0	0
Q Serve(g_s), s	0.0	0.0	0.0	21.3	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.5	0.0	0.0	23.8	0.0	0.0	13.3	0.0	0.0	11.2	0.0	0.0
Prop In Lane	0.08		0.05	0.37		0.21	0.06		0.41	0.40		0.11
Lane Grp Cap(c), veh/h	1010	0	0	914	0	0	562	0	0	461	0	0
V/C Ratio(X)	0.15	0.00	0.00	0.79	0.00	0.00	0.73	0.00	0.00	0.58	0.00	0.00
Avail Cap(c_a), veh/h	2126	0	0	1927	0	0	1166	0	0	964	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.7	0.0	0.0	11.4	0.0	0.0	19.1	0.0	0.0	17.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.6	0.0	0.0	1.8	0.0	0.0	1.2	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(50%),veh/ln	0.7	0.0	0.0	5.9	0.0	0.0	4.3	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.8	0.0	0.0	13.0	0.0	0.0	20.9	0.0	0.0	19.0	0.0	0.0
LnGrp LOS	A			B			C			B		
Approach Vol, veh/h		155			722			410			268	
Approach Delay, s/veh		6.8			13.0			20.9			19.0	
Approach LOS		A			B			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.2		36.5		22.2		36.5				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		39.4		71.4		39.4		71.4				
Max Q Clear Time (g_c+I1), s		15.3		4.5		13.2		25.8				
Green Ext Time (p_c), s		2.3		0.9		1.6		6.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	15.5
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	48.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	138	195	61	2	202	83	150	169	1	66	51	266
Future Vol, veh/h	138	195	61	2	202	83	150	169	1	66	51	266
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	162	229	72	2	238	98	176	199	1	78	60	313
Number of Lanes	1	1	0	1	1	0	1	1	1	1	1	0

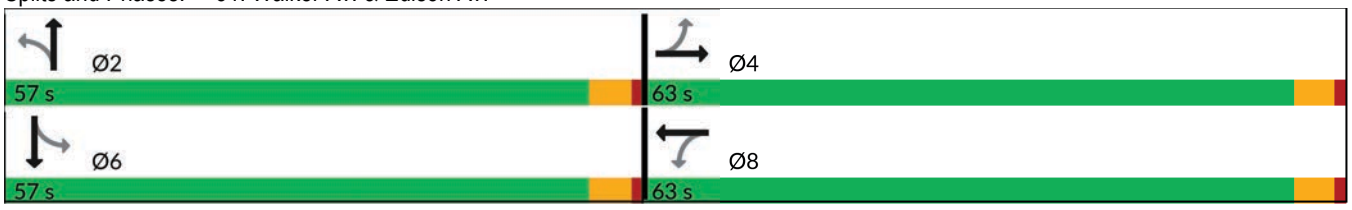
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay, s/veh	37.9	66	26.1	63.8
HCM LOS	E	F	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	76%	0%	71%	0%	16%
Vol Right, %	0%	0%	100%	0%	24%	0%	29%	0%	84%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	169	1	138	256	2	285	66	317
LT Vol	150	0	0	138	0	2	0	66	0
Through Vol	0	169	0	0	195	0	202	0	51
RT Vol	0	0	1	0	61	0	83	0	266
Lane Flow Rate	176	199	1	162	301	2	335	78	373
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.537	0.575	0.003	0.477	0.827	0.007	0.94	0.229	0.983
Departure Headway (Hd)	10.945	10.419	9.684	10.584	9.888	10.828	10.094	10.631	9.486
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	328	346	368	339	364	330	359	337	380
Service Time	8.735	8.21	7.474	8.371	7.675	8.613	7.878	8.412	7.266
HCM Lane V/C Ratio	0.537	0.575	0.003	0.478	0.827	0.006	0.933	0.231	0.982
HCM Control Delay, s/veh	25.8	26.5	12.5	22.7	46.1	13.7	66.4	16.6	73.6
HCM Lane LOS	D	D	B	C	E	B	F	C	F
HCM 95th-tile Q	3	3.4	0	2.5	7.4	0	9.9	0.9	11.4

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	8	385	101	229	18	109	210	96
Future Volume (vph)	8	385	101	229	18	109	210	96
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		35.7		35.7		35.8		35.8
Actuated g/C Ratio		0.44		0.44		0.44		0.44
v/c Ratio		0.57		0.77		0.43		0.77
Control Delay (s/veh)		21.6		30.0		16.0		35.5
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		21.6		30.0		16.0		35.5
LOS		C		C		B		D
Approach Delay (s/veh)		21.6		30.0		16.0		35.5
Approach LOS		C		C		B		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 81.9	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay (s/veh): 26.0	Intersection LOS: C
Intersection Capacity Utilization 97.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	385	8	101	229	79	18	109	165	210	96	8
Future Volume (veh/h)	8	385	8	101	229	79	18	109	165	210	96	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	9	423	9	111	252	87	20	120	181	231	105	9
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	123	664	14	253	388	119	138	214	295	475	164	12
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	12	1737	36	284	1016	311	46	666	920	875	510	37
Grp Volume(v), veh/h	441	0	0	450	0	0	321	0	0	345	0	0
Grp Sat Flow(s),veh/h/ln	1785	0	0	1611	0	0	1631	0	0	1423	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Cycle Q Clear(g_c), s	6.2	0.0	0.0	6.7	0.0	0.0	5.1	0.0	0.0	6.1	0.0	0.0
Prop In Lane	0.02		0.02	0.25		0.19	0.06		0.56	0.67		0.03
Lane Grp Cap(c), veh/h	801	0	0	760	0	0	647	0	0	650	0	0
V/C Ratio(X)	0.55	0.00	0.00	0.59	0.00	0.00	0.50	0.00	0.00	0.53	0.00	0.00
Avail Cap(c_a), veh/h	3460	0	0	2935	0	0	2841	0	0	2370	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.8	0.0	0.0	8.0	0.0	0.0	8.9	0.0	0.0	9.1	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.0	0.7	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(50%),veh/ln	1.3	0.0	0.0	1.4	0.0	0.0	0.8	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.4	0.0	0.0	8.7	0.0	0.0	9.5	0.0	0.0	9.8	0.0	0.0
LnGrp LOS	A			A			A			A		
Approach Vol, veh/h		441			450			321			345	
Approach Delay, s/veh		8.4			8.7			9.5			9.8	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.5		16.4		14.5		16.4				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		52.4		58.4		52.4		58.4				
Max Q Clear Time (g_c+I1), s		7.1		8.2		8.1		8.7				
Green Ext Time (p_c), s		1.9		2.8		2.3		3.4				
Intersection Summary												
HCM 7th Control Delay, s/veh			9.0									
HCM 7th LOS			A									

Intersection	
Intersection Delay, s/veh	26.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	111	251	95	1	172	94	70	86	6	105	69	94
Future Vol, veh/h	111	251	95	1	172	94	70	86	6	105	69	94
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	131	295	112	1	202	111	82	101	7	124	81	111
Number of Lanes	1	1	0	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay, s/veh	35.3	27.8	14.7	16.6
HCM LOS	E	D	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	73%	0%	65%	0%	42%
Vol Right, %	0%	0%	100%	0%	27%	0%	35%	0%	58%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	86	6	111	346	1	266	105	163
LT Vol	70	0	0	111	0	1	0	105	0
Through Vol	0	86	0	0	251	0	172	0	69
RT Vol	0	0	6	0	95	0	94	0	94
Lane Flow Rate	82	101	7	131	407	1	313	124	192
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.218	0.253	0.016	0.302	0.861	0.003	0.703	0.312	0.435
Departure Headway (Hd)	9.511	8.993	8.267	8.326	7.619	8.858	8.091	9.098	8.161
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	377	400	433	432	476	404	448	395	441
Service Time	7.266	6.747	6.021	6.069	5.362	6.606	5.839	6.847	5.91
HCM Lane V/C Ratio	0.218	0.253	0.016	0.303	0.855	0.002	0.699	0.314	0.435
HCM Control Delay, s/veh	14.9	14.8	11.2	14.6	41.9	11.6	27.9	15.9	17.1
HCM Lane LOS	B	B	B	B	E	B	D	C	C
HCM 95th-tile Q	0.8	1	0	1.3	8.9	0	5.4	1.3	2.2

APPENDIX 5.12:

E+P (PHASE 1 + PHASE 2) INTERSECTION ANALYSIS WITH IMPROVEMENTS

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Intersection	
Intersection Delay, s/veh	29.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	198	20	4	438	296	38	15	13	319	5	52
Future Vol, veh/h	40	198	20	4	438	296	38	15	13	319	5	52
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	43	211	21	4	466	315	40	16	14	339	5	55
Number of Lanes	1	2	0	1	2	0	0	1	0	1	2	0

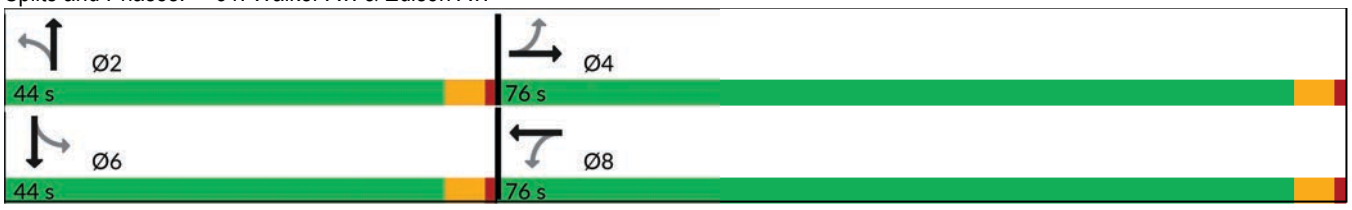
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay, s/veh	14.2	36.4	13.7	28.6
HCM LOS	B	E	B	D

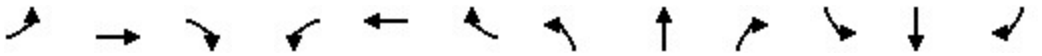
Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	58%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	23%	0%	100%	77%	0%	100%	33%	0%	100%	3%
Vol Right, %	20%	0%	0%	23%	0%	0%	67%	0%	0%	97%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	40	132	86	4	292	442	319	3	54
LT Vol	38	40	0	0	4	0	0	319	0	0
Through Vol	15	0	132	66	0	292	146	0	3	2
RT Vol	13	0	0	20	0	0	296	0	0	52
Lane Flow Rate	70	43	140	91	4	311	470	339	4	57
Geometry Grp	6	6	6	6	6	6	6	5	5	5
Degree of Util (X)	0.176	0.106	0.329	0.21	0.009	0.639	0.905	0.757	0.007	0.109
Departure Headway (Hd)	9.026	8.954	8.439	8.272	7.922	7.411	6.932	8.035	7.53	6.845
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	397	400	425	433	451	488	522	451	475	523
Service Time	6.799	6.722	6.207	6.039	5.675	5.164	4.684	5.782	5.277	4.592
HCM Lane V/C Ratio	0.176	0.108	0.329	0.21	0.009	0.637	0.9	0.752	0.008	0.109
HCM Control Delay, s/veh	13.7	12.8	15.3	13.2	10.7	22.4	45.8	31.9	10.3	10.4
HCM Lane LOS	B	B	C	B	B	C	E	D	B	B
HCM 95th-tile Q	0.6	0.4	1.4	0.8	0	4.4	10.5	6.4	0	0.4

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	130	258	306	20	197	96	122
Future Volume (vph)	14	130	258	306	20	197	96	122
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	76.0	76.0	76.0	76.0	44.0	44.0	44.0	44.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		62.9		62.9		36.2		36.2
Actuated g/C Ratio		0.58		0.58		0.33		0.33
v/c Ratio		0.17		0.94		0.75		0.87
Control Delay (s/veh)		11.3		40.7		40.4		62.6
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		11.3		40.7		40.4		62.6
LOS		B		D		D		E
Approach Delay (s/veh)		11.3		40.7		40.4		62.6
Approach LOS		B		D		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay (s/veh): 41.4	Intersection LOS: D
Intersection Capacity Utilization 101.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	130	2	258	306	136	20	197	165	96	122	29
Future Volume (veh/h)	14	130	2	258	306	136	20	197	165	96	122	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	16	144	2	287	340	151	22	219	183	107	136	32
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	111	895	12	381	391	169	68	270	215	173	199	40
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	95	1570	21	544	687	297	43	910	724	341	669	133
Grp Volume(v), veh/h	162	0	0	778	0	0	424	0	0	275	0	0
Grp Sat Flow(s),veh/h/ln	1686	0	0	1528	0	0	1677	0	0	1143	0	0
Q Serve(g_s), s	0.0	0.0	0.0	27.8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	30.7	0.0	0.0	16.3	0.0	0.0	16.4	0.0	0.0
Prop In Lane	0.10		0.01	0.37		0.19	0.05		0.43	0.39		0.12
Lane Grp Cap(c), veh/h	1018	0	0	942	0	0	553	0	0	412	0	0
V/C Ratio(X)	0.16	0.00	0.00	0.83	0.00	0.00	0.77	0.00	0.00	0.67	0.00	0.00
Avail Cap(c_a), veh/h	1775	0	0	1638	0	0	993	0	0	779	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.0	0.0	0.0	12.8	0.0	0.0	22.9	0.0	0.0	22.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.9	0.0	0.0	2.3	0.0	0.0	1.9	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(50%),veh/ln	0.9	0.0	0.0	8.2	0.0	0.0	5.8	0.0	0.0	3.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.1	0.0	0.0	14.7	0.0	0.0	25.2	0.0	0.0	23.9	0.0	0.0
LnGrp LOS	A			B			C			C		
Approach Vol, veh/h		162			778			424			275	
Approach Delay, s/veh		7.1			14.7			25.2			23.9	
Approach LOS		A			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.2		44.1		25.2		44.1				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		39.4		71.4		39.4		71.4				
Max Q Clear Time (g_c+I1), s		18.3		5.0		18.4		32.7				
Green Ext Time (p_c), s		2.3		1.0		1.5		6.7				

Intersection Summary												
HCM 7th Control Delay, s/veh			18.2									
HCM 7th LOS			B									

Intersection	
Intersection Delay, s/veh	40
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	147	229	61	2	297	79	150	169	1	65	51	277
Future Vol, veh/h	147	229	61	2	297	79	150	169	1	65	51	277
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	173	269	72	2	349	93	176	199	1	76	60	326
Number of Lanes	1	2	0	0	2	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	3
HCM Control Delay, s/veh	22.8	31.6	26.9	77.7
HCM LOS	C	D	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	1%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	56%	99%	65%	0%	16%
Vol Right, %	0%	0%	100%	0%	0%	44%	0%	35%	0%	84%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	169	1	147	153	137	151	228	65	328
LT Vol	150	0	0	147	0	0	2	0	65	0
Through Vol	0	169	0	0	153	76	149	149	0	51
RT Vol	0	0	1	0	0	61	0	79	0	277
Lane Flow Rate	176	199	1	173	180	162	177	268	76	386
Geometry Grp	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.541	0.581	0.003	0.511	0.506	0.441	0.501	0.74	0.231	1.042
Departure Headway (Hd)	11.294	10.771	10.039	10.936	10.413	10.089	10.486	10.226	10.855	9.724
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	321	338	359	332	348	359	345	356	335	378
Service Time	8.994	8.471	7.739	8.636	8.113	7.789	8.186	7.926	8.489	7.359
HCM Lane V/C Ratio	0.548	0.589	0.003	0.521	0.517	0.451	0.513	0.753	0.227	1.021
HCM Control Delay, s/veh	26.5	27.4	12.8	24.5	23.3	20.5	23.3	37.1	16.7	89.8
HCM Lane LOS	D	D	B	C	C	C	C	E	C	F
HCM 95th-tile Q	3	3.5	0	2.8	2.7	2.2	2.7	5.7	0.9	13.1

Intersection	
Intersection Delay, s/veh	32.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	363	39	15	203	248	28	13	8	356	20	48
Future Vol, veh/h	56	363	39	15	203	248	28	13	8	356	20	48
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	64	417	45	17	233	285	32	15	9	409	23	55
Number of Lanes	1	2	0	1	2	0	0	1	0	1	2	0

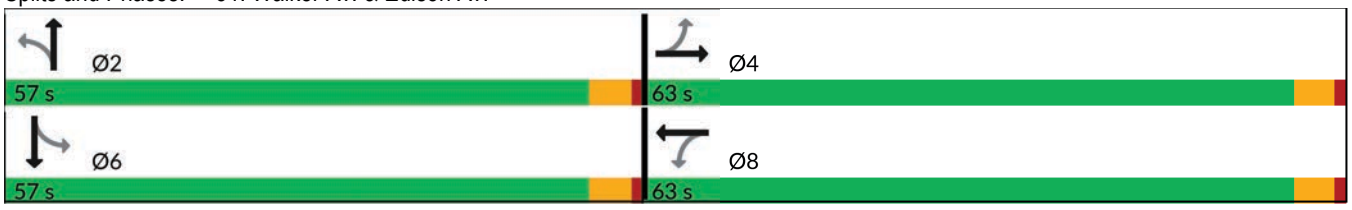
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay, s/veh	21.2	28.5	14.3	50.4
HCM LOS	C	D	B	F

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	57%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	27%	0%	100%	76%	0%	100%	21%	0%	100%	12%
Vol Right, %	16%	0%	0%	24%	0%	0%	79%	0%	0%	88%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	56	242	160	15	135	316	356	13	55
LT Vol	28	56	0	0	15	0	0	356	0	0
Through Vol	13	0	242	121	0	135	68	0	13	7
RT Vol	8	0	0	39	0	0	248	0	0	48
Lane Flow Rate	56	64	278	184	17	156	363	409	15	63
Geometry Grp	6	6	6	6	6	6	6	5	5	5
Degree of Util (X)	0.153	0.16	0.65	0.421	0.043	0.364	0.791	0.938	0.033	0.124
Departure Headway (Hd)	9.811	8.932	8.417	8.241	8.93	8.414	7.848	8.252	7.745	7.121
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	368	400	428	434	399	426	457	438	461	501
Service Time	7.511	6.73	6.214	6.038	6.724	6.208	5.641	6.028	5.52	4.896
HCM Lane V/C Ratio	0.152	0.16	0.65	0.424	0.043	0.366	0.794	0.934	0.033	0.126
HCM Control Delay, s/veh	14.3	13.4	25.7	17	12.1	16	34.6	58	10.8	10.9
HCM Lane LOS	B	B	D	C	B	C	D	F	B	B
HCM 95th-tile Q	0.5	0.6	4.5	2	0.1	1.6	7.1	10.8	0.1	0.4

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	10	421	120	250	13	113	210	98
Future Volume (vph)	10	421	120	250	13	113	210	98
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		45.2		45.2		41.4		41.4
Actuated g/C Ratio		0.47		0.47		0.43		0.43
v/c Ratio		0.58		0.85		0.46		0.85
Control Delay (s/veh)		22.9		39.4		18.4		47.4
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		22.9		39.4		18.4		47.4
LOS		C		D		B		D
Approach Delay (s/veh)		22.9		39.4		18.4		47.4
Approach LOS		C		D		B		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.7	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 32.0	Intersection LOS: C
Intersection Capacity Utilization 103.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	421	5	120	250	79	13	113	185	210	98	10
Future Volume (veh/h)	10	421	5	120	250	79	13	113	185	210	98	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	11	463	5	132	275	87	14	124	203	231	108	11
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	106	716	8	254	398	113	111	215	329	432	166	14
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	13	1755	19	316	976	276	26	633	969	790	489	41
Grp Volume(v), veh/h	479	0	0	494	0	0	341	0	0	350	0	0
Grp Sat Flow(s),veh/h/ln	1787	0	0	1568	0	0	1628	0	0	1320	0	0
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0
Cycle Q Clear(g_c), s	7.8	0.0	0.0	9.1	0.0	0.0	6.4	0.0	0.0	8.3	0.0	0.0
Prop In Lane	0.02		0.01	0.27		0.18	0.04		0.60	0.66		0.03
Lane Grp Cap(c), veh/h	830	0	0	765	0	0	656	0	0	612	0	0
V/C Ratio(X)	0.58	0.00	0.00	0.65	0.00	0.00	0.52	0.00	0.00	0.57	0.00	0.00
Avail Cap(c_a), veh/h	2938	0	0	2448	0	0	2414	0	0	1967	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.7	0.0	0.0	9.0	0.0	0.0	10.1	0.0	0.0	10.5	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.9	0.0	0.0	0.6	0.0	0.0	0.8	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(50%),veh/ln	1.9	0.0	0.0	2.0	0.0	0.0	1.3	0.0	0.0	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.3	0.0	0.0	9.9	0.0	0.0	10.7	0.0	0.0	11.4	0.0	0.0
LnGrp LOS	A			A			B			B		
Approach Vol, veh/h		479			494			341			350	
Approach Delay, s/veh		9.3			9.9			10.7			11.4	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	17.0	19.5	17.0	19.5
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	52.4	58.4	52.4	58.4
Max Q Clear Time (g_c+I1), s	8.4	9.8	10.3	11.1
Green Ext Time (p_c), s	2.0	3.2	2.4	3.9

Intersection Summary	
HCM 7th Control Delay, s/veh	10.2
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	18.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	124	350	95	1	237	92	70	86	6	103	69	109
Future Vol, veh/h	124	350	95	1	237	92	70	86	6	103	69	109
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	146	412	112	1	279	108	82	101	7	121	81	128
Number of Lanes	1	2	0	1	2	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	3
HCM Control Delay, s/veh	19.6	17.8	15.1	17.3
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	55%	0%	100%	46%	0%	39%
Vol Right, %	0%	0%	100%	0%	0%	45%	0%	0%	54%	0%	61%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	86	6	124	233	212	1	158	171	103	178
LT Vol	70	0	0	124	0	0	1	0	0	103	0
Through Vol	0	86	0	0	233	117	0	158	79	0	69
RT Vol	0	0	6	0	0	95	0	0	92	0	109
Lane Flow Rate	82	101	7	146	275	249	1	186	201	121	209
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.223	0.259	0.017	0.345	0.61	0.531	0.003	0.443	0.458	0.306	0.475
Departure Headway (Hd)	9.734	9.225	8.512	8.509	7.999	7.679	9.099	8.588	8.203	9.098	8.17
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	369	390	420	425	453	471	393	420	439	396	442
Service Time	7.49	6.981	6.268	6.226	5.716	5.396	6.852	6.341	5.956	6.821	5.893
HCM Lane V/C Ratio	0.222	0.259	0.017	0.344	0.607	0.529	0.003	0.443	0.458	0.306	0.473
HCM Control Delay, s/veh	15.3	15.2	11.4	15.7	22.5	18.8	11.9	18	17.7	15.8	18.1
HCM Lane LOS	C	C	B	C	C	C	B	C	C	C	C
HCM 95th-tile Q	0.8	1	0.1	1.5	4	3.1	0	2.2	2.3	1.3	2.5

APPENDIX 5.13:

E+P (BUILDOUT) INTERSECTION ANALYSIS WITH IMPROVEMENTS

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Intersection	
Intersection Delay, s/veh	19.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	116	22	12	294	48	13	203	3	33	251	58
Future Vol, veh/h	39	116	22	12	294	48	13	203	3	33	251	58
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	42	126	24	13	320	52	14	221	3	36	273	63
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay, s/veh	12.9	24.2	15.3	21
HCM LOS	B	C	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	6%	100%	0%	100%	0%	10%
Vol Thru, %	93%	0%	84%	0%	86%	73%
Vol Right, %	1%	0%	16%	0%	14%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	219	39	138	12	342	342
LT Vol	13	39	0	12	0	33
Through Vol	203	0	116	0	294	251
RT Vol	3	0	22	0	48	58
Lane Flow Rate	238	42	150	13	372	372
Geometry Grp	2	5	5	5	5	2
Degree of Util (X)	0.448	0.093	0.304	0.027	0.708	0.658
Departure Headway (Hd)	6.782	7.938	7.307	7.468	6.854	6.373
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	528	450	489	478	528	565
Service Time	4.858	5.719	5.088	5.231	4.617	4.437
HCM Lane V/C Ratio	0.451	0.093	0.307	0.027	0.705	0.658
HCM Control Delay, s/veh	15.3	11.5	13.3	10.4	24.7	21
HCM Lane LOS	C	B	B	B	C	C
HCM 95th-tile Q	2.3	0.3	1.3	0.1	5.6	4.8

Intersection	
Intersection Delay, s/veh	35.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	213	22	4	484	296	48	18	13	320	6	52
Future Vol, veh/h	41	213	22	4	484	296	48	18	13	320	6	52
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	44	227	23	4	515	315	51	19	14	340	6	55
Number of Lanes	1	2	0	1	2	0	0	1	0	1	2	0

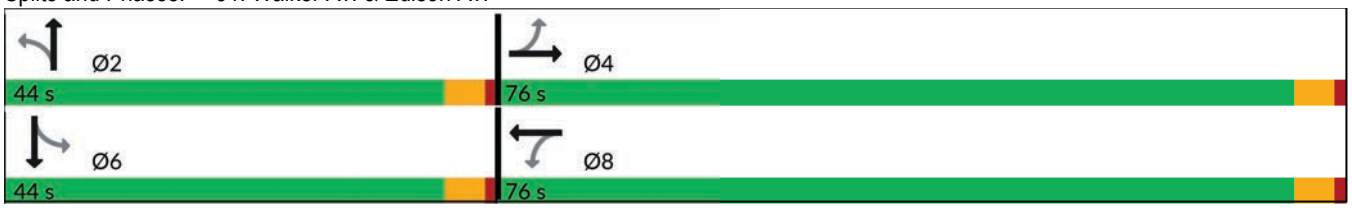
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay, s/veh	15.2	46.3	14.7	31.2
HCM LOS	C	E	B	D

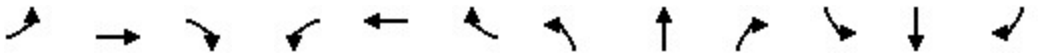
Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	61%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	23%	0%	100%	76%	0%	100%	35%	0%	100%	4%
Vol Right, %	16%	0%	0%	24%	0%	0%	65%	0%	0%	96%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	41	142	93	4	323	457	320	4	54
LT Vol	48	41	0	0	4	0	0	320	0	0
Through Vol	18	0	142	71	0	323	161	0	4	2
RT Vol	13	0	0	22	0	0	296	0	0	52
Lane Flow Rate	84	44	151	99	4	343	487	340	4	57
Geometry Grp	6	6	6	6	6	6	6	5	5	5
Degree of Util (X)	0.218	0.112	0.366	0.235	0.01	0.727	0.968	0.781	0.009	0.113
Departure Headway (Hd)	9.325	9.227	8.711	8.54	8.135	7.623	7.159	8.263	7.756	7.074
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	384	387	412	419	439	474	506	439	461	506
Service Time	7.114	7.01	6.493	6.322	5.901	5.388	4.924	6.021	5.515	4.832
HCM Lane V/C Ratio	0.219	0.114	0.367	0.236	0.009	0.724	0.962	0.774	0.009	0.113
HCM Control Delay, s/veh	14.7	13.2	16.5	14	11	28.3	59.3	34.9	10.6	10.7
HCM Lane LOS	B	B	C	B	B	D	F	D	B	B
HCM 95th-tile Q	0.8	0.4	1.6	0.9	0	5.8	12.5	6.8	0	0.4

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	135	270	325	20	197	96	122
Future Volume (vph)	14	135	270	325	20	197	96	122
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	76.0	76.0	76.0	76.0	44.0	44.0	44.0	44.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		67.4		67.4		37.5		37.5
Actuated g/C Ratio		0.59		0.59		0.33		0.33
v/c Ratio		0.17		0.96		0.78		0.94
Control Delay (s/veh)		11.4		46.0		43.5		76.4
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		11.4		46.0		43.5		76.4
LOS		B		D		D		E
Approach Delay (s/veh)		11.4		46.0		43.5		76.4
Approach LOS		B		D		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114.2	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 46.9	Intersection LOS: D
Intersection Capacity Utilization 104.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	135	2	270	325	136	20	197	177	96	122	32
Future Volume (veh/h)	14	135	2	270	325	136	20	197	177	96	122	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	16	150	2	300	361	151	22	219	197	107	136	36
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	103	892	11	379	397	164	57	275	236	155	181	41
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	98	1541	20	557	686	284	43	875	751	311	576	131
Grp Volume(v), veh/h	168	0	0	812	0	0	438	0	0	279	0	0
Grp Sat Flow(s),veh/h/ln	1659	0	0	1526	0	0	1670	0	0	1018	0	0
Q Serve(g_s), s	0.0	0.0	0.0	37.4	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
Cycle Q Clear(g_c), s	3.8	0.0	0.0	41.1	0.0	0.0	21.0	0.0	0.0	23.8	0.0	0.0
Prop In Lane	0.10		0.01	0.37		0.19	0.05		0.45	0.38		0.13
Lane Grp Cap(c), veh/h	1006	0	0	941	0	0	569	0	0	378	0	0
V/C Ratio(X)	0.17	0.00	0.00	0.86	0.00	0.00	0.77	0.00	0.00	0.74	0.00	0.00
Avail Cap(c_a), veh/h	1413	0	0	1315	0	0	798	0	0	568	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.4	0.0	0.0	16.0	0.0	0.0	27.6	0.0	0.0	27.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	4.5	0.0	0.0	3.0	0.0	0.0	2.8	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(50%),veh/ln	1.3	0.0	0.0	12.8	0.0	0.0	7.9	0.0	0.0	5.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.5	0.0	0.0	20.6	0.0	0.0	30.6	0.0	0.0	30.6	0.0	0.0
LnGrp LOS	A			C			C			C		
Approach Vol, veh/h		168			812			438			279	
Approach Delay, s/veh		8.5			20.6			30.6			30.6	
Approach LOS		A			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.7		54.5		31.7		54.5				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		39.4		71.4		39.4		71.4				
Max Q Clear Time (g_c+I1), s		23.0		5.8		25.8		43.1				
Green Ext Time (p_c), s		2.2		1.0		1.3		6.8				

Intersection Summary	
HCM 7th Control Delay, s/veh	23.6
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	39.9
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	154	240	61	2	338	79	150	169	1	65	51	285
Future Vol, veh/h	154	240	61	2	338	79	150	169	1	65	51	285
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	181	282	72	2	398	93	176	199	1	76	60	335
Number of Lanes	1	2	0	1	2	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	3
HCM Control Delay, s/veh	33.5	33.8	26.8	75.3
HCM LOS	C	D	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	57%	0%	100%	59%	0%	15%
Vol Right, %	0%	0%	100%	0%	0%	43%	0%	0%	41%	0%	85%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	169	1	154	160	141	2	225	192	65	336
LT Vol	150	0	0	154	0	0	2	0	0	65	0
Through Vol	0	169	0	0	160	80	0	225	113	0	51
RT Vol	0	0	1	0	0	61	0	0	79	0	285
Lane Flow Rate	176	199	1	181	188	166	2	265	225	76	395
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.536	0.581	0.003	0.533	0.526	0.449	0.007	0.749	0.618	0.223	1.035
Departure Headway (Hd)	11.284	10.768	10.046	10.93	10.41	10.095	11.032	10.512	10.212	10.517	9.423
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	321	338	358	332	348	358	326	347	356	343	387
Service Time	8.984	8.468	7.746	8.63	8.11	7.795	8.732	8.212	7.912	8.223	7.129
HCM Lane V/C Ratio	0.548	0.589	0.003	0.545	0.54	0.464	0.006	0.764	0.632	0.222	1.021
HCM Control Delay, s/veh	26.3	27.4	12.8	25.4	24.1	20.8	13.8	38.8	28.1	16.2	86.7
HCM Lane LOS	D	D	B	D	C	C	B	E	D	C	F
HCM 95th-tile Q	3	3.5	0	3	2.9	2.2	0	5.8	3.9	0.8	13

Intersection	
Intersection Delay, s/veh	44.8
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	82	402	15	5	246	35	24	227	10	50	224	39
Future Vol, veh/h	82	402	15	5	246	35	24	227	10	50	224	39
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	89	437	16	5	267	38	26	247	11	54	243	42
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay, s/veh	69	30.6	27	34.1
HCM LOS	F	D	D	D

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	9%	100%	0%	100%	0%	16%
Vol Thru, %	87%	0%	96%	0%	88%	72%
Vol Right, %	4%	0%	4%	0%	12%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	261	82	417	5	281	313
LT Vol	24	82	0	5	0	50
Through Vol	227	0	402	0	246	224
RT Vol	10	0	15	0	35	39
Lane Flow Rate	284	89	453	5	305	340
Geometry Grp	2	5	5	5	5	2
Degree of Util (X)	0.664	0.216	1.031	0.014	0.723	0.77
Departure Headway (Hd)	8.591	8.738	8.192	9.28	8.667	8.303
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	423	414	444	388	418	439
Service Time	6.591	6.438	5.892	6.98	6.367	6.303
HCM Lane V/C Ratio	0.671	0.215	1.02	0.013	0.73	0.774
HCM Control Delay, s/veh	27	13.8	79.9	12.1	30.9	34.1
HCM Lane LOS	D	B	F	B	D	D
HCM 95th-tile Q	4.7	0.8	13.9	0	5.6	6.6

Intersection	
Intersection Delay, s/veh	39.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	420	52	15	230	247	33	13	8	355	22	48
Future Vol, veh/h	56	420	52	15	230	247	33	13	8	355	22	48
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	64	483	60	17	264	284	38	15	9	408	25	55
Number of Lanes	1	2	0	1	2	0	0	1	0	1	2	0

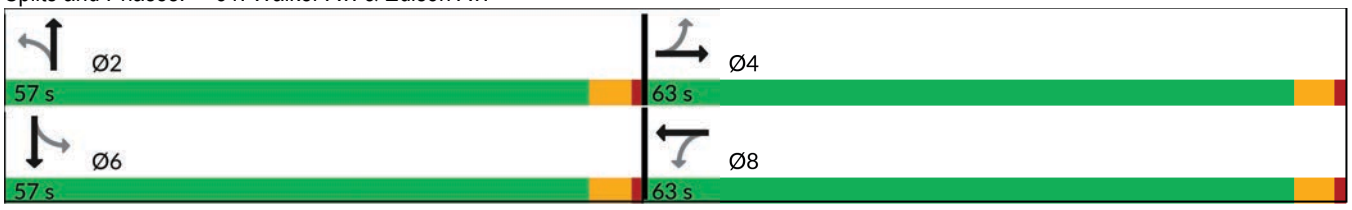
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay, s/veh	28.5	35.5	15.3	60.8
HCM LOS	D	E	C	F

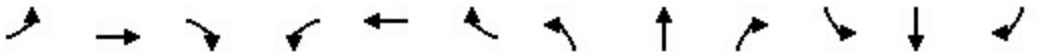
Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	61%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	24%	0%	100%	73%	0%	100%	24%	0%	100%	13%
Vol Right, %	15%	0%	0%	27%	0%	0%	76%	0%	0%	87%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	56	280	192	15	153	324	355	15	55
LT Vol	33	56	0	0	15	0	0	355	0	0
Through Vol	13	0	280	140	0	153	77	0	15	7
RT Vol	8	0	0	52	0	0	247	0	0	48
Lane Flow Rate	62	64	322	221	17	176	372	408	17	64
Geometry Grp	6	6	6	6	6	6	6	5	5	5
Degree of Util (X)	0.178	0.166	0.784	0.526	0.045	0.435	0.86	0.986	0.038	0.134
Departure Headway (Hd)	10.307	9.288	8.771	8.575	9.394	8.877	8.324	8.698	8.189	7.57
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	348	386	412	422	381	405	435	420	440	476
Service Time	8.073	7.043	6.526	6.329	7.15	6.632	6.079	6.398	5.889	5.27
HCM Lane V/C Ratio	0.178	0.166	0.782	0.524	0.045	0.435	0.855	0.971	0.039	0.134
HCM Control Delay, s/veh	15.3	13.9	36.9	20.5	12.6	18.3	44.7	70.5	11.2	11.4
HCM Lane LOS	C	B	E	C	B	C	E	F	B	B
HCM 95th-tile Q	0.6	0.6	6.8	3	0.1	2.1	8.6	12	0.1	0.5

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	443	128	259	13	112	210	98
Future Volume (vph)	14	443	128	259	13	112	210	98
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		50.5		50.5		44.6		44.6
Actuated g/C Ratio		0.48		0.48		0.43		0.43
v/c Ratio		0.60		0.90		0.48		0.89
Control Delay (s/veh)		24.2		46.5		19.4		55.1
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		24.2		46.5		19.4		55.1
LOS		C		D		B		E
Approach Delay (s/veh)		24.2		46.5		19.4		55.1
Approach LOS		C		D		B		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.8	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay (s/veh): 36.1	Intersection LOS: D
Intersection Capacity Utilization 106.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	14	443	5	128	259	79	13	112	198	210	98	11
Future Volume (veh/h)	14	443	5	128	259	79	13	112	198	210	98	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	15	487	5	141	285	87	14	123	218	231	108	12
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	743	7	247	397	109	99	213	353	405	163	15
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	19	1747	18	320	934	256	24	605	1001	740	462	43
Grp Volume(v), veh/h	507	0	0	513	0	0	355	0	0	351	0	0
Grp Sat Flow(s),veh/h/ln	1783	0	0	1511	0	0	1630	0	0	1245	0	0
Q Serve(g_s), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
Cycle Q Clear(g_c), s	9.4	0.0	0.0	11.5	0.0	0.0	7.5	0.0	0.0	10.4	0.0	0.0
Prop In Lane	0.03		0.01	0.27		0.17	0.04		0.61	0.66		0.03
Lane Grp Cap(c), veh/h	848	0	0	753	0	0	666	0	0	583	0	0
V/C Ratio(X)	0.60	0.00	0.00	0.68	0.00	0.00	0.53	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	2575	0	0	2120	0	0	2121	0	0	1698	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.5	0.0	0.0	10.0	0.0	0.0	11.1	0.0	0.0	11.9	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.1	0.0	0.0	0.7	0.0	0.0	1.0	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(50%),veh/ln	2.5	0.0	0.0	2.7	0.0	0.0	1.7	0.0	0.0	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.2	0.0	0.0	11.0	0.0	0.0	11.8	0.0	0.0	12.9	0.0	0.0
LnGrp LOS	B			B			B			B		
Approach Vol, veh/h		507			513			355			351	
Approach Delay, s/veh		10.2			11.0			11.8			12.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		19.2		22.2		19.2		22.2				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		52.4		58.4		52.4		58.4				
Max Q Clear Time (g_c+I1), s		9.5		11.4		12.4		13.5				
Green Ext Time (p_c), s		2.1		3.4		2.4		4.1				

Intersection Summary												
HCM 7th Control Delay, s/veh		11.3										
HCM 7th LOS		B										

Intersection	
Intersection Delay, s/veh	20.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	130	399	95	1	257	92	70	86	6	103	69	114
Future Vol, veh/h	130	399	95	1	257	92	70	86	6	103	69	114
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	153	469	112	1	302	108	82	101	7	121	81	134
Number of Lanes	1	2	0	1	2	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	3
HCM Control Delay, s/veh	23.5	19.7	15.7	18.5
HCM LOS	C	C	C	C

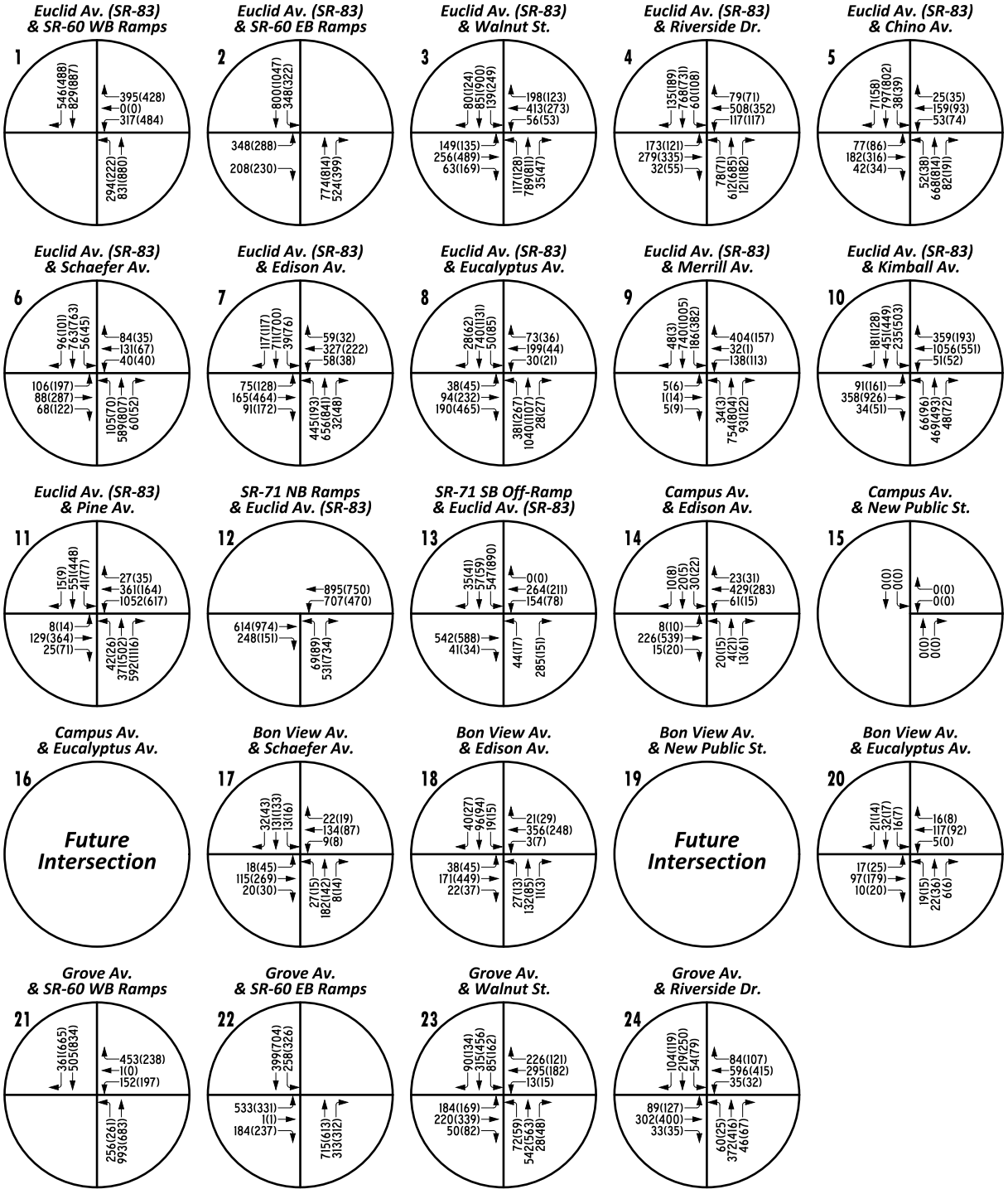
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	58%	0%	100%	48%	0%	38%
Vol Right, %	0%	0%	100%	0%	0%	42%	0%	0%	52%	0%	62%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	86	6	130	266	228	1	171	178	103	183
LT Vol	70	0	0	130	0	0	1	0	0	103	0
Through Vol	0	86	0	0	266	133	0	171	86	0	69
RT Vol	0	0	6	0	0	95	0	0	92	0	114
Lane Flow Rate	82	101	7	153	313	268	1	202	209	121	215
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.232	0.27	0.017	0.369	0.711	0.587	0.003	0.497	0.494	0.316	0.506
Departure Headway (Hd)	10.127	9.617	8.902	8.686	8.176	7.878	9.389	8.877	8.506	9.4	8.464
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	355	373	402	414	441	459	381	405	424	383	426
Service Time	7.887	7.377	6.662	6.434	5.923	5.625	7.142	6.631	6.26	7.15	6.214
HCM Lane V/C Ratio	0.231	0.271	0.017	0.37	0.71	0.584	0.003	0.499	0.493	0.316	0.505
HCM Control Delay, s/veh	15.9	15.9	11.8	16.5	28.7	21.3	12.2	20.1	19.3	16.5	19.6
HCM Lane LOS	C	C	B	C	D	C	B	C	C	C	C
HCM 95th-tile Q	0.9	1.1	0.1	1.7	5.5	3.7	0	2.7	2.7	1.3	2.8

APPENDIX 6.1:

OPENING YEAR (2031) VOLUME EXHIBITS

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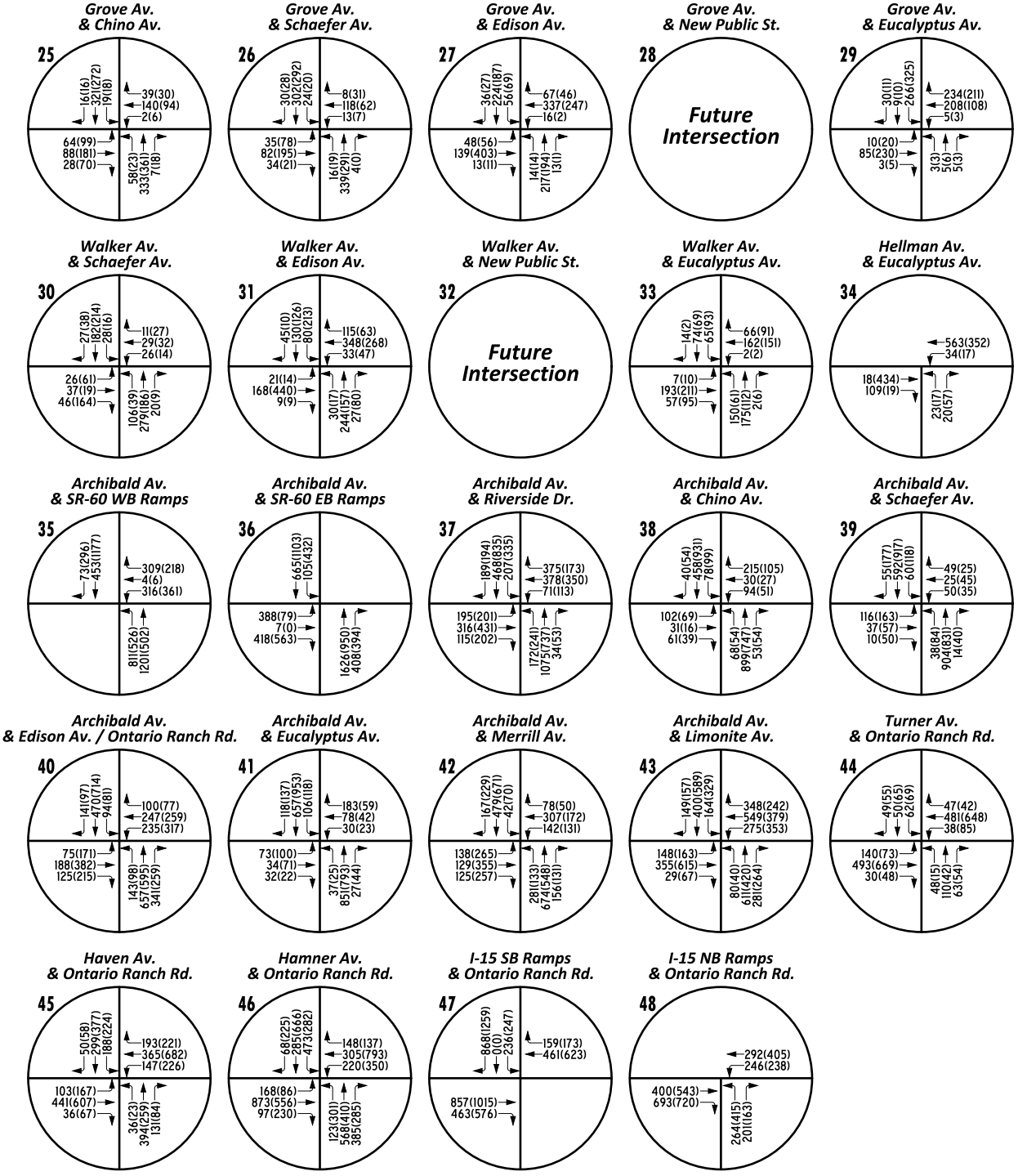
EXHIBIT 6-1 : OPENING YEAR (2031) WITHOUT PROJECT INTERSECTION VOLUMES (ACTUAL VEHICLES) (1 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

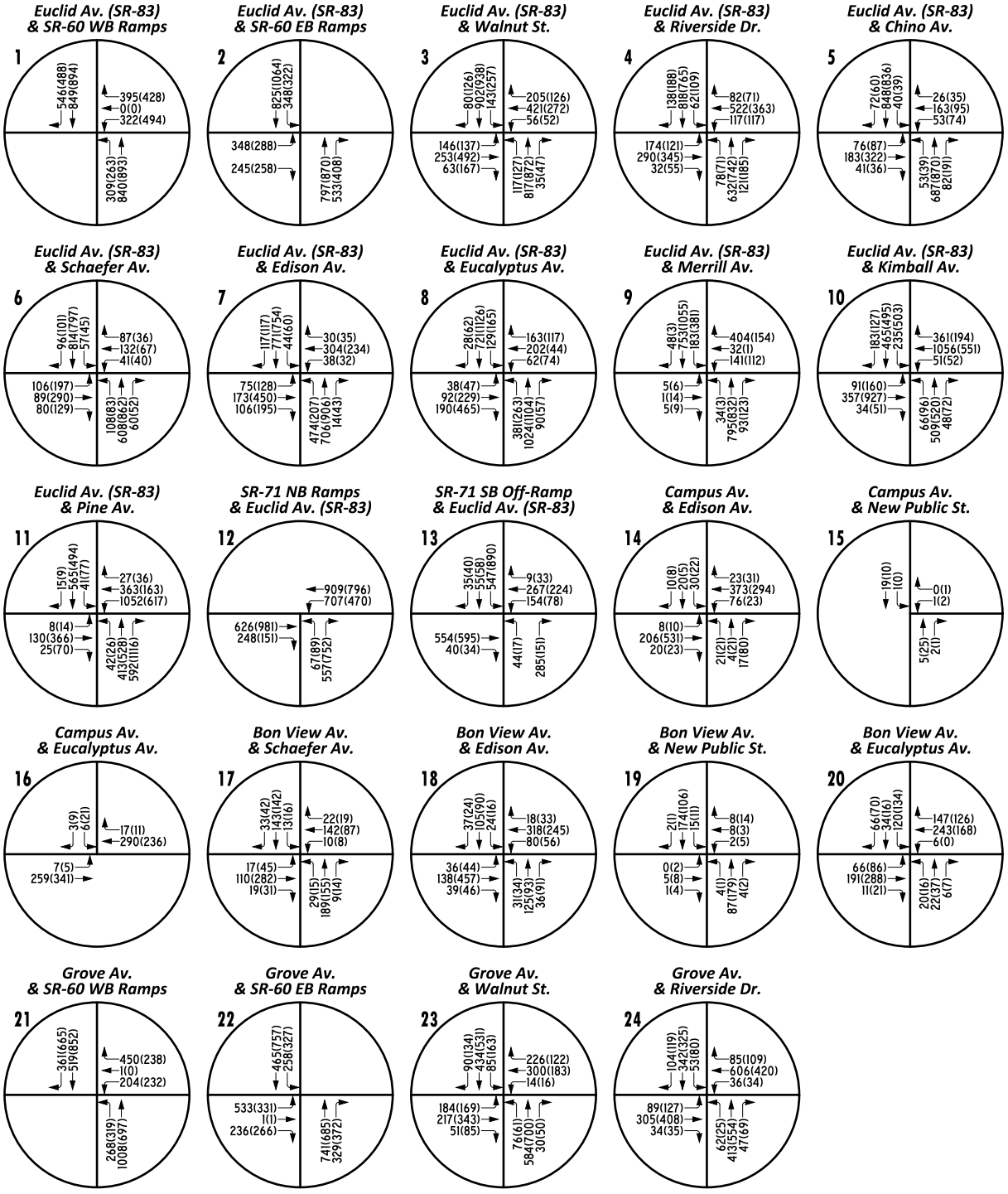
EXHIBIT 6-1 : OPENING YEAR (2031) WITHOUT PROJECT INTERSECTION VOLUMES (ACTUAL VEHICLES) (2 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

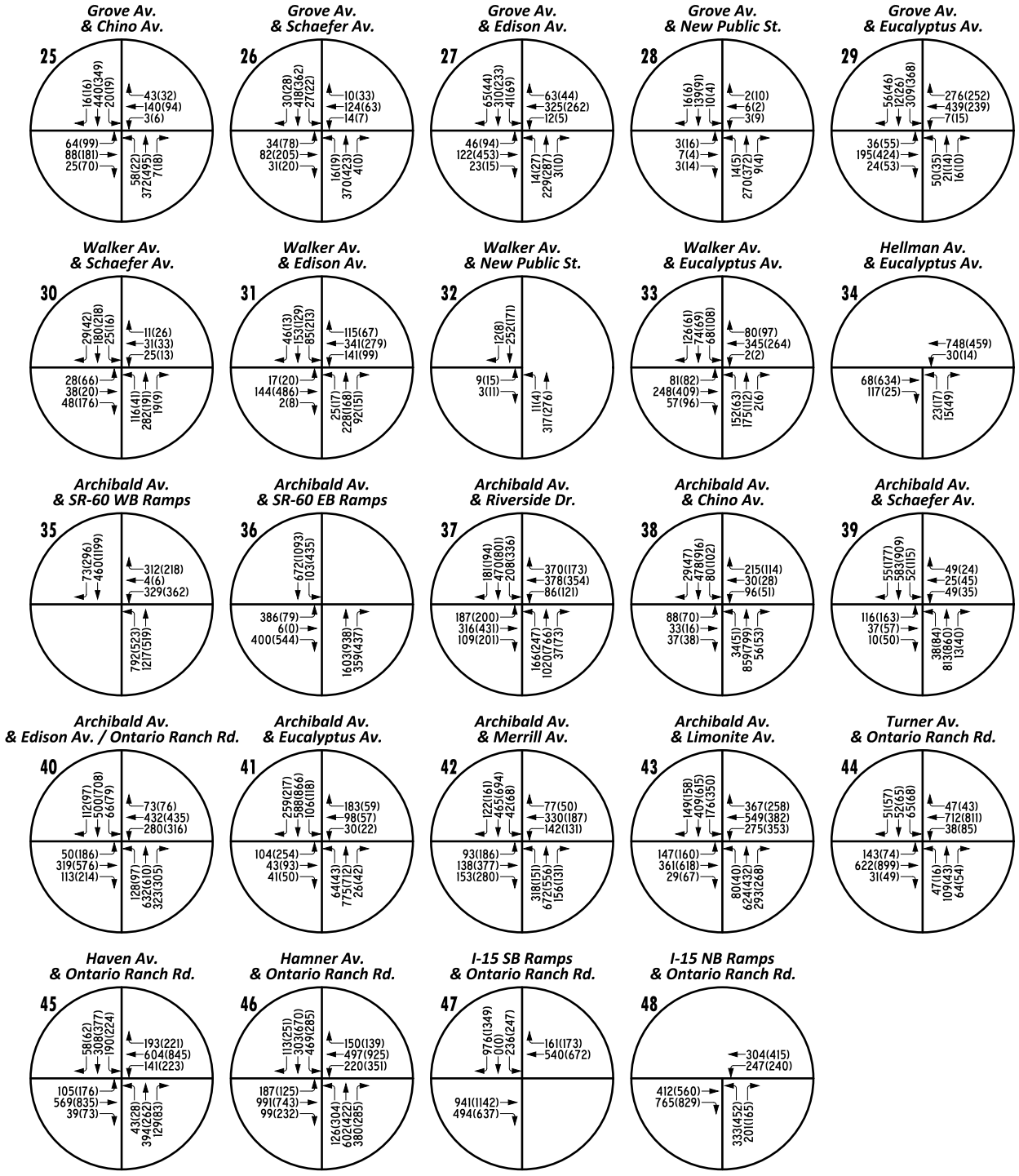
EXHIBIT 6-2 : OPENING YEAR (2031) WITH PROJECT INTERSECTION VOLUMES (ACTUAL VEHICLES) (1 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

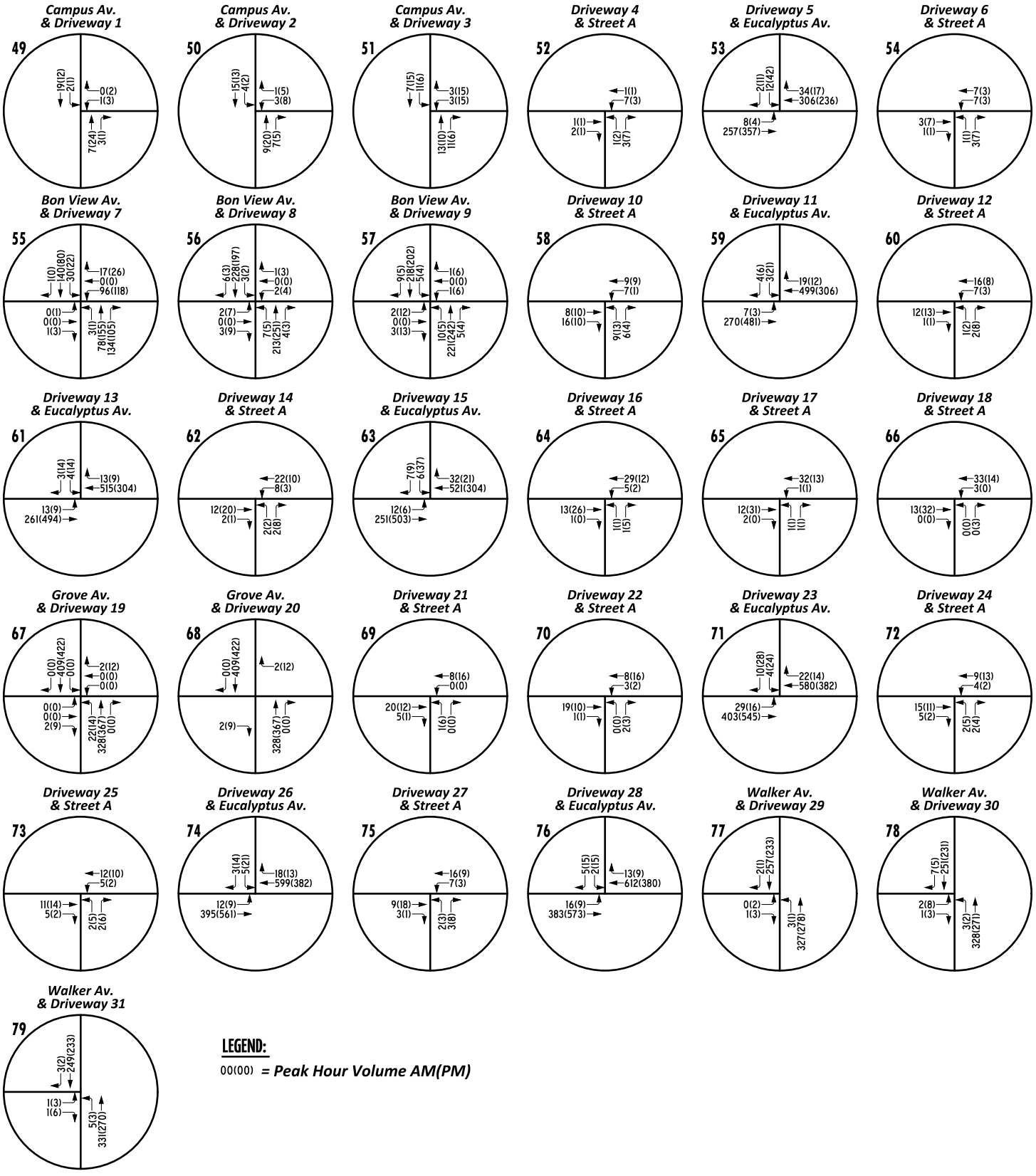
EXHIBIT 6-2 : OPENING YEAR (2031) WITH PROJECT INTERSECTION VOLUMES (ACTUAL VEHICLES) (2 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

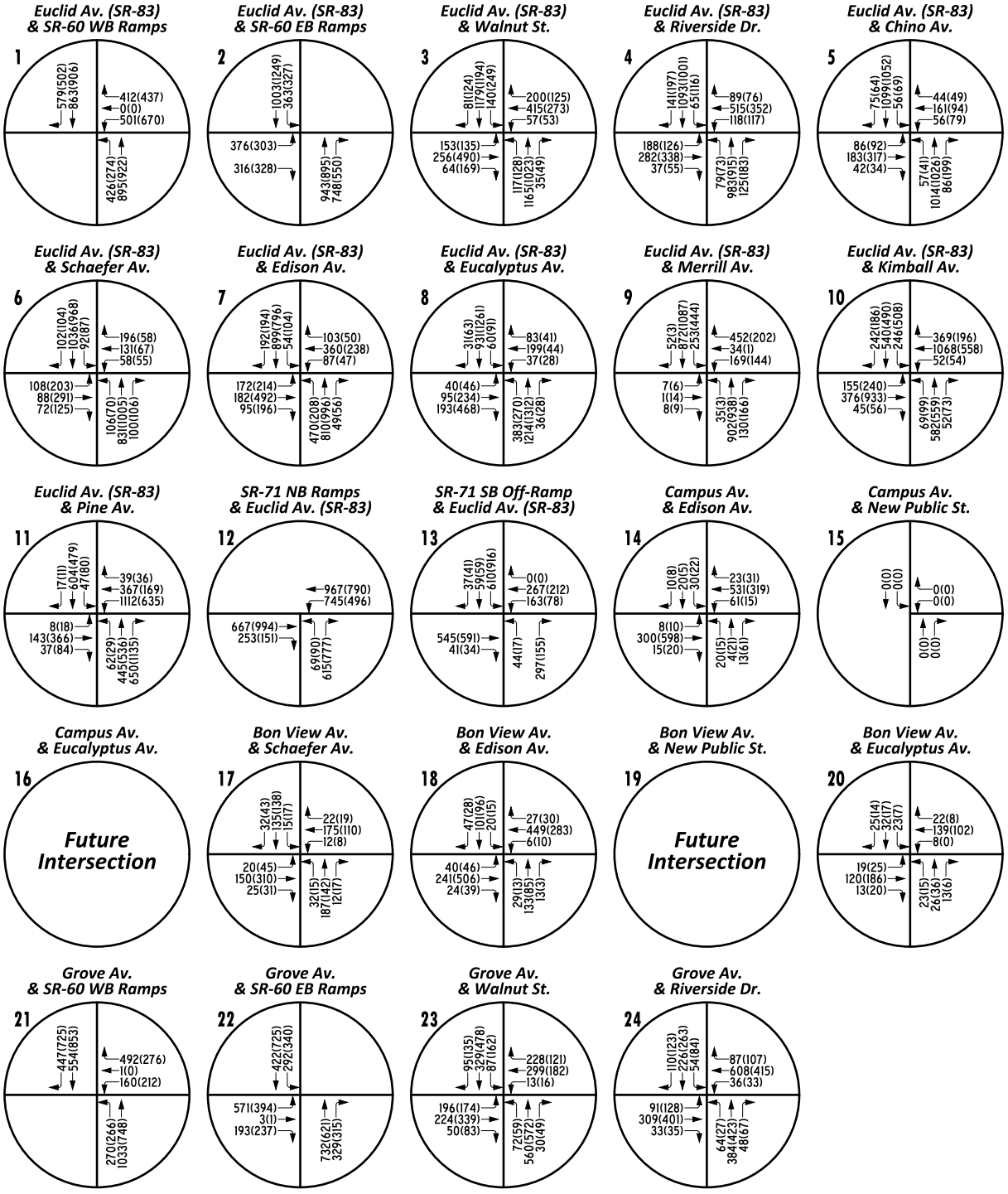
EXHIBIT 6-3 : OPENING YEAR (2031) WITH PROJECT DRIVEWAY VOLUMES (ACTUAL VEHICLES)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

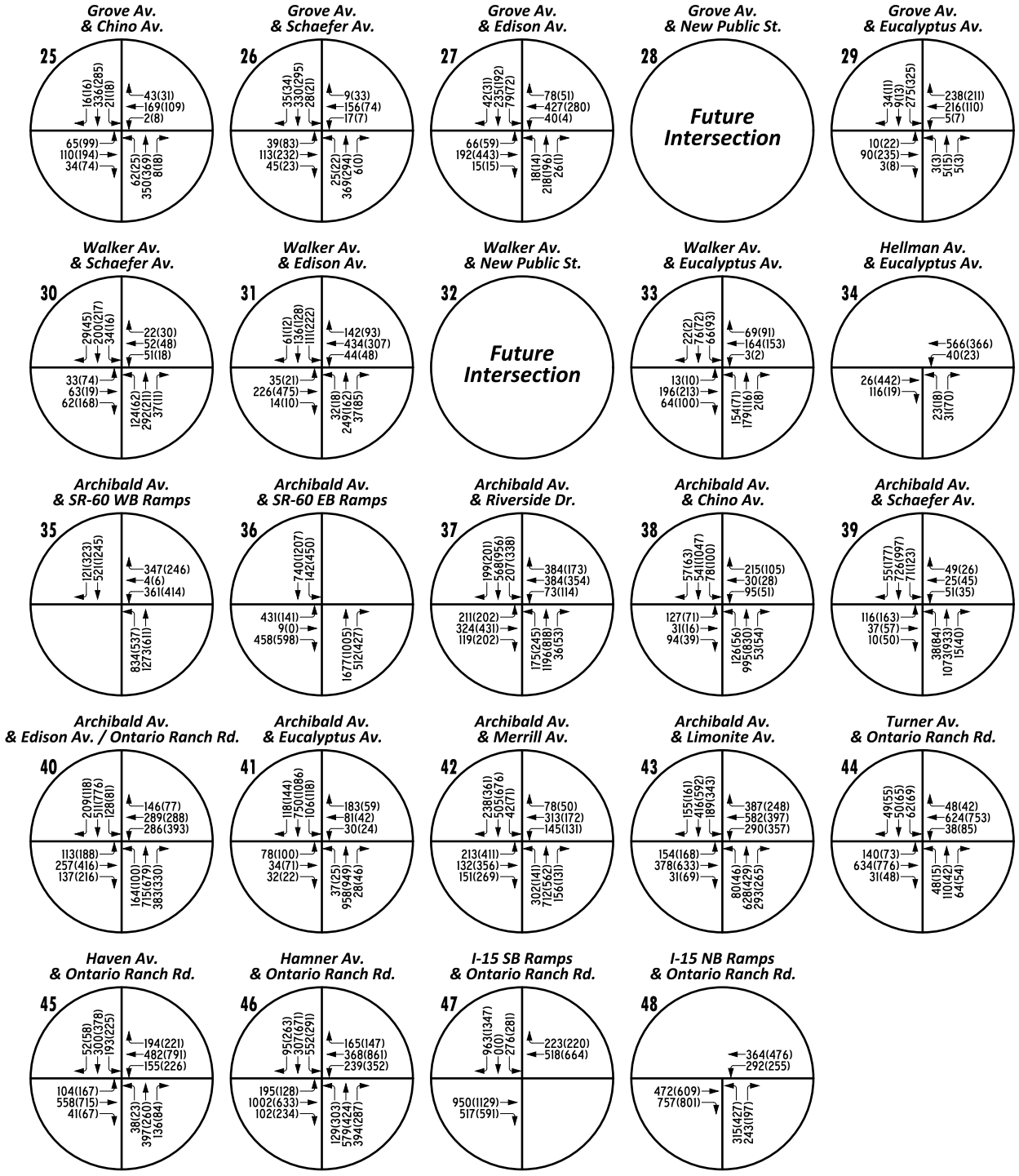
EXHIBIT 6-4 : OPENING YEAR (2031) WITHOUT PROJECT INTERSECTION VOLUMES (PCE) (1 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

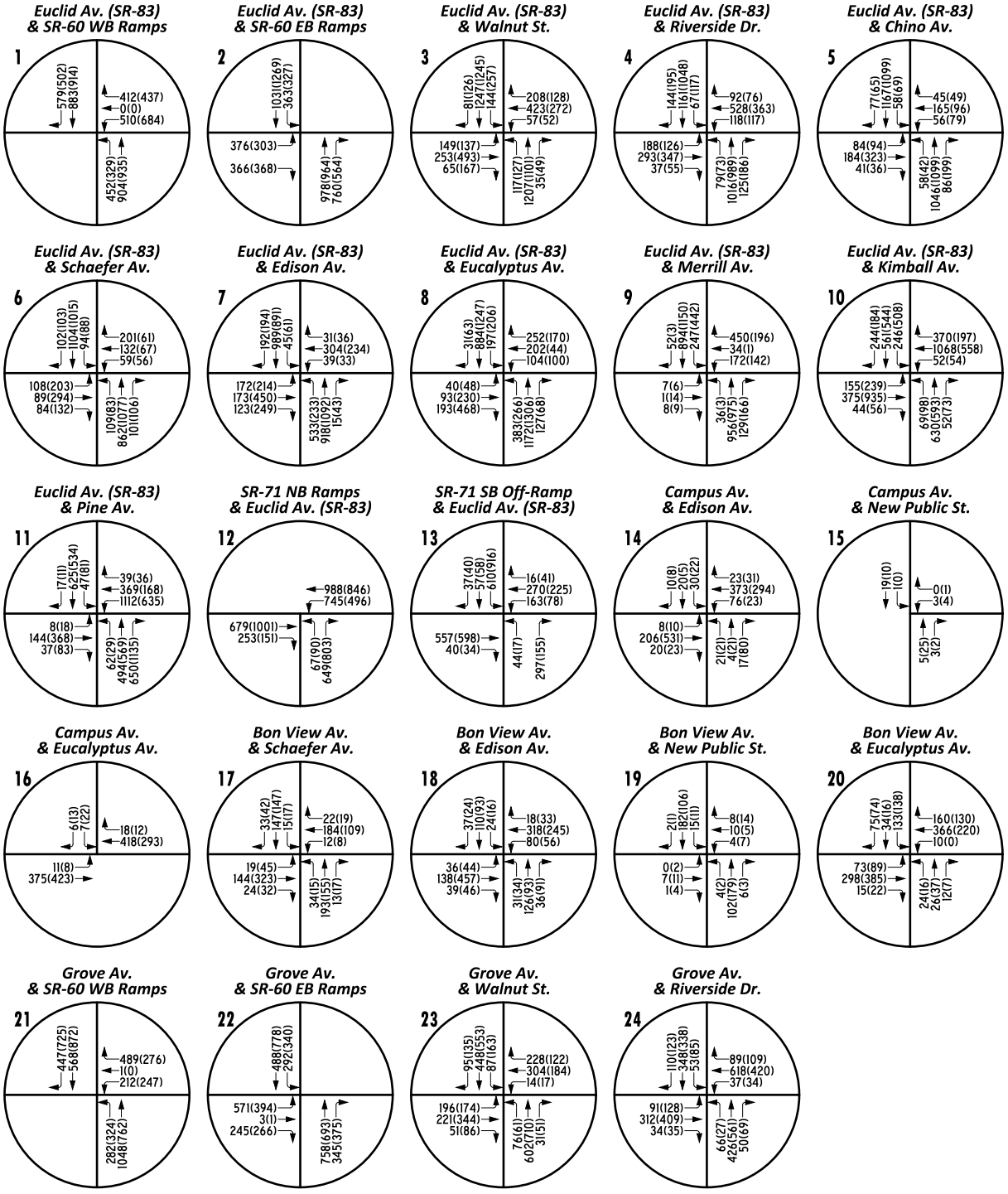
EXHIBIT 6-4 : OPENING YEAR (2031) WITHOUT PROJECT INTERSECTION VOLUMES (PCE) (2 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

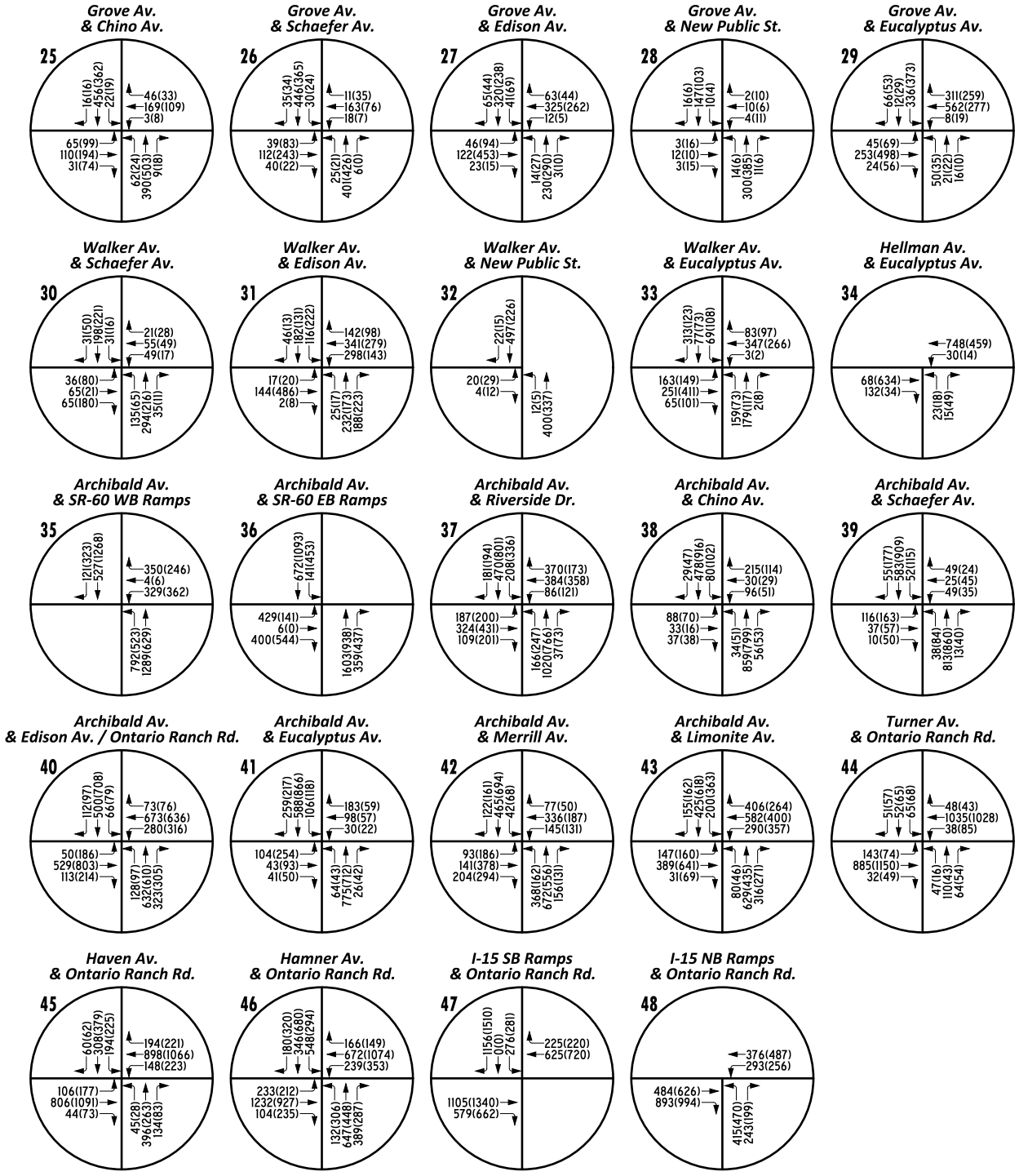
EXHIBIT 6-5 : OPENING YEAR (2031) WITH PROJECT INTERSECTION VOLUMES (PCE) (1 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

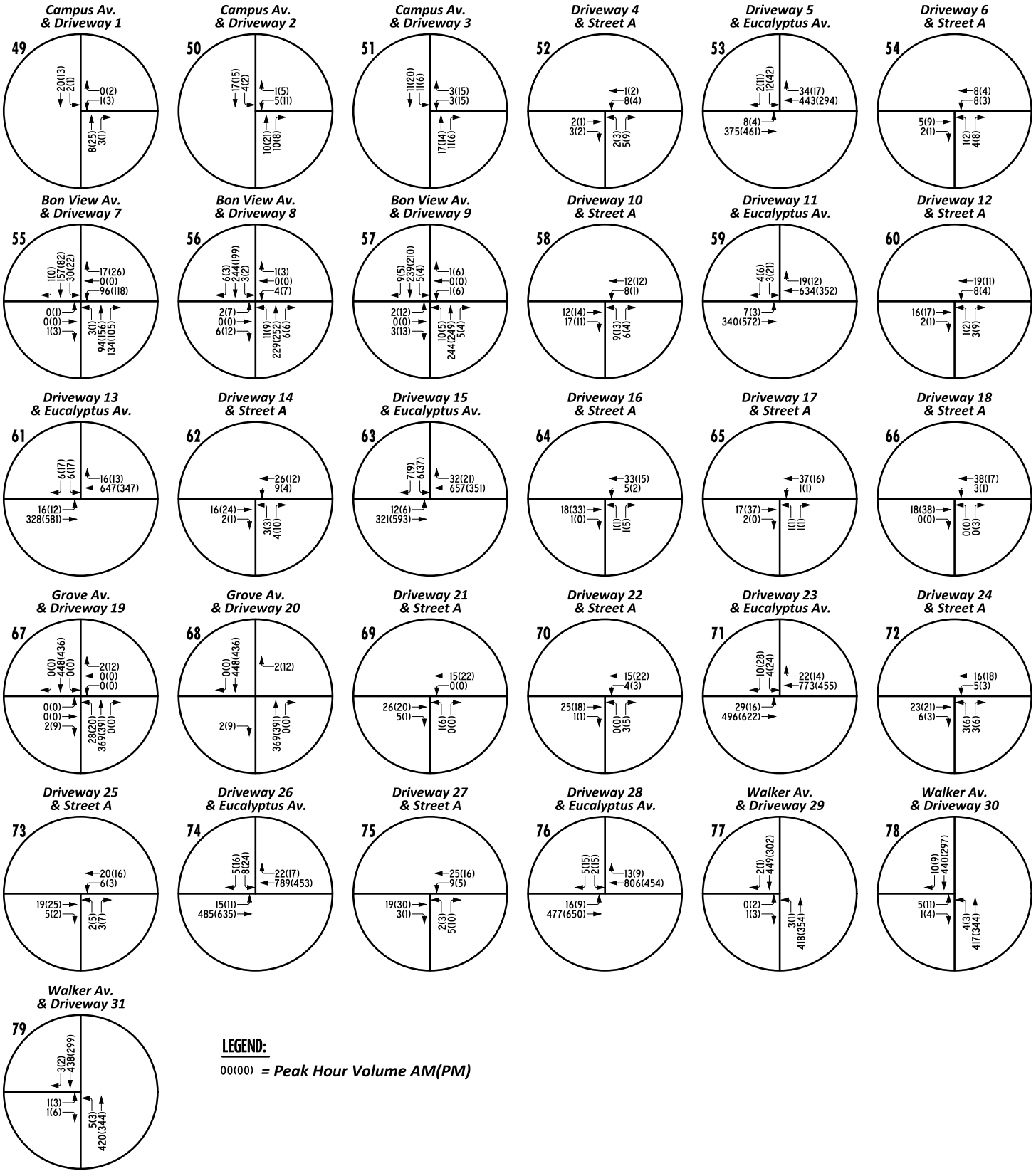
EXHIBIT 6-5 : OPENING YEAR (2031) WITH PROJECT INTERSECTION VOLUMES (PCE) (2 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

EXHIBIT 6-6 : OPENING YEAR (2031) WITH PROJECT DRIVEWAY VOLUMES (PCE)



APPENDIX 6.2:

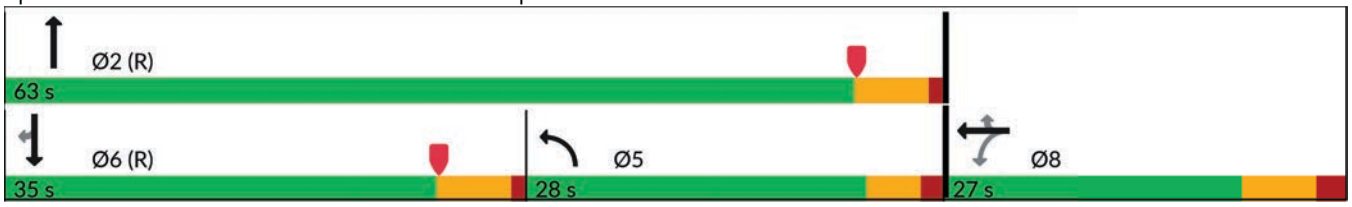
OPENING YEAR (2031) WITHOUT PROJECT INTERSECTION ANALYSIS

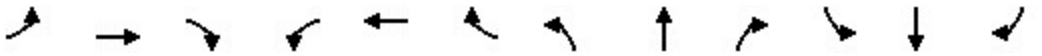
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Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	501	0	412	426	895	863	579
Future Volume (vph)	501	0	412	426	895	863	579
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.0	17.0	17.0	15.2	28.0	27.0	27.0
Total Split (s)	27.0	27.0	27.0	28.0	63.0	35.0	35.0
Total Split (%)	30.0%	30.0%	30.0%	31.1%	70.0%	38.9%	38.9%
Yellow Time (s)	5.0	5.0	5.0	3.7	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	1.5	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	5.2	6.0	6.0	6.0
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	20.0	20.0	20.0	23.0	57.0	28.8	28.8
Actuated g/C Ratio	0.22	0.22	0.22	0.26	0.63	0.32	0.32
v/c Ratio	0.97	0.77	0.67	1.08	0.43	0.82	0.70
Control Delay (s/veh)	78.2	35.7	23.3	83.8	4.3	35.7	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	78.2	35.7	23.3	83.8	4.3	35.7	7.8
LOS	E	D	C	F	A	D	A
Approach Delay (s/veh)		46.5			29.9	24.5	
Approach LOS		D			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36.8 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay (s/veh): 31.9	Intersection LOS: C
Intersection Capacity Utilization 107.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 1: Euclid Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	501	0	412	426	895	0	0	863	579
Future Volume (veh/h)	0	0	0	501	0	412	426	895	0	0	863	579
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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				1700	1800	1800	1700	1800	0	0	1800	1800
Adj Flow Rate, veh/h				614	0	197	444	932	0	0	899	373
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				693	0	326	434	2194	0	0	1050	455
Arrive On Green				0.21	0.00	0.21	0.54	1.00	0.00	0.00	0.31	0.31
Sat Flow, veh/h				3238	0	1525	1619	3510	0	0	3510	1481
Grp Volume(v), veh/h				614	0	197	444	932	0	0	899	373
Grp Sat Flow(s),veh/h/ln				1619	0	1525	1619	1710	0	0	1710	1481
Q Serve(g_s), s				16.6	0.0	10.5	24.1	0.0	0.0	0.0	22.2	21.0
Cycle Q Clear(g_c), s				16.6	0.0	10.5	24.1	0.0	0.0	0.0	22.2	21.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				693	0	326	434	2194	0	0	1050	455
V/C Ratio(X)				0.89	0.00	0.60	1.02	0.42	0.00	0.00	0.86	0.82
Avail Cap(c_a), veh/h				720	0	339	434	2194	0	0	1102	477
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	0.21	0.21	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.3	0.0	31.9	20.9	0.0	0.0	0.0	29.3	28.9
Incr Delay (d2), s/veh				12.9	0.0	3.5	26.1	0.1	0.0	0.0	9.0	15.2
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				7.6	0.0	4.1	8.0	0.0	0.0	0.0	9.7	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				47.2	0.0	35.4	47.0	0.1	0.0	0.0	38.3	44.1
LnGrp LOS				D		D	F	A			D	D
Approach Vol, veh/h					811			1376			1272	
Approach Delay, s/veh					44.3			15.2			40.0	
Approach LOS					D			B			D	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	63.7		30.1	33.6		26.3						
Change Period (Y+Rc), s	6.0		6.0	* 6		7.0						
Max Green Setting (Gmax), s	57.0		22.8	* 29		20.0						
Max Q Clear Time (g_c+I1), s	2.0		26.1	24.2		18.6						
Green Ext Time (p_c), s	11.2		0.0	3.4		0.7						

Intersection Summary	
HCM 7th Control Delay, s/veh	31.2
HCM 7th LOS	C

Notes

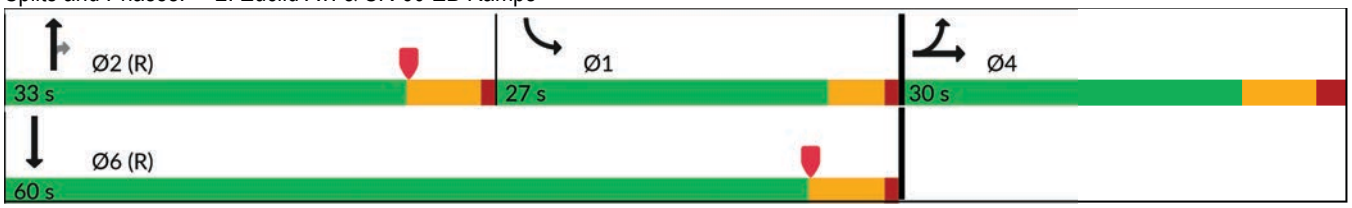
User approved volume balancing among the lanes for turning movement.

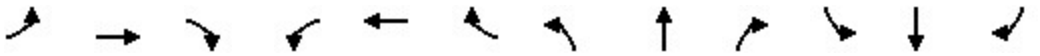
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	376	6	943	748	363	1003
Future Volume (vph)	376	6	943	748	363	1003
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	27.7	27.7	26.0	26.0	14.7	24.0
Total Split (s)	30.0	30.0	33.0	33.0	27.0	60.0
Total Split (%)	33.3%	33.3%	36.7%	36.7%	30.0%	66.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.7	5.0
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	22.8	22.8	27.2	27.2	22.3	54.2
Actuated g/C Ratio	0.25	0.25	0.30	0.30	0.25	0.60
v/c Ratio	0.92	0.84	0.96	0.88	0.96	0.51
Control Delay (s/veh)	63.4	41.0	52.0	19.5	61.0	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.3
Total Delay (s/veh)	63.4	41.0	52.0	19.5	61.0	9.0
LOS	E	D	D	B	E	A
Approach Delay (s/veh)		51.9	37.6			22.8
Approach LOS		D	D			C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36.6 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 34.9	Intersection LOS: C
Intersection Capacity Utilization 107.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	376	6	316	0	0	0	0	943	748	363	1003	0
Future Volume (veh/h)	376	6	316	0	0	0	0	943	748	363	1003	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1700	1800	1800				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	336	89	271				0	993	561	382	1056	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	403	98	297				0	1026	458	418	2136	0
Arrive On Green	0.25	0.25	0.25				0.00	0.30	0.30	0.52	1.00	0.00
Sat Flow, veh/h	1619	392	1193				0	3510	1525	1619	3510	0
Grp Volume(v), veh/h	336	0	360				0	993	561	382	1056	0
Grp Sat Flow(s),veh/h/ln	1619	0	1585				0	1710	1525	1619	1710	0
Q Serve(g_s), s	17.7	0.0	19.9				0.0	25.8	27.0	19.5	0.0	0.0
Cycle Q Clear(g_c), s	17.7	0.0	19.9				0.0	25.8	27.0	19.5	0.0	0.0
Prop In Lane	1.00		0.75				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	403	0	395				0	1026	458	418	2136	0
V/C Ratio(X)	0.83	0.00	0.91				0.00	0.97	1.23	0.91	0.49	0.00
Avail Cap(c_a), veh/h	414	0	405				0	1026	458	418	2136	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	0.58	0.58	0.39	0.39	0.00
Uniform Delay (d), s/veh	32.0	0.0	32.8				0.0	31.1	31.5	20.9	0.0	0.0
Incr Delay (d2), s/veh	13.9	0.0	24.6				0.0	15.0	112.8	11.9	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	8.3	0.0	10.1				0.0	11.9	23.4	5.8	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.9	0.0	57.4				0.0	46.1	144.3	32.8	0.3	0.0
LnGrp LOS	D		E					D	F	C	A	
Approach Vol, veh/h		696						1554			1438	
Approach Delay, s/veh		51.9						81.5			8.9	
Approach LOS		D						F			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	29.2	33.0		29.4		62.2
Change Period (Y+Rc), s	6.0	* 6		7.0		6.0
Max Green Setting (Gmax), s	22.3	* 27		23.0		54.0
Max Q Clear Time (g_c+I1), s	21.5	29.0		21.9		2.0
Green Ext Time (p_c), s	0.1	0.0		0.6		13.4

Intersection Summary	
HCM 7th Control Delay, s/veh	47.6
HCM 7th LOS	D

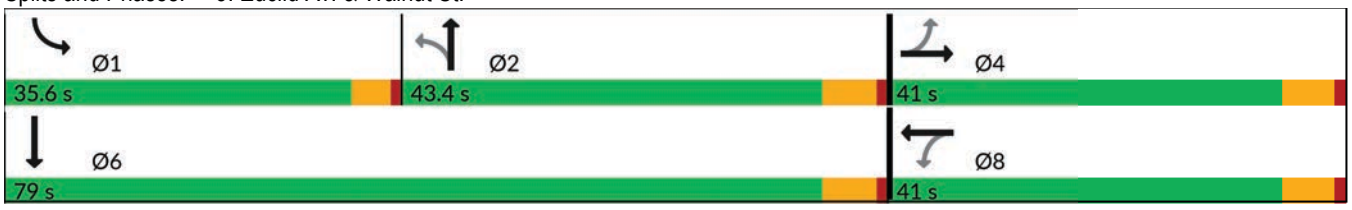
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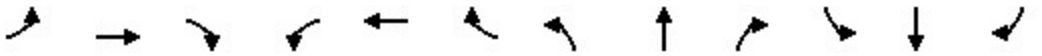
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	153	256	57	415	117	1165	140	1179
Future Volume (vph)	153	256	57	415	117	1165	140	1179
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	41.0	41.0	41.0	41.0	43.4	43.4	35.6	79.0
Total Split (%)	34.2%	34.2%	34.2%	34.2%	36.2%	36.2%	29.7%	65.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	35.2	35.2	35.2	35.2	37.6	37.6	9.6	51.8
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.38	0.38	0.10	0.53
v/c Ratio	1.01	0.30	0.20	0.57	1.12	0.71	0.55	0.55
Control Delay (s/veh)	105.6	22.2	24.9	25.3	151.7	28.7	49.8	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	105.6	22.2	24.9	25.3	151.7	28.7	49.8	16.3
LOS	F	C	C	C	F	C	D	B
Approach Delay (s/veh)		49.2		25.3		39.6		19.7
Approach LOS		D		C		D		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay (s/veh): 31.1	Intersection LOS: C
Intersection Capacity Utilization 82.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	256	64	57	415	200	117	1165	35	140	1179	81
Future Volume (veh/h)	153	256	64	57	415	200	117	1165	35	140	1179	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	170	284	53	63	461	221	130	1294	18	156	1310	70
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	1054	194	371	822	391	199	1954	27	218	2447	131
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.39	0.39	0.39	0.07	0.51	0.51
Sat Flow, veh/h	728	2878	529	1001	2245	1068	377	4994	69	2956	4771	255
Grp Volume(v), veh/h	170	167	170	63	350	332	130	849	463	156	899	481
Grp Sat Flow(s),veh/h/ln	728	1710	1697	1001	1710	1604	377	1638	1787	1478	1638	1750
Q Serve(g_s), s	19.3	6.6	6.8	4.5	15.7	15.9	31.6	20.5	20.5	5.0	17.7	17.7
Cycle Q Clear(g_c), s	35.2	6.6	6.8	11.3	15.7	15.9	37.6	20.5	20.5	5.0	17.7	17.7
Prop In Lane	1.00		0.31	1.00		0.67	1.00		0.04	1.00		0.15
Lane Grp Cap(c), veh/h	221	626	622	371	626	587	199	1282	699	218	1680	898
V/C Ratio(X)	0.77	0.27	0.27	0.17	0.56	0.56	0.65	0.66	0.66	0.72	0.54	0.54
Avail Cap(c_a), veh/h	221	626	622	371	626	587	199	1282	699	954	2496	1333
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	21.4	21.4	25.4	24.3	24.3	33.0	24.0	24.0	43.5	15.7	15.7
Incr Delay (d2), s/veh	15.0	0.2	0.2	0.2	1.1	1.3	7.5	1.3	2.3	1.6	0.3	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(50%),veh/ln	4.9	2.5	2.6	1.0	6.1	5.8	3.3	7.5	8.4	1.8	5.9	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.8	21.6	21.7	25.6	25.4	25.6	40.5	25.3	26.4	45.2	16.0	16.2
LnGrp LOS	D	C	C	C	C	C	D	C	C	D	B	B
Approach Vol, veh/h		507			745			1442			1536	
Approach Delay, s/veh		32.7			25.5			27.0			19.0	
Approach LOS		C			C			C			B	

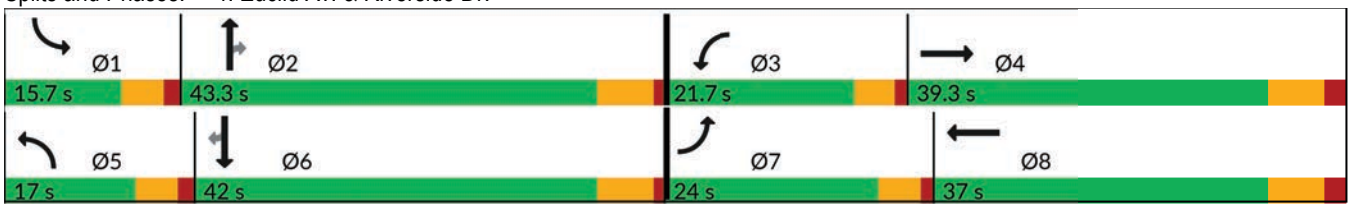
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.7	43.4		41.0		55.1		41.0				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	37.6		35.2		73.2		35.2				
Max Q Clear Time (g_c+I1), s	7.0	39.6		37.2		19.7		17.9				
Green Ext Time (p_c), s	0.2	0.0		0.0		11.8		3.9				

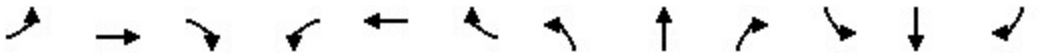
Intersection Summary			
HCM 7th Control Delay, s/veh		24.5	
HCM 7th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	188	282	118	515	79	983	125	65	1093	141
Future Volume (vph)	188	282	118	515	79	983	125	65	1093	141
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	33.0	15.2	36.0	36.0
Total Split (s)	24.0	39.3	21.7	37.0	17.0	43.3	43.3	15.7	42.0	42.0
Total Split (%)	20.0%	32.8%	18.1%	30.8%	14.2%	36.1%	36.1%	13.1%	35.0%	35.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	5.0	3.7	5.0	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	6.0	5.2	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.0	29.1	14.1	26.2	11.1	37.7	37.7	10.4	37.0	37.0
Actuated g/C Ratio	0.15	0.26	0.13	0.24	0.10	0.34	0.34	0.09	0.33	0.33
v/c Ratio	0.79	0.71	0.60	0.78	0.51	0.88	0.22	0.45	1.00	0.25
Control Delay (s/veh)	69.8	46.5	61.1	47.0	62.5	46.6	6.8	61.7	65.0	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.8	46.5	61.1	47.0	62.5	46.6	6.8	61.7	65.0	9.0
LOS	E	D	E	D	E	D	A	E	E	A
Approach Delay (s/veh)		55.1		49.3		43.4			58.7	
Approach LOS		E		D		D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay (s/veh): 51.5	Intersection LOS: D
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	282	37	118	515	89	79	983	125	65	1093	141
Future Volume (veh/h)	188	282	37	118	515	89	79	983	125	65	1093	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	196	294	16	123	536	51	82	1024	89	68	1139	81
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	406	22	180	672	64	140	1189	530	133	1174	517
Arrive On Green	0.14	0.24	0.24	0.11	0.21	0.21	0.09	0.35	0.35	0.08	0.34	0.34
Sat Flow, veh/h	1619	1690	92	1619	3152	299	1619	3420	1523	1619	3420	1505
Grp Volume(v), veh/h	196	0	310	123	290	297	82	1024	89	68	1139	81
Grp Sat Flow(s),veh/h/ln	1619	0	1782	1619	1710	1741	1619	1710	1523	1619	1710	1505
Q Serve(g_s), s	12.4	0.0	16.8	7.7	16.9	17.0	5.1	29.2	4.2	4.2	34.4	3.9
Cycle Q Clear(g_c), s	12.4	0.0	16.8	7.7	16.9	17.0	5.1	29.2	4.2	4.2	34.4	3.9
Prop In Lane	1.00		0.05	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	0	428	180	365	371	140	1189	530	133	1174	517
V/C Ratio(X)	0.88	0.00	0.72	0.68	0.80	0.80	0.58	0.86	0.17	0.51	0.97	0.16
Avail Cap(c_a), veh/h	298	0	549	262	489	498	182	1217	542	162	1174	517
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	0.0	36.6	44.8	39.1	39.1	46.1	31.8	23.7	46.1	33.9	23.9
Incr Delay (d2), s/veh	16.2	0.0	4.2	1.7	7.7	7.8	3.8	6.4	0.1	3.0	19.4	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(50%),veh/ln	5.8	0.0	7.5	3.1	7.5	7.7	2.1	12.0	1.5	1.8	16.5	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.5	0.0	40.8	46.5	46.8	47.0	49.9	38.2	23.8	49.1	53.3	24.0
LnGrp LOS	E		D	D	D	D	D	D	C	D	D	C
Approach Vol, veh/h		506			710			1195			1288	
Approach Delay, s/veh		48.4			46.8			38.0			51.2	
Approach LOS		D			D			D			D	

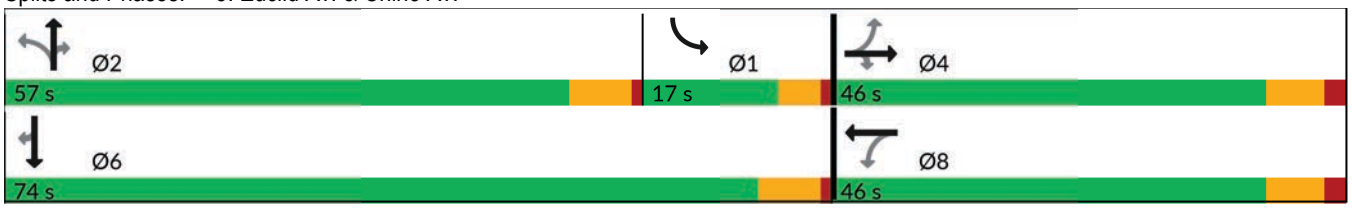
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	42.5	16.4	32.2	14.3	42.0	19.2	29.4
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	10.5	37.3	17.0	32.3	11.8	36.0	19.3	30.0
Max Q Clear Time (g_c+I1), s	6.2	31.2	9.7	18.8	7.1	36.4	14.4	19.0
Green Ext Time (p_c), s	0.0	3.2	0.1	1.9	0.1	0.0	0.1	3.3

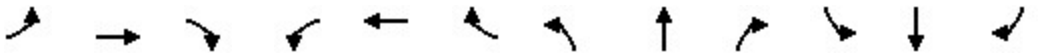
Intersection Summary	
HCM 7th Control Delay, s/veh	45.7
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	86	183	42	56	161	57	1014	86	56	1099	75
Future Volume (vph)	86	183	42	56	161	57	1014	86	56	1099	75
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	46.0	46.0	46.0	46.0	46.0	57.0	57.0	57.0	17.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	47.5%	47.5%	47.5%	14.2%	61.7%	61.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2		7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	22.0	22.0	22.0		22.0	36.9	36.9	36.9	11.6	48.1	48.1
Actuated g/C Ratio	0.26	0.26	0.26		0.26	0.43	0.43	0.43	0.14	0.56	0.56
v/c Ratio	0.43	0.43	0.10		0.72	0.54	0.75	0.13	0.28	0.62	0.09
Control Delay (s/veh)	37.8	33.0	0.9		42.6	42.5	25.3	4.1	46.4	13.9	2.9
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.8	33.0	0.9		42.6	42.5	25.3	4.1	46.4	13.9	2.9
LOS	D	C	A		D	D	C	A	D	B	A
Approach Delay (s/veh)		30.0			42.6		24.6			14.7	
Approach LOS		C			D		C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay (s/veh): 22.6	Intersection LOS: C
Intersection Capacity Utilization 88.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	183	42	56	161	44	57	1014	86	56	1099	75
Future Volume (veh/h)	86	183	42	56	161	44	57	1014	86	56	1099	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	93	199	24	61	175	40	62	1102	77	61	1195	50
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	229	431	365	99	228	47	182	1532	683	141	2079	927
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.45	0.45	0.45	0.09	0.61	0.61
Sat Flow, veh/h	1119	1800	1525	210	952	197	429	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	93	199	24	276	0	0	62	1102	77	61	1195	50
Grp Sat Flow(s),veh/h/ln	1119	1800	1525	1359	0	0	429	1710	1525	1619	1710	1525
Q Serve(g_s), s	0.0	8.5	1.1	9.6	0.0	0.0	11.6	23.5	2.6	3.2	18.9	1.2
Cycle Q Clear(g_c), s	14.6	8.5	1.1	18.0	0.0	0.0	30.4	23.5	2.6	3.2	18.9	1.2
Prop In Lane	1.00		1.00	0.22		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	229	431	365	374	0	0	182	1532	683	141	2079	927
V/C Ratio(X)	0.41	0.46	0.07	0.74	0.00	0.00	0.34	0.72	0.11	0.43	0.57	0.05
Avail Cap(c_a), veh/h	446	780	661	679	0	0	232	1929	860	222	2579	1150
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	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	29.1	26.3	33.0	0.0	0.0	30.4	20.1	14.4	38.8	10.6	7.1
Incr Delay (d2), s/veh	1.2	0.8	0.1	2.9	0.0	0.0	1.1	1.0	0.1	0.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.6	0.4	5.7	0.0	0.0	1.1	8.1	0.8	1.2	5.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.6	29.9	26.4	35.9	0.0	0.0	31.5	21.1	14.4	39.5	10.8	7.1
LnGrp LOS	C	C	C	D			C	C	B	D	B	A
Approach Vol, veh/h		316			276			1241			1306	
Approach Delay, s/veh		30.4			35.9			21.2			12.0	
Approach LOS		C			D			C			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.3	46.6		28.6		60.9		28.6				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	12.3	* 51		38.8		67.5		38.8				
Max Q Clear Time (g_c+I1), s	5.2	32.4		16.6		20.9		20.0				
Green Ext Time (p_c), s	0.0	7.7		1.4		9.8		1.4				

Intersection Summary			
HCM 7th Control Delay, s/veh		19.6	
HCM 7th LOS		B	

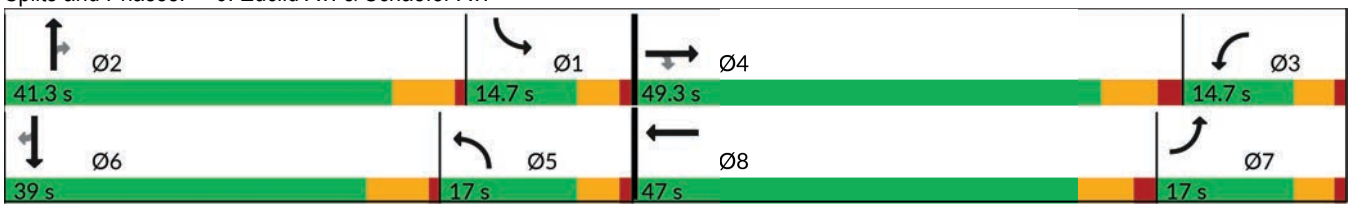
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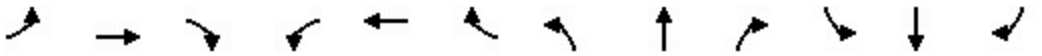
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	108	88	72	58	131	106	831	100	92	1036	102
Future Volume (vph)	108	88	72	58	131	106	831	100	92	1036	102
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	29.5	14.7	37.5	37.5
Total Split (s)	17.0	49.3	49.3	14.7	47.0	17.0	41.3	41.3	14.7	39.0	39.0
Total Split (%)	14.2%	41.1%	41.1%	12.3%	39.2%	14.2%	34.4%	34.4%	12.3%	32.5%	32.5%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	11.4	19.6	19.6	19.2	24.0	11.4	31.3	31.3	12.9	32.9	32.9
Actuated g/C Ratio	0.11	0.19	0.19	0.19	0.23	0.11	0.30	0.30	0.13	0.32	0.32
v/c Ratio	0.65	0.28	0.20	0.21	0.81	0.64	0.86	0.20	0.49	1.02	0.20
Control Delay (s/veh)	64.0	40.3	2.8	40.0	44.8	63.2	43.7	5.2	56.0	68.5	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.0	40.3	2.8	40.0	44.8	63.2	43.7	5.2	56.0	68.5	5.6
LOS	E	D	A	D	D	E	D	A	E	E	A
Approach Delay (s/veh)		39.8			44.1		41.9			62.4	
Approach LOS		D			D		D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay (s/veh): 50.6	Intersection LOS: D
Intersection Capacity Utilization 85.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	88	72	58	131	196	106	831	100	92	1036	102
Future Volume (veh/h)	108	88	72	58	131	196	106	831	100	92	1036	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	116	95	39	62	141	192	114	894	90	99	1114	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	160	180	153	373	160	218	159	1043	464	208	1145	510
Arrive On Green	0.10	0.10	0.10	0.23	0.23	0.23	0.10	0.31	0.31	0.13	0.33	0.33
Sat Flow, veh/h	1619	1800	1525	1619	690	940	1619	3420	1520	1619	3420	1523
Grp Volume(v), veh/h	116	95	39	62	0	333	114	894	90	99	1114	55
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	0	1631	1619	1710	1520	1619	1710	1523
Q Serve(g_s), s	6.8	4.9	2.3	3.0	0.0	19.1	6.6	23.9	4.2	5.5	31.2	2.4
Cycle Q Clear(g_c), s	6.8	4.9	2.3	3.0	0.0	19.1	6.6	23.9	4.2	5.5	31.2	2.4
Prop In Lane	1.00		1.00	1.00		0.58	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	180	153	373	0	379	159	1043	464	208	1145	510
V/C Ratio(X)	0.73	0.53	0.25	0.17	0.00	0.88	0.72	0.86	0.19	0.48	0.97	0.11
Avail Cap(c_a), veh/h	205	785	665	373	0	672	205	1226	545	208	1145	510
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	41.5	40.3	29.9	0.0	35.9	42.4	31.7	24.9	39.3	31.8	22.3
Incr Delay (d2), s/veh	5.8	1.8	0.6	0.1	0.0	5.1	5.0	5.5	0.2	0.6	20.2	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(50%),veh/ln	2.8	2.2	0.9	1.1	0.0	7.7	2.7	9.7	1.5	2.1	14.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.2	43.2	41.0	29.9	0.0	41.0	47.5	37.2	25.1	39.9	52.1	22.4
LnGrp LOS	D	D	D	C		D	D	D	C	D	D	C
Approach Vol, veh/h		250			395			1098			1268	
Approach Delay, s/veh		45.2			39.3			37.3			49.8	
Approach LOS		D			D			D			D	

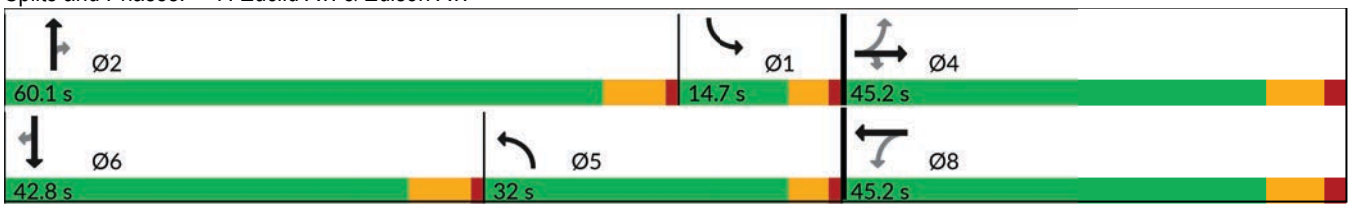
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	36.1	27.1	16.7	14.2	39.0	14.3	29.5
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	10.0	34.8	10.0	42.3	12.3	32.5	12.3	40.0
Max Q Clear Time (g_c+I1), s	7.5	25.9	5.0	6.9	8.6	33.2	8.8	21.1
Green Ext Time (p_c), s	0.0	3.7	0.0	0.4	0.0	0.0	0.0	1.4

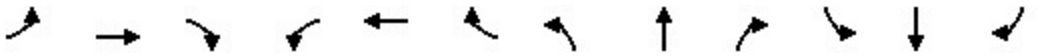
Intersection Summary	
HCM 7th Control Delay, s/veh	43.5
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	172	182	95	87	360	470	810	49	54	899	192
Future Volume (vph)	172	182	95	87	360	470	810	49	54	899	192
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	44.2	44.2	44.2	45.2	45.2	14.7	26.5	26.5	14.7	37.5	37.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	32.0	60.1	60.1	14.7	42.8	42.8
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	26.7%	50.1%	50.1%	12.3%	35.7%	35.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	38.1	38.1	38.1	38.1	38.1	23.0	42.5	42.5	18.9	35.1	35.1
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33	0.20	0.37	0.37	0.16	0.31	0.31
v/c Ratio	1.61	0.32	0.17	0.28	0.84	0.85	0.68	0.09	0.22	0.91	0.35
Control Delay (s/veh)	337.4	31.8	2.8	32.6	50.2	58.3	35.0	2.2	44.8	52.5	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	337.4	31.8	2.8	32.6	50.2	58.3	35.0	2.2	44.8	52.5	10.6
LOS	F	C	A	C	D	E	D	A	D	D	B
Approach Delay (s/veh)		142.6			47.4		42.0			45.1	
Approach LOS		F			D		D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114.7	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.61	
Intersection Signal Delay (s/veh): 56.9	Intersection LOS: E
Intersection Capacity Utilization 101.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 7: Euclid Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	182	95	87	360	103	470	810	49	54	899	192
Future Volume (veh/h)	172	182	95	87	360	103	470	810	49	54	899	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	183	194	61	93	383	100	500	862	41	57	956	183
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	138	611	518	345	467	122	557	1036	452	313	1052	469
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.19	0.30	0.30	0.19	0.31	0.31
Sat Flow, veh/h	875	1800	1525	1079	1375	359	2956	3420	1493	1619	3420	1525
Grp Volume(v), veh/h	183	194	61	93	0	483	500	862	41	57	956	183
Grp Sat Flow(s),veh/h/ln	875	1800	1525	1079	0	1735	1478	1710	1493	1619	1710	1525
Q Serve(g_s), s	9.5	8.9	3.1	7.8	0.0	28.5	18.5	26.3	2.2	3.3	30.1	10.6
Cycle Q Clear(g_c), s	38.0	8.9	3.1	16.7	0.0	28.5	18.5	26.3	2.2	3.3	30.1	10.6
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	611	518	345	0	589	557	1036	452	313	1052	469
V/C Ratio(X)	1.32	0.32	0.12	0.27	0.00	0.82	0.90	0.83	0.09	0.18	0.91	0.39
Avail Cap(c_a), veh/h	138	611	518	345	0	589	721	1638	715	313	1109	495
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	27.4	25.4	33.6	0.0	33.8	44.4	36.3	28.0	37.8	37.2	30.5
Incr Delay (d2), s/veh	186.6	0.3	0.1	0.4	0.0	9.0	10.1	2.2	0.1	0.1	10.6	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(50%),veh/ln	11.0	3.7	1.1	2.0	0.0	12.8	7.2	10.5	0.8	1.3	13.2	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	240.1	27.7	25.5	34.0	0.0	42.8	54.5	38.5	28.0	37.9	47.8	31.0
LnGrp LOS	F	C	C	C		D	D	D	C	D	D	C
Approach Vol, veh/h		438			576			1403			1196	
Approach Delay, s/veh		116.1			41.4			43.9			44.8	
Approach LOS		F			D			D			D	

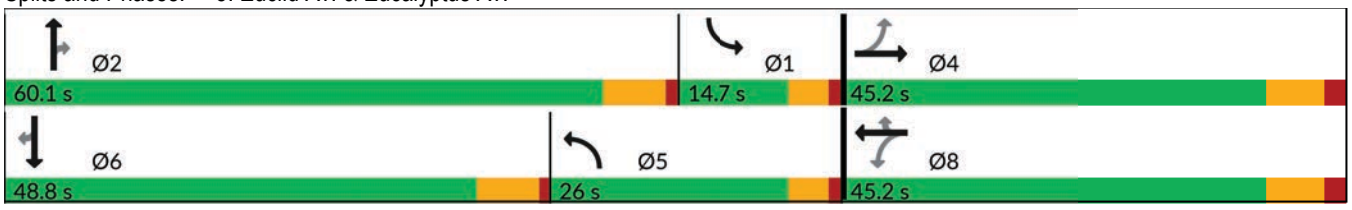
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.3	40.4		45.2	25.8	40.9		45.2				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.0	53.6		38.0	27.3	36.3		38.0				
Max Q Clear Time (g_c+I1), s	5.3	28.3		40.0	20.5	32.1		30.5				
Green Ext Time (p_c), s	0.0	5.6		0.0	0.6	2.4		1.9				

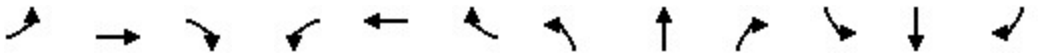
Intersection Summary	
HCM 7th Control Delay, s/veh	52.5
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	40	95	37	199	83	383	1214	36	60	931	31
Future Volume (vph)	40	95	37	199	83	383	1214	36	60	931	31
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	45.2	45.2	44.2	44.2	44.2	14.7	28.5	28.5	14.7	35.5	35.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	26.0	60.1	60.1	14.7	48.8	48.8
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	21.7%	50.1%	50.1%	12.3%	40.7%	40.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.0	18.0	18.0	18.0	18.0	17.4	41.9	41.9	11.0	31.2	31.2
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21	0.20	0.49	0.49	0.13	0.36	0.36
v/c Ratio	0.21	0.40	0.19	0.55	0.21	0.68	0.77	0.05	0.17	0.79	0.05
Control Delay (s/veh)	32.7	12.2	32.4	37.6	2.4	40.8	24.3	0.1	42.1	31.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.7	12.2	32.4	37.6	2.4	40.8	24.3	0.1	42.1	31.2	0.2
LOS	C	B	C	D	A	D	C	A	D	C	A
Approach Delay (s/veh)		14.7		27.8			27.6			30.9	
Approach LOS		B		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay (s/veh): 27.4	Intersection LOS: C
Intersection Capacity Utilization 96.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 8: Euclid Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	95	193	37	199	83	383	1214	36	60	931	31
Future Volume (veh/h)	40	95	193	37	199	83	383	1214	36	60	931	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	0.98		0.91	0.95		0.97	1.00		1.00	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	42	100	162	39	209	67	403	1278	15	63	980	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	310	551	450	304	580	478	519	1460	648	234	1130	500
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.18	0.43	0.43	0.08	0.33	0.33
Sat Flow, veh/h	1042	1710	1395	1017	1800	1484	2956	3420	1518	2956	3420	1512
Grp Volume(v), veh/h	42	100	162	39	209	67	403	1278	15	63	980	22
Grp Sat Flow(s),veh/h/ln	1042	1710	1395	1017	1800	1484	1478	1710	1518	1478	1710	1512
Q Serve(g_s), s	3.5	4.5	9.5	3.3	9.5	3.4	13.9	36.6	0.6	2.1	28.8	1.1
Cycle Q Clear(g_c), s	13.0	4.5	9.5	12.8	9.5	3.4	13.9	36.6	0.6	2.1	28.8	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	310	551	450	304	580	478	519	1460	648	234	1130	500
V/C Ratio(X)	0.14	0.18	0.36	0.13	0.36	0.14	0.78	0.88	0.02	0.27	0.87	0.04
Avail Cap(c_a), veh/h	344	606	494	337	638	526	587	1710	759	276	1350	597
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	26.1	27.8	32.8	27.8	25.8	42.2	28.1	17.8	46.4	33.7	24.4
Incr Delay (d2), s/veh	0.1	0.1	0.4	0.1	0.3	0.1	5.4	4.8	0.0	0.5	5.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.8	3.1	0.8	3.9	1.2	5.2	14.3	0.2	0.8	11.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.0	26.3	28.2	32.9	28.1	25.9	47.6	32.9	17.8	46.9	39.1	24.4
LnGrp LOS	C	C	C	C	C	C	D	C	B	D	D	C
Approach Vol, veh/h		304			315			1696			1065	
Approach Delay, s/veh		28.2			28.2			36.3			39.3	
Approach LOS		C			C			D			D	

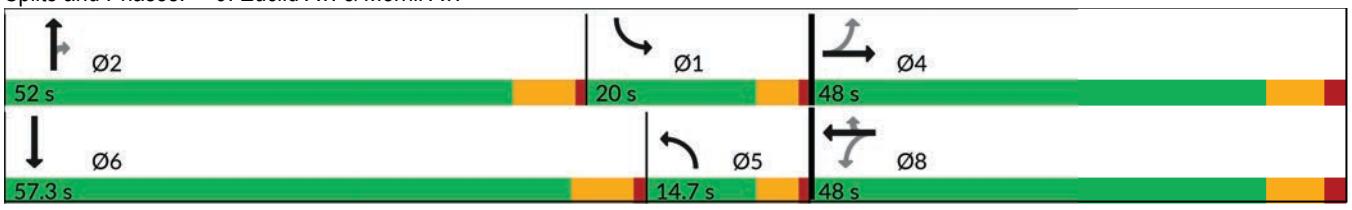
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.2	52.3		41.7	23.5	41.9		41.7				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.0	53.6		38.0	21.3	42.3		38.0				
Max Q Clear Time (g_c+I1), s	4.1	38.6		15.0	15.9	30.8		14.8				
Green Ext Time (p_c), s	0.0	7.1		1.3	0.5	4.6		1.1				

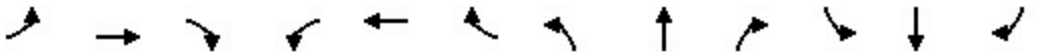
Intersection Summary		
HCM 7th Control Delay, s/veh		35.7
HCM 7th LOS		D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	7	1	169	34	452	35	902	130	253	872
Future Volume (vph)	7	1	169	34	452	35	902	130	253	872
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		4		8		5	2		1	6
Permitted Phases	4		8		8			2		
Detector Phase	4	4	8	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	47.2	47.2	47.2	14.7	28.5	28.5	14.7	28.5
Total Split (s)	48.0	48.0	48.0	48.0	48.0	14.7	52.0	52.0	20.0	57.3
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	12.3%	43.3%	43.3%	16.7%	47.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		26.1	26.1	26.1	26.1	12.2	35.3	35.3	13.6	44.8
Actuated g/C Ratio		0.28	0.28	0.28	0.28	0.13	0.37	0.37	0.14	0.47
v/c Ratio		0.04	0.54	0.08	0.88	0.19	0.79	0.24	0.67	0.65
Control Delay (s/veh)		18.8	36.5	27.0	36.5	47.6	32.9	12.3	51.0	24.9
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		18.8	36.5	27.0	36.5	47.6	32.9	12.3	51.0	24.9
LOS		B	D	C	D	D	C	B	D	C
Approach Delay (s/veh)		18.8		36.0			30.8			30.5
Approach LOS		B		D			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.6	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay (s/veh): 31.8	Intersection LOS: C
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Euclid Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1	8	169	34	452	35	902	130	253	872	52
Future Volume (veh/h)	7	1	8	169	34	452	35	902	130	253	872	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1800	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	8	1	8	190	38	342	39	1013	124	284	980	57
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	42	156	441	461	386	215	1293	565	380	1226	71
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.13	0.38	0.38	0.13	0.37	0.37
Sat Flow, veh/h	520	164	608	1349	1800	1506	1619	3420	1493	2956	3280	191
Grp Volume(v), veh/h	17	0	0	190	38	342	39	1013	124	284	511	526
Grp Sat Flow(s),veh/h/ln	1292	0	0	1349	1800	1506	1619	1710	1493	1478	1710	1760
Q Serve(g_s), s	0.0	0.0	0.0	8.7	1.2	17.0	1.7	20.3	4.4	7.2	20.7	20.7
Cycle Q Clear(g_c), s	0.6	0.0	0.0	9.3	1.2	17.0	1.7	20.3	4.4	7.2	20.7	20.7
Prop In Lane	0.47		0.47	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	399	0	0	441	461	386	215	1293	565	380	639	658
V/C Ratio(X)	0.04	0.00	0.00	0.43	0.08	0.89	0.18	0.78	0.22	0.75	0.80	0.80
Avail Cap(c_a), veh/h	735	0	0	804	947	792	215	2006	876	583	1120	1153
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	0.0	24.9	21.9	27.8	29.9	21.3	16.4	32.6	21.7	21.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	2.8	0.1	1.1	0.2	1.1	2.4	2.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	2.7	0.5	5.7	0.6	7.0	1.3	2.4	7.3	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.7	0.0	0.0	25.1	22.0	30.5	30.0	22.4	16.6	33.7	24.1	24.0
LnGrp LOS	C			C	C	C	C	C	B	C	C	C
Approach Vol, veh/h		17			570			1176			1321	
Approach Delay, s/veh		21.7			28.2			22.1			26.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	35.8		27.1	15.0	35.5		27.1				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	15.3	45.5		40.8	10.0	50.8		40.8				
Max Q Clear Time (g_c+I1), s	9.2	22.3		2.6	3.7	22.7		19.0				
Green Ext Time (p_c), s	0.3	7.0		0.0	0.0	6.3		0.9				

Intersection Summary			
HCM 7th Control Delay, s/veh		24.9	
HCM 7th LOS		C	

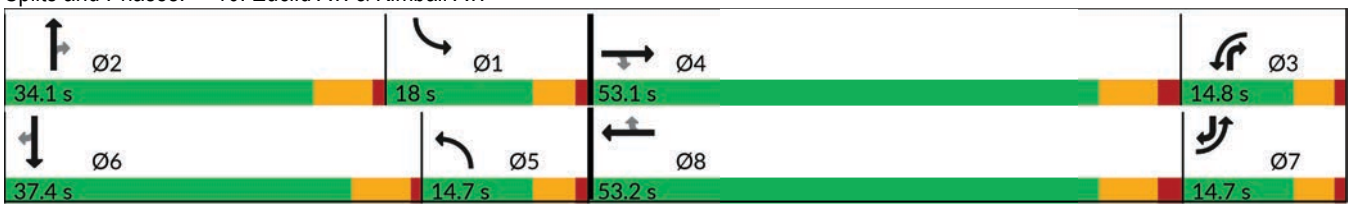
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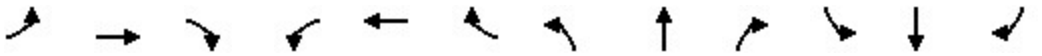
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	376	45	52	1068	369	69	582	52	246	540	242
Future Volume (vph)	155	376	45	52	1068	369	69	582	52	246	540	242
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	14.7	37.4	14.7
Total Split (s)	14.7	53.1	53.1	14.8	53.2	53.2	14.7	34.1	14.8	18.0	37.4	14.7
Total Split (%)	12.3%	44.3%	44.3%	12.3%	44.3%	44.3%	12.3%	28.4%	12.3%	15.0%	31.2%	12.3%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	3.7	5.4	3.7
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	4.7	6.4	4.7
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.1	34.1	34.1	22.4	43.0	43.0	12.2	25.2	53.1	12.7	29.4	41.2
Actuated g/C Ratio	0.09	0.30	0.30	0.20	0.38	0.38	0.11	0.22	0.46	0.11	0.26	0.36
v/c Ratio	0.66	0.41	0.09	0.18	0.92	0.56	0.45	0.86	0.08	0.83	0.68	0.45
Control Delay (s/veh)	65.2	36.0	0.4	43.2	47.0	13.3	59.6	55.5	2.4	72.5	44.5	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.2	36.0	0.4	43.2	47.0	13.3	59.6	55.5	2.4	72.5	44.5	21.7
LOS	E	D	A	D	D	B	E	E	A	E	D	C
Approach Delay (s/veh)		41.1			38.5			52.0			45.8	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay (s/veh): 43.4	Intersection LOS: D
Intersection Capacity Utilization 84.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	376	45	52	1068	369	69	582	52	246	540	242
Future Volume (veh/h)	155	376	45	52	1068	369	69	582	52	246	540	242
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1600	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	172	418	30	58	1187	231	77	647	25	273	600	212
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	264	551	245	496	1293	569	184	740	797	323	728	456
Arrive On Green	0.09	0.16	0.16	0.31	0.38	0.38	0.11	0.22	0.22	0.11	0.21	0.21
Sat Flow, veh/h	2956	3420	1523	1619	3420	1504	1619	3420	1525	2956	3420	1504
Grp Volume(v), veh/h	172	418	30	58	1187	231	77	647	25	273	600	212
Grp Sat Flow(s),veh/h/ln	1478	1710	1523	1619	1710	1504	1619	1710	1525	1478	1710	1504
Q Serve(g_s), s	6.3	13.0	1.9	2.9	36.9	12.6	4.9	20.4	0.0	10.1	18.7	2.7
Cycle Q Clear(g_c), s	6.3	13.0	1.9	2.9	36.9	12.6	4.9	20.4	0.0	10.1	18.7	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	551	245	496	1293	569	184	740	797	323	728	456
V/C Ratio(X)	0.65	0.76	0.12	0.12	0.92	0.41	0.42	0.87	0.03	0.85	0.82	0.46
Avail Cap(c_a), veh/h	265	1407	626	496	1410	620	184	846	844	352	950	554
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	44.7	40.1	27.9	33.0	25.5	46.0	42.2	12.9	48.8	41.9	31.6
Incr Delay (d2), s/veh	4.4	2.2	0.2	0.1	8.9	0.2	0.6	9.2	0.0	14.8	4.6	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	5.5	0.7	1.1	15.7	4.3	1.9	9.0	0.3	4.2	7.9	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.6	46.9	40.3	28.0	41.9	25.7	46.6	51.4	12.9	63.6	46.5	32.3
LnGrp LOS	D	D	D	C	D	C	D	D	B	E	D	C
Approach Vol, veh/h		620			1476			749			1085	
Approach Delay, s/veh		48.4			38.8			49.6			48.0	
Approach LOS		D			D			D			D	

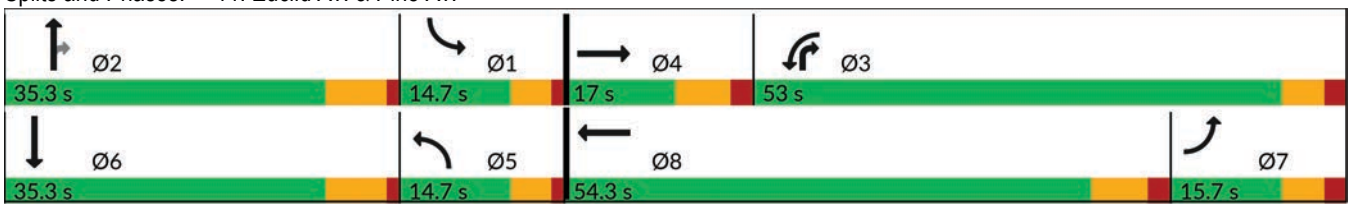
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	30.7	38.9	25.2	17.4	30.2	14.7	49.4
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	13.3	27.6	10.1	45.9	10.0	31.0	10.0	46.0
Max Q Clear Time (g_c+I1), s	12.1	22.4	4.9	15.0	6.9	20.7	8.3	38.9
Green Ext Time (p_c), s	0.1	1.8	0.0	2.6	0.0	3.1	0.0	3.3

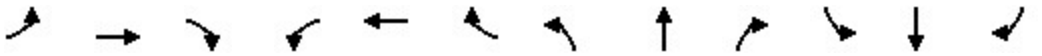
Intersection Summary	
HCM 7th Control Delay, s/veh	44.9
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	8	143	1112	367	62	445	650	47	604
Future Volume (vph)	8	143	1112	367	62	445	650	47	604
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	15.7	17.0	53.0	54.3	14.7	35.3	53.0	14.7	35.3
Total Split (%)	13.1%	14.2%	44.2%	45.3%	12.3%	29.4%	44.2%	12.3%	29.4%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.6	10.1	47.4	59.7	10.1	21.3	75.2	13.7	24.9
Actuated g/C Ratio	0.09	0.09	0.42	0.53	0.09	0.19	0.67	0.12	0.22
v/c Ratio	0.05	1.17	0.95	0.45	0.45	0.73	0.61	0.25	0.87
Control Delay (s/veh)	50.1	167.7	49.4	21.8	62.8	50.8	8.5	51.7	56.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.1	167.7	49.4	21.8	62.8	50.8	8.5	51.7	56.1
LOS	D	F	D	C	E	D	A	D	E
Approach Delay (s/veh)		162.9		42.0		27.7			55.8
Approach LOS		F		D		C			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 113	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay (s/veh): 46.4	Intersection LOS: D
Intersection Capacity Utilization 94.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	143	37	1112	367	39	62	445	650	47	604	17
Future Volume (veh/h)	8	143	37	1112	367	39	62	445	650	47	604	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	8	151	0	1171	386	40	65	468	452	49	636	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	363	161		1214	442	46	125	576	883	192	716	16
Arrive On Green	0.22	0.09	0.00	0.41	0.28	0.28	0.08	0.17	0.17	0.12	0.21	0.21
Sat Flow, veh/h	1619	1800	0	2956	1604	166	1619	3420	1525	1619	3419	75
Grp Volume(v), veh/h	8	151	0	1171	0	426	65	468	452	49	318	332
Grp Sat Flow(s),veh/h/ln	1619	1800	0	1478	0	1770	1619	1710	1525	1619	1710	1784
Q Serve(g_s), s	0.4	9.4	0.0	43.3	0.0	25.7	4.3	14.8	0.0	3.1	20.2	20.3
Cycle Q Clear(g_c), s	0.4	9.4	0.0	43.3	0.0	25.7	4.3	14.8	0.0	3.1	20.2	20.3
Prop In Lane	1.00		0.00	1.00		0.09	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	363	161		1214	0	488	125	576	883	192	358	374
V/C Ratio(X)	0.02	0.94		0.96	0.00	0.87	0.52	0.81	0.51	0.26	0.89	0.89
Avail Cap(c_a), veh/h	363	161		1247	0	747	144	878	1018	192	439	458
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	50.8	0.0	32.2	0.0	38.7	49.7	44.9	14.1	44.9	43.0	43.0
Incr Delay (d2), s/veh	0.0	54.0	0.0	17.2	0.0	8.9	1.2	1.9	0.2	0.3	15.0	14.6
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(50%),veh/ln	0.2	6.5	0.0	17.0	0.0	11.7	1.7	6.1	6.0	1.2	9.5	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.9	104.7	0.0	49.4	0.0	47.6	50.9	46.8	14.3	45.2	58.1	57.7
LnGrp LOS	C	F		D		D	D	D	B	D	E	E
Approach Vol, veh/h		159			1597			985			699	
Approach Delay, s/veh		101.2			49.0			32.1			57.0	
Approach LOS		F			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	25.4	51.8	17.0	13.4	30.0	30.8	37.9
Change Period (Y+Rc), s	4.7	6.5	5.7	7.0	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.0	28.8	47.3	10.0	10.0	28.8	10.0	47.3
Max Q Clear Time (g_c+I1), s	5.1	16.8	45.3	11.4	6.3	22.3	2.4	27.7
Green Ext Time (p_c), s	0.0	2.1	0.7	0.0	0.0	1.2	0.0	3.2

Intersection Summary	
HCM 7th Control Delay, s/veh	48.2
HCM 7th LOS	D

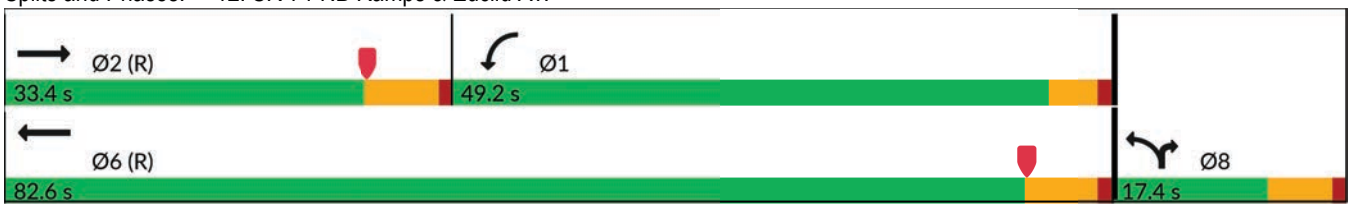
Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	667	745	967	69	615
Future Volume (vph)	667	745	967	69	615
Turn Type	NA	Prot	NA	Prot	Prot
Protected Phases	2	1	6	8	8
Permitted Phases					
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	31.5	12.7	14.5	13.8	13.8
Total Split (s)	33.4	49.2	82.6	17.4	17.4
Total Split (%)	33.4%	49.2%	82.6%	17.4%	17.4%
Yellow Time (s)	5.5	3.7	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.7	6.5	5.8	5.8
Lead/Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	None
Act Effct Green (s)	28.9	44.5	78.1	9.6	9.6
Actuated g/C Ratio	0.29	0.45	0.78	0.10	0.10
v/c Ratio	0.98	1.08	0.38	0.25	0.88
Control Delay (s/veh)	52.5	86.2	4.0	43.5	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.5	86.2	4.0	43.5	18.8
LOS	D	F	A	D	B
Approach Delay (s/veh)	52.5		39.8	21.3	
Approach LOS	D		D	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay (s/veh): 39.5	Intersection LOS: D
Intersection Capacity Utilization 95.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: SR-71 NB Ramps & Euclid Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	667	253	745	967	69	615
Future Volume (veh/h)	667	253	745	967	69	615
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1700	1800	1600	1800
Adj Flow Rate, veh/h	695	0	776	1007	72	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	772		837	2763	204	
Arrive On Green	0.45	0.00	0.52	0.81	0.07	0.00
Sat Flow, veh/h	3600	0	1619	3510	2956	1525
Grp Volume(v), veh/h	695	0	776	1007	72	0
Grp Sat Flow(s),veh/h/ln	1710	0	1619	1710	1478	1525
Q Serve(g_s), s	18.8	0.0	44.4	8.0	2.3	0.0
Cycle Q Clear(g_c), s	18.8	0.0	44.4	8.0	2.3	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	772		837	2763	204	
V/C Ratio(X)	0.90		0.93	0.36	0.35	
Avail Cap(c_a), veh/h	920		837	2763	343	
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.4	0.0	22.4	2.6	44.4	0.0
Incr Delay (d2), s/veh	10.0	0.0	15.9	0.4	1.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	17.7	1.1	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	36.4	0.0	38.3	3.0	45.4	0.0
LnGrp LOS	D		D	A	D	
Approach Vol, veh/h	695			1783	72	
Approach Delay, s/veh	36.4			18.4	45.4	
Approach LOS	D			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	58.2	29.1				87.3	12.7
Change Period (Y+Rc), s	6.5	* 6.5				6.5	5.8
Max Green Setting (Gmax), s	44.5	* 27				76.1	11.6
Max Q Clear Time (g_c+I1), s	46.4	20.8				10.0	4.3
Green Ext Time (p_c), s	0.0	1.8				5.8	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	24.0
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

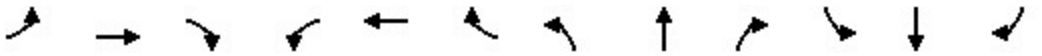
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	545	163	267	44	297	610	59	37
Future Volume (vph)	545	163	267	44	297	610	59	37
Turn Type	NA	Prot	NA	Prot	Prot	Split	NA	Perm
Protected Phases	2	1	6	3	3	4	4	
Permitted Phases								4
Detector Phase	2	1	6	3	3	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	25.2	12.7	27.2	13.5	13.5	34.8	34.8	34.8
Total Split (s)	28.7	18.2	46.9	18.1	18.1	35.0	35.0	35.0
Total Split (%)	28.7%	18.2%	46.9%	18.1%	18.1%	35.0%	35.0%	35.0%
Yellow Time (s)	5.2	3.7	5.2	4.5	4.5	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	4.7	6.2	5.5	5.5	5.8	5.8	5.8
Lead/Lag	Lead	Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	28.0	12.8	45.5	10.5	10.5	26.5	26.5	26.5
Actuated g/C Ratio	0.28	0.13	0.46	0.11	0.11	0.27	0.27	0.27
v/c Ratio	0.65	0.83	0.18	0.27	0.83	0.87	0.81	0.07
Control Delay (s/veh)	36.8	69.5	16.0	44.5	30.0	57.0	49.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.8	69.5	16.0	44.5	30.0	57.0	49.3	0.3
LOS	D	E	B	D	C	E	D	A
Approach Delay (s/veh)	36.8		36.3				50.4	
Approach LOS	D		D				D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay (s/veh): 40.5	Intersection LOS: D
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: Euclid Av. & SR-71 SB Off-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	545	41	163	267	0	44	0	297	610	59	37
Future Volume (veh/h)	0	545	41	163	267	0	44	0	297	610	59	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	0	1800	1800	1700	1800	1800	1700	0	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	574	28	172	281	0	46	0	208	686	0	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	652	32	621	2196		0	0	0	771	0	363
Arrive On Green	0.00	0.20	0.20	0.77	1.00	0.00	0.00	0.00	0.00	0.24	0.00	0.24
Sat Flow, veh/h	0	3409	162	1619	3510	0		0		3238	0	1525
Grp Volume(v), veh/h	0	295	307	172	281	0		0.0		686	0	20
Grp Sat Flow(s),veh/h/ln	0	1710	1771	1619	1710	0				1619	0	1525
Q Serve(g_s), s	0.0	16.8	16.8	3.1	0.0	0.0				20.5	0.0	1.0
Cycle Q Clear(g_c), s	0.0	16.8	16.8	3.1	0.0	0.0				20.5	0.0	1.0
Prop In Lane	0.00		0.09	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	336	348	621	2196					771	0	363
V/C Ratio(X)	0.00	0.88	0.88	0.28	0.13					0.89	0.00	0.06
Avail Cap(c_a), veh/h	0	385	398	621	2196					946	0	445
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.94	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	39.0	39.0	7.5	0.0	0.0				36.8	0.0	29.4
Incr Delay (d2), s/veh	0.0	26.3	25.9	0.1	0.1	0.0				8.7	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
%ile BackOfQ(50%),veh/ln	0.0	9.2	9.5	0.9	0.0	0.0				8.9	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	65.3	64.9	7.6	0.1	0.0				45.5	0.0	29.5
LnGrp LOS		E	E	A	A					D		C
Approach Vol, veh/h		602			453						706	
Approach Delay, s/veh		65.1			3.0						45.1	
Approach LOS		E			A						D	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	44.6	25.8		29.6		70.4						
Change Period (Y+Rc), s	6.2	* 6.2		5.8		6.2						
Max Green Setting (Gmax), s	13.5	* 23		29.2		40.7						
Max Q Clear Time (g_c+I1), s	5.1	18.8		22.5		2.0						
Green Ext Time (p_c), s	0.1	0.8		1.3		1.1						

Intersection Summary												
HCM 7th Control Delay, s/veh			41.1									
HCM 7th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	300	15	61	531	23	20	4	13	30	20	10
Future Vol, veh/h	8	300	15	61	531	23	20	4	13	30	20	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	326	16	66	577	25	22	4	14	33	22	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	602	0	0	342	0	0	1072	1086	334	1068	1082	590
Stage 1	-	-	-	-	-	-	352	352	-	722	722	-
Stage 2	-	-	-	-	-	-	721	735	-	346	360	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	985	-	-	1228	-	-	200	218	712	201	219	511
Stage 1	-	-	-	-	-	-	669	635	-	421	434	-
Stage 2	-	-	-	-	-	-	422	429	-	674	630	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	985	-	-	1228	-	-	160	198	712	176	199	511
Mov Cap-2 Maneuver	-	-	-	-	-	-	160	198	-	176	199	-
Stage 1	-	-	-	-	-	-	662	628	-	387	399	-
Stage 2	-	-	-	-	-	-	359	394	-	649	623	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.22	0.8	24.32	30.31
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	226	44	-	-	177	-	-	206
HCM Lane V/C Ratio	0.178	0.009	-	-	0.054	-	-	0.316
HCM Ctrl Dly (s/v)	24.3	8.7	0	-	8.1	0	-	30.3
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.6	0	-	-	0.2	-	-	1.3

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	152	24	51	195	0	7	1	12	0	4	0
Future Vol, veh/h	0	152	24	51	195	0	7	1	12	0	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	165	26	55	212	0	8	1	13	0	4	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	212	0	0	191	0	0	503	501	178	489	514	212
Stage 1	-	-	-	-	-	-	178	178	-	323	323	-
Stage 2	-	-	-	-	-	-	325	323	-	166	191	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1370	-	-	1394	-	-	482	475	870	493	467	833
Stage 1	-	-	-	-	-	-	828	756	-	693	654	-
Stage 2	-	-	-	-	-	-	692	654	-	841	746	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1370	-	-	1394	-	-	456	454	870	463	446	833
Mov Cap-2 Maneuver	-	-	-	-	-	-	456	454	-	463	446	-
Stage 1	-	-	-	-	-	-	828	756	-	662	625	-
Stage 2	-	-	-	-	-	-	656	625	-	827	746	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	1.59	10.84	13.15
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	638	1370	-	-	373	-	-	446
HCM Lane V/C Ratio	0.034	-	-	-	0.04	-	-	0.01
HCM Ctrl Dly (s/v)	10.8	0	-	-	7.7	0	-	13.2
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	150	25	12	175	22	32	187	12	15	135	32
Future Vol, veh/h	20	150	25	12	175	22	32	187	12	15	135	32
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	24	179	30	14	208	26	38	223	14	18	161	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	12.1	12.4	13	11.7
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	10%	6%	8%
Vol Thru, %	81%	77%	84%	74%
Vol Right, %	5%	13%	11%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	231	195	209	182
LT Vol	32	20	12	15
Through Vol	187	150	175	135
RT Vol	12	25	22	32
Lane Flow Rate	275	232	249	217
Geometry Grp	1	1	1	1
Degree of Util (X)	0.432	0.368	0.392	0.342
Departure Headway (Hd)	5.661	5.7	5.673	5.686
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	633	627	629	628
Service Time	3.732	3.772	3.745	3.762
HCM Lane V/C Ratio	0.434	0.37	0.396	0.346
HCM Control Delay, s/veh	13	12.1	12.4	11.7
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.2	1.7	1.9	1.5

Intersection	
Intersection Delay, s/veh	25.4
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	241	24	6	449	27	29	133	13	20	101	47
Future Vol, veh/h	40	241	24	6	449	27	29	133	13	20	101	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	44	268	27	7	499	30	32	148	14	22	112	52
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	18.2	38	14.5	13.9
HCM LOS	C	E	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	13%	1%	12%
Vol Thru, %	76%	79%	93%	60%
Vol Right, %	7%	8%	6%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	305	482	168
LT Vol	29	40	6	20
Through Vol	133	241	449	101
RT Vol	13	24	27	47
Lane Flow Rate	194	339	536	187
Geometry Grp	1	1	1	1
Degree of Util (X)	0.381	0.593	0.882	0.36
Departure Headway (Hd)	7.047	6.301	5.929	6.949
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	508	569	611	515
Service Time	5.13	4.372	3.989	5.035
HCM Lane V/C Ratio	0.382	0.596	0.877	0.363
HCM Control Delay, s/veh	14.5	18.2	38	13.9
HCM Lane LOS	B	C	E	B
HCM 95th-tile Q	1.8	3.9	10.3	1.6

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	120	13	8	139	22	23	26	13	23	32	25
Future Vol, veh/h	19	120	13	8	139	22	23	26	13	23	32	25
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	22	136	15	9	158	25	26	30	15	26	36	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

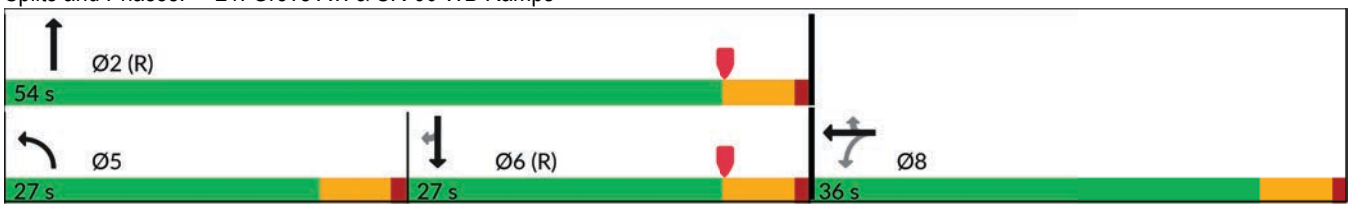
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.7	8.8	8.3	8.3
HCM LOS	A	A	A	A

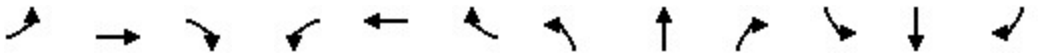
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	13%	5%	29%
Vol Thru, %	42%	79%	82%	40%
Vol Right, %	21%	9%	13%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	152	169	80
LT Vol	23	19	8	23
Through Vol	26	120	139	32
RT Vol	13	13	22	25
Lane Flow Rate	70	173	192	91
Geometry Grp	1	1	1	1
Degree of Util (X)	0.094	0.215	0.235	0.118
Departure Headway (Hd)	4.786	4.472	4.411	4.682
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	748	803	814	765
Service Time	2.822	2.501	2.44	2.717
HCM Lane V/C Ratio	0.094	0.215	0.236	0.119
HCM Control Delay, s/veh	8.3	8.7	8.8	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.8	0.9	0.4

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	492	270	1033	554	447
Future Volume (vph)	1	492	270	1033	554	447
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	15.8	24.8	15.8	15.8
Total Split (s)	36.0	36.0	27.0	54.0	27.0	27.0
Total Split (%)	40.0%	40.0%	30.0%	60.0%	30.0%	30.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	28.5	28.5	18.8	49.9	25.3	25.3
Actuated g/C Ratio	0.32	0.32	0.21	0.55	0.28	0.28
v/c Ratio	0.32	0.94	0.85	0.58	0.61	0.63
Control Delay (s/veh)	24.6	51.4	42.4	16.6	32.7	7.1
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay (s/veh)	24.6	51.4	42.4	16.9	32.7	7.1
LOS	C	D	D	B	C	A
Approach Delay (s/veh)	44.8			22.2	21.3	
Approach LOS	D			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay (s/veh): 26.9	Intersection LOS: C
Intersection Capacity Utilization 98.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 21: Grove Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	160	1	492	270	1033	0	0	554	447
Future Volume (veh/h)	0	0	0	160	1	492	270	1033	0	0	554	447
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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				1700	1800	1800	1700	1800	0	0	1800	1800
Adj Flow Rate, veh/h				170	1	443	287	1099	0	0	589	398
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				531	3	475	312	1915	0	0	1035	459
Arrive On Green				0.31	0.31	0.31	0.39	1.00	0.00	0.00	0.30	0.30
Sat Flow, veh/h				1705	10	1525	1619	3510	0	0	3510	1518
Grp Volume(v), veh/h				171	0	443	287	1099	0	0	589	398
Grp Sat Flow(s),veh/h/ln				1715	0	1525	1619	1710	0	0	1710	1518
Q Serve(g_s), s				6.9	0.0	25.4	15.2	0.0	0.0	0.0	13.1	22.3
Cycle Q Clear(g_c), s				6.9	0.0	25.4	15.2	0.0	0.0	0.0	13.1	22.3
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				534	0	475	312	1915	0	0	1035	459
V/C Ratio(X)				0.32	0.00	0.93	0.92	0.57	0.00	0.00	0.57	0.87
Avail Cap(c_a), veh/h				575	0	512	381	1915	0	0	1035	459
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	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				23.7	0.0	30.1	27.0	0.0	0.0	0.0	26.4	29.7
Incr Delay (d2), s/veh				0.3	0.0	23.1	3.0	0.1	0.0	0.0	2.3	19.2
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				2.6	0.0	11.6	4.5	0.0	0.0	0.0	5.3	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				24.0	0.0	53.2	30.0	0.1	0.0	0.0	28.7	48.9
LnGrp LOS				C		D	C	A			C	D
Approach Vol, veh/h					614			1386			987	
Approach Delay, s/veh					45.1			6.3			36.8	
Approach LOS					D			A			D	

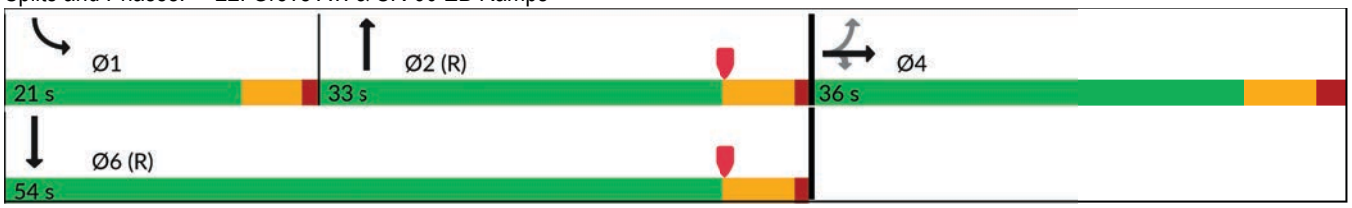
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	56.2		23.1	33.0		33.8						
Change Period (Y+Rc), s	5.8		5.8	5.8		5.8						
Max Green Setting (Gmax), s	48.2		21.2	21.2		30.2						
Max Q Clear Time (g_c+I1), s	2.0		17.2	24.3		27.4						
Green Ext Time (p_c), s	7.1		0.2	0.0		0.6						

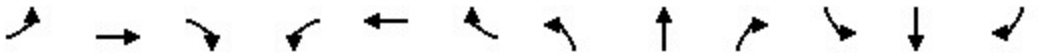
Intersection Summary	
HCM 7th Control Delay, s/veh	24.4
HCM 7th LOS	C

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	3	193	732	292	422
Future Volume (vph)	3	193	732	292	422
Turn Type	NA	Perm	NA	Prot	NA
Protected Phases	4		2	1	6
Permitted Phases		4			
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	31.8	15.0	25.8
Total Split (s)	36.0	36.0	33.0	21.0	54.0
Total Split (%)	40.0%	40.0%	36.7%	23.3%	60.0%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	5.8	5.0	5.8
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	29.2	29.2	27.2	16.0	48.2
Actuated g/C Ratio	0.32	0.32	0.30	0.18	0.54
v/c Ratio	1.08	0.32	1.01	1.06	0.23
Control Delay (s/veh)	91.4	4.9	59.8	112.6	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	91.4	4.9	59.8	112.6	11.0
LOS	F	A	E	F	B
Approach Delay (s/veh)	69.7		59.8		52.5
Approach LOS	E		E		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay (s/veh): 60.7	Intersection LOS: E
Intersection Capacity Utilization 98.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	571	3	193	0	0	0	0	732	329	292	422	0
Future Volume (veh/h)	571	3	193	0	0	0	0	732	329	292	422	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1700	1800	1800				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	595	3	117				0	762	225	304	440	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	554	3	495				0	806	238	288	1928	0
Arrive On Green	0.49	0.49	0.49				0.00	0.45	0.45	0.27	0.80	0.00
Sat Flow, veh/h	1706	9	1525				0	2666	787	1619	3600	0
Grp Volume(v), veh/h	598	0	117				0	514	473	304	440	0
Grp Sat Flow(s),veh/h/ln	1715	0	1525				0	1800	1654	1619	1800	0
Q Serve(g_s), s	29.2	0.0	4.0				0.0	24.6	24.6	16.0	2.6	0.0
Cycle Q Clear(g_c), s	29.2	0.0	4.0				0.0	24.6	24.6	16.0	2.6	0.0
Prop In Lane	0.99		1.00				0.00		0.48	1.00		0.00
Lane Grp Cap(c), veh/h	556	0	495				0	544	500	288	1928	0
V/C Ratio(X)	1.07	0.00	0.24				0.00	0.95	0.95	1.06	0.23	0.00
Avail Cap(c_a), veh/h	556	0	495				0	544	500	288	1928	0
HCM Platoon Ratio	1.50	1.50	1.50				1.00	1.50	1.50	1.50	1.50	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.75	0.75	0.00
Uniform Delay (d), s/veh	23.1	0.0	16.6				0.0	23.9	23.9	33.0	4.4	0.0
Incr Delay (d2), s/veh	59.9	0.0	0.1				0.0	27.2	28.8	61.5	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	17.4	0.0	1.3				0.0	11.6	10.9	10.1	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	83.0	0.0	16.7				0.0	51.1	52.7	94.5	4.6	0.0
LnGrp LOS	F		B					D	D	F	A	
Approach Vol, veh/h		715						987			744	
Approach Delay, s/veh		72.1						51.9			41.3	
Approach LOS		E						D			D	

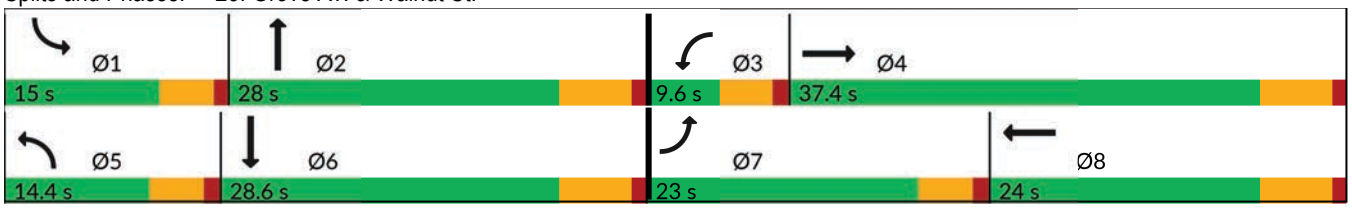
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	21.0	33.0		36.0		54.0
Change Period (Y+Rc), s	5.0	5.8		6.8		5.8
Max Green Setting (Gmax), s	16.0	27.2		29.2		48.2
Max Q Clear Time (g_c+I1), s	18.0	26.6		31.2		4.6
Green Ext Time (p_c), s	0.0	0.3		0.0		2.3

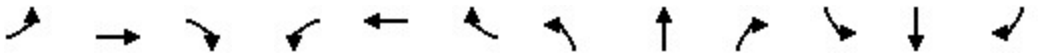
Intersection Summary	
HCM 7th Control Delay, s/veh	54.6
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	196	224	13	299	72	560	87	329
Future Volume (vph)	196	224	13	299	72	560	87	329
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	9.6	23.8
Total Split (s)	23.0	37.4	9.6	24.0	14.4	28.0	15.0	28.6
Total Split (%)	25.6%	41.6%	10.7%	26.7%	16.0%	31.1%	16.7%	31.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.1	34.3	5.3	16.0	8.2	20.2	8.8	20.7
Actuated g/C Ratio	0.19	0.44	0.07	0.20	0.10	0.26	0.11	0.26
v/c Ratio	0.75	0.22	0.14	0.79	0.51	0.81	0.58	0.56
Control Delay (s/veh)	49.2	14.9	43.5	30.3	49.1	37.6	51.0	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.2	14.9	43.5	30.3	49.1	37.6	51.0	27.6
LOS	D	B	D	C	D	D	D	C
Approach Delay (s/veh)		29.2		30.6		38.9		31.6
Approach LOS		C		C		D		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78.8	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 33.0	Intersection LOS: C
Intersection Capacity Utilization 68.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Grove Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	224	50	13	299	228	72	560	30	87	329	95
Future Volume (veh/h)	196	224	50	13	299	228	72	560	30	87	329	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	233	267	56	15	356	240	86	667	30	104	392	93
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	272	1044	215	29	432	286	107	817	37	130	712	167
Arrive On Green	0.17	0.37	0.37	0.02	0.22	0.22	0.07	0.25	0.25	0.08	0.26	0.26
Sat Flow, veh/h	1619	2815	580	1619	1956	1293	1619	3333	150	1619	2748	645
Grp Volume(v), veh/h	233	160	163	15	310	286	86	342	355	104	242	243
Grp Sat Flow(s),veh/h/ln	1619	1710	1685	1619	1710	1539	1619	1710	1773	1619	1710	1684
Q Serve(g_s), s	10.2	4.7	4.9	0.7	12.6	12.9	3.8	13.7	13.7	4.6	8.9	9.1
Cycle Q Clear(g_c), s	10.2	4.7	4.9	0.7	12.6	12.9	3.8	13.7	13.7	4.6	8.9	9.1
Prop In Lane	1.00		0.34	1.00		0.84	1.00		0.08	1.00		0.38
Lane Grp Cap(c), veh/h	272	634	625	29	378	340	107	419	435	130	443	436
V/C Ratio(X)	0.86	0.25	0.26	0.52	0.82	0.84	0.80	0.82	0.82	0.80	0.55	0.56
Avail Cap(c_a), veh/h	410	743	732	111	428	385	218	522	541	231	536	528
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	15.9	15.9	35.4	27.0	27.1	33.5	25.9	25.9	32.9	23.3	23.3
Incr Delay (d2), s/veh	7.3	0.2	0.2	5.2	11.0	13.9	5.2	8.0	7.8	4.3	1.1	1.1
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(50%),veh/ln	4.2	1.7	1.7	0.3	5.8	5.6	1.5	5.9	6.1	1.8	3.4	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.7	16.1	16.2	40.6	38.0	41.0	38.7	33.9	33.7	37.2	24.3	24.4
LnGrp LOS	D	B	B	D	D	D	D	C	C	D	C	C
Approach Vol, veh/h		556			611			783			589	
Approach Delay, s/veh		24.8			39.5			34.3			26.7	
Approach LOS		C			D			C			C	

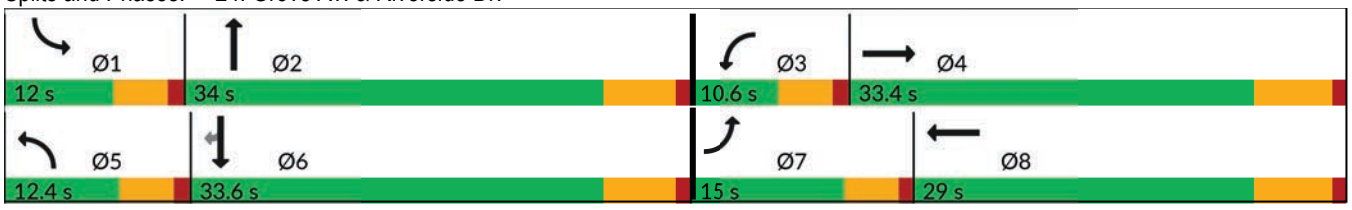
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	23.6	5.9	32.8	9.4	24.6	16.8	21.9
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	10.4	22.2	5.0	31.6	9.8	22.8	18.4	18.2
Max Q Clear Time (g_c+I1), s	6.6	15.7	2.7	6.9	5.8	11.1	12.2	14.9
Green Ext Time (p_c), s	0.0	2.1	0.0	1.7	0.0	2.1	0.2	1.1

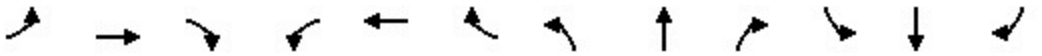
Intersection Summary	
HCM 7th Control Delay, s/veh	31.7
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	91	309	36	608	64	384	54	226	110
Future Volume (vph)	91	309	36	608	64	384	54	226	110
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	15.0	33.4	10.6	29.0	12.4	34.0	12.0	33.6	33.6
Total Split (%)	16.7%	37.1%	11.8%	32.2%	13.8%	37.8%	13.3%	37.3%	37.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.8	25.8	6.2	21.2	7.4	24.6	7.1	24.3	24.3
Actuated g/C Ratio	0.11	0.33	0.08	0.27	0.10	0.32	0.09	0.31	0.31
v/c Ratio	0.54	0.62	0.30	0.81	0.45	0.82	0.39	0.43	0.20
Control Delay (s/veh)	48.8	30.0	46.4	36.7	49.0	40.7	47.5	27.0	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.8	30.0	46.4	36.7	49.0	40.7	47.5	27.0	3.2
LOS	D	C	D	D	D	D	D	C	A
Approach Delay (s/veh)		34.0		37.1		41.8		23.1	
Approach LOS		C		D		D		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 77.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay (s/veh): 34.9	Intersection LOS: C
Intersection Capacity Utilization 72.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	309	33	36	608	87	64	384	48	54	226	110
Future Volume (veh/h)	91	309	33	36	608	87	64	384	48	54	226	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	98	332	32	39	654	83	69	413	41	58	243	78
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	122	487	47	62	808	102	87	480	48	79	528	447
Arrive On Green	0.08	0.30	0.30	0.04	0.27	0.27	0.05	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1619	1613	155	1619	3048	386	1619	1611	160	1619	1800	1525
Grp Volume(v), veh/h	98	0	364	39	366	371	69	0	454	58	243	78
Grp Sat Flow(s),veh/h/ln	1619	0	1768	1619	1710	1725	1619	0	1771	1619	1800	1525
Q Serve(g_s), s	4.0	0.0	12.3	1.6	13.6	13.6	2.9	0.0	16.4	2.4	7.5	2.6
Cycle Q Clear(g_c), s	4.0	0.0	12.3	1.6	13.6	13.6	2.9	0.0	16.4	2.4	7.5	2.6
Prop In Lane	1.00		0.09	1.00		0.22	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	122	0	534	62	453	457	87	0	528	79	528	447
V/C Ratio(X)	0.80	0.00	0.68	0.63	0.81	0.81	0.79	0.00	0.86	0.73	0.46	0.17
Avail Cap(c_a), veh/h	248	0	709	143	575	580	186	0	737	177	738	625
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	0.0	20.8	32.1	23.3	23.3	31.7	0.0	22.5	31.8	19.6	17.9
Incr Delay (d2), s/veh	4.6	0.0	1.7	3.8	6.7	6.8	6.0	0.0	7.5	4.8	0.6	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(50%),veh/ln	1.6	0.0	4.5	0.6	5.5	5.6	1.2	0.0	7.0	1.0	2.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.4	0.0	22.5	36.0	30.0	30.1	37.8	0.0	30.0	36.6	20.2	18.0
LnGrp LOS	D		C	D	C	C	D		C	D	C	B
Approach Vol, veh/h		462			776			523			379	
Approach Delay, s/veh		25.2			30.4			31.0			22.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	26.0	7.2	26.7	8.2	25.7	9.7	24.2
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	7.4	28.2	6.0	27.2	7.8	27.8	10.4	22.8
Max Q Clear Time (g_c+I1), s	4.4	18.4	3.6	14.3	4.9	9.5	6.0	15.6
Green Ext Time (p_c), s	0.0	1.8	0.0	1.5	0.0	1.4	0.0	2.3

Intersection Summary	
HCM 7th Control Delay, s/veh	28.0
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	31
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	110	34	2	169	43	62	350	8	21	336	16
Future Vol, veh/h	65	110	34	2	169	43	62	350	8	21	336	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	72	122	38	2	188	48	69	389	9	23	373	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	18.3	18.3	42.7	32.3
HCM LOS	C	C	E	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	31%	1%	6%
Vol Thru, %	83%	53%	79%	90%
Vol Right, %	2%	16%	20%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	420	209	214	373
LT Vol	62	65	2	21
Through Vol	350	110	169	336
RT Vol	8	34	43	16
Lane Flow Rate	467	232	238	414
Geometry Grp	1	1	1	1
Degree of Util (X)	0.886	0.498	0.503	0.798
Departure Headway (Hd)	6.837	7.714	7.617	6.933
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	527	464	471	518
Service Time	4.912	5.805	5.707	5.012
HCM Lane V/C Ratio	0.886	0.5	0.505	0.799
HCM Control Delay, s/veh	42.7	18.3	18.3	32.3
HCM Lane LOS	E	C	C	D
HCM 95th-tile Q	10	2.7	2.8	7.5

Intersection	
Intersection Delay, s/veh	24.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	113	45	17	156	9	25	369	6	28	330	35
Future Vol, veh/h	39	113	45	17	156	9	25	369	6	28	330	35
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	43	124	49	19	171	10	27	405	7	31	363	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	15.8	15.5	29.7	28.3
HCM LOS	C	C	D	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	20%	9%	7%
Vol Thru, %	92%	57%	86%	84%
Vol Right, %	2%	23%	5%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	400	197	182	393
LT Vol	25	39	17	28
Through Vol	369	113	156	330
RT Vol	6	45	9	35
Lane Flow Rate	440	216	200	432
Geometry Grp	1	1	1	1
Degree of Util (X)	0.791	0.435	0.41	0.775
Departure Headway (Hd)	6.48	7.24	7.381	6.459
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	563	496	486	561
Service Time	4.5	5.308	5.45	4.478
HCM Lane V/C Ratio	0.782	0.435	0.412	0.77
HCM Control Delay, s/veh	29.7	15.8	15.5	28.3
HCM Lane LOS	D	C	C	D
HCM 95th-tile Q	7.5	2.2	2	7.1

Intersection	
Intersection Delay, s/veh	85
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	192	15	40	427	78	18	218	26	79	235	42
Future Vol, veh/h	66	192	15	40	427	78	18	218	26	79	235	42
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	72	209	16	43	464	85	20	237	28	86	255	46
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	30	164.7	28.8	46.5
HCM LOS	D	F	D	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	24%	7%	22%
Vol Thru, %	83%	70%	78%	66%
Vol Right, %	10%	5%	14%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	262	273	545	356
LT Vol	18	66	40	79
Through Vol	218	192	427	235
RT Vol	26	15	78	42
Lane Flow Rate	285	297	592	387
Geometry Grp	1	1	1	1
Degree of Util (X)	0.664	0.688	1.277	0.859
Departure Headway (Hd)	9.271	9.116	7.758	8.798
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	393	401	468	414
Service Time	7.271	7.116	5.823	6.798
HCM Lane V/C Ratio	0.725	0.741	1.265	0.935
HCM Control Delay, s/veh	28.8	30	164.7	46.5
HCM Lane LOS	D	D	F	E
HCM 95th-tile Q	4.6	5	24.8	8.4

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	90	3	5	216	238	3	5	5	275	9	34
Future Vol, veh/h	10	90	3	5	216	238	3	5	5	275	9	34
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	11	96	3	5	230	253	3	5	5	293	10	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.8	16.5	9.1	14.5
HCM LOS	A	C	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	10%	1%	86%
Vol Thru, %	38%	87%	47%	3%
Vol Right, %	38%	3%	52%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	103	459	318
LT Vol	3	10	5	275
Through Vol	5	90	216	9
RT Vol	5	3	238	34
Lane Flow Rate	14	110	488	338
Geometry Grp	1	1	1	1
Degree of Util (X)	0.023	0.171	0.655	0.521
Departure Headway (Hd)	5.869	5.619	4.83	5.543
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	607	637	752	650
Service Time	3.931	3.669	2.83	3.582
HCM Lane V/C Ratio	0.023	0.173	0.649	0.52
HCM Control Delay, s/veh	9.1	9.8	16.5	14.5
HCM Lane LOS	A	A	C	B
HCM 95th-tile Q	0.1	0.6	4.9	3

Intersection	
Intersection Delay, s/veh	23.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	63	62	51	52	22	124	292	37	34	200	29
Future Vol, veh/h	33	63	62	51	52	22	124	292	37	34	200	29
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	40	76	75	61	63	27	149	352	45	41	241	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	13.2	12.7	34.9	15.8
HCM LOS	B	B	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	21%	41%	13%
Vol Thru, %	64%	40%	42%	76%
Vol Right, %	8%	39%	18%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	453	158	125	263
LT Vol	124	33	51	34
Through Vol	292	63	52	200
RT Vol	37	62	22	29
Lane Flow Rate	546	190	151	317
Geometry Grp	1	1	1	1
Degree of Util (X)	0.868	0.349	0.288	0.531
Departure Headway (Hd)	5.726	6.598	6.884	6.03
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	639	543	520	596
Service Time	3.726	4.668	4.957	4.086
HCM Lane V/C Ratio	0.854	0.35	0.29	0.532
HCM Control Delay, s/veh	34.9	13.2	12.7	15.8
HCM Lane LOS	D	B	B	C
HCM 95th-tile Q	10	1.6	1.2	3.1

Intersection	
Intersection Delay, s/veh	134.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	226	14	44	434	142	32	249	37	111	136	61
Future Vol, veh/h	35	226	14	44	434	142	32	249	37	111	136	61
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	39	251	16	49	482	158	36	277	41	123	151	68
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	35.3	270.5	44.7	42.3
HCM LOS	E	F	E	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	13%	7%	36%
Vol Thru, %	78%	82%	70%	44%
Vol Right, %	12%	5%	23%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	318	275	620	308
LT Vol	32	35	44	111
Through Vol	249	226	434	136
RT Vol	37	14	142	61
Lane Flow Rate	353	306	689	342
Geometry Grp	1	1	1	1
Degree of Util (X)	0.819	0.727	1.529	0.798
Departure Headway (Hd)	9.801	9.921	7.992	9.864
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	371	367	455	370
Service Time	7.801	7.921	6.063	7.864
HCM Lane V/C Ratio	0.951	0.834	1.514	0.924
HCM Control Delay, s/veh	44.7	35.3	270.5	42.3
HCM Lane LOS	E	E	F	E
HCM 95th-tile Q	7.2	5.5	36.5	6.8

Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	196	64	3	164	69	154	179	2	66	76	22
Future Vol, veh/h	13	196	64	3	164	69	154	179	2	66	76	22
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	231	75	4	193	81	181	211	2	78	89	26
Number of Lanes	0	1	0	0	1	0	1	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	1	1	1
HCM Control Delay, s/veh	20.5	17.7	14.9	15.6
HCM LOS	C	C	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	5%	1%	40%
Vol Thru, %	0%	100%	0%	72%	69%	46%
Vol Right, %	0%	0%	100%	23%	29%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	154	179	2	273	236	164
LT Vol	154	0	0	13	3	66
Through Vol	0	179	0	196	164	76
RT Vol	0	0	2	64	69	22
Lane Flow Rate	181	211	2	321	278	193
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.382	0.414	0.004	0.62	0.54	0.409
Departure Headway (Hd)	7.598	7.085	6.368	6.951	6.996	7.632
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	473	508	560	520	514	471
Service Time	5.358	4.846	4.128	4.705	4.753	5.4
HCM Lane V/C Ratio	0.383	0.415	0.004	0.617	0.541	0.41
HCM Control Delay, s/veh	15	14.8	9.2	20.5	17.7	15.6
HCM Lane LOS	B	B	A	C	C	C
HCM 95th-tile Q	1.8	2	0	4.2	3.2	2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	26	116	40	566	23	31
Future Volume (vph)	26	116	40	566	23	31
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	2	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.2	24.2	28.6	28.6
Total Split (s)	89.0	89.0	89.0	89.0	31.0	31.0
Total Split (%)	74.2%	74.2%	74.2%	74.2%	25.8%	25.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	23.1	23.1	27.1	27.1	8.6	8.6
Actuated g/C Ratio	0.62	0.62	0.73	0.73	0.23	0.23
v/c Ratio	0.01	0.14	0.05	0.51	0.07	0.09
Control Delay (s/veh)	5.7	2.0	5.8	8.5	16.3	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.7	2.0	5.8	8.5	16.3	7.6
LOS	A	A	A	A	B	A
Approach Delay (s/veh)	2.7			8.4	11.4	
Approach LOS	A			A	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 37.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay (s/veh): 7.6	Intersection LOS: A
Intersection Capacity Utilization 44.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 34: Hellman Av. & Eucalyptus Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	26	116	40	566	23	31
Future Volume (veh/h)	26	116	40	566	23	31
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1700	1800	1700	1800
Adj Flow Rate, veh/h	31	135	47	666	27	15
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1830	816	897	963	81	77
Arrive On Green	0.54	0.54	0.54	0.54	0.05	0.05
Sat Flow, veh/h	3510	1525	1170	1800	1619	1525
Grp Volume(v), veh/h	31	135	47	666	27	15
Grp Sat Flow(s),veh/h/ln	1710	1525	1170	1800	1619	1525
Q Serve(g_s), s	0.1	1.2	0.5	7.1	0.4	0.2
Cycle Q Clear(g_c), s	0.1	1.2	0.6	7.1	0.4	0.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1830	816	897	963	81	77
V/C Ratio(X)	0.02	0.17	0.05	0.69	0.33	0.20
Avail Cap(c_a), veh/h	10873	4850	3991	5723	1641	1546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.8	3.1	3.0	4.5	11.9	11.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.9	0.9	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.2	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	2.8	3.2	3.0	5.4	12.8	12.3
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h	166			713	42	
Approach Delay, s/veh	3.1			5.2	12.6	
Approach LOS	A			A	B	

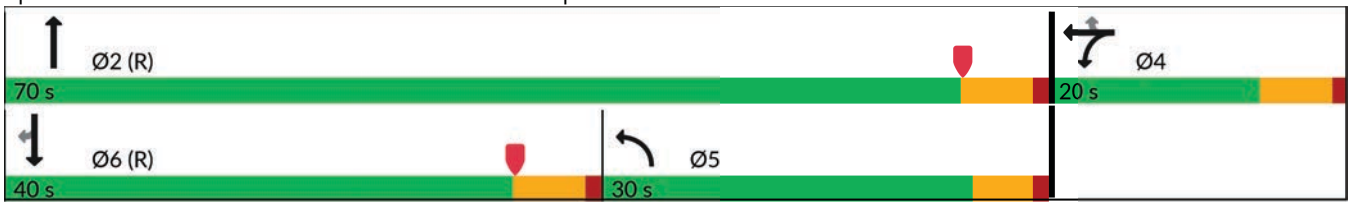
Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	5.9	20.1	20.1
Change Period (Y+Rc), s	4.6	6.2	6.2
Max Green Setting (Gmax), s	26.4	82.8	82.8
Max Q Clear Time (g_c+I1), s	2.4	3.2	9.1
Green Ext Time (p_c), s	0.0	0.6	4.9

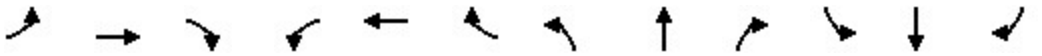
Intersection Summary	
HCM 7th Control Delay, s/veh	5.2
HCM 7th LOS	A

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	361	4	347	834	1273	521	121
Future Volume (vph)	361	4	347	834	1273	521	121
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4	4		5	2	6	
Permitted Phases			4				6
Detector Phase	4	4	4	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	8.0	8.0	8.0
Minimum Split (s)	10.8	10.8	10.8	10.0	43.8	38.8	38.8
Total Split (s)	20.0	20.0	20.0	30.0	70.0	40.0	40.0
Total Split (%)	22.2%	22.2%	22.2%	33.3%	77.8%	44.4%	44.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.0	5.8	5.8	5.8
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	21.7	21.7	21.7	31.4	56.7	20.3	20.3
Actuated g/C Ratio	0.24	0.24	0.24	0.35	0.63	0.23	0.23
v/c Ratio	0.68	0.63	0.54	0.83	0.42	0.38	0.28
Control Delay (s/veh)	43.5	34.3	22.5	31.2	4.2	29.9	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.5	34.3	22.5	31.2	4.2	29.9	6.3
LOS	D	C	C	C	A	C	A
Approach Delay (s/veh)		33.7			14.9	25.5	
Approach LOS		C			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 35.6 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 20.7	Intersection LOS: C
Intersection Capacity Utilization 84.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 35: Archibald Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	361	4	347	834	1273	0	0	521	121
Future Volume (veh/h)	0	0	0	361	4	347	834	1273	0	0	521	121
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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				1700	1800	1800	1600	1800	0	0	1800	1800
Adj Flow Rate, veh/h				419	0	107	851	1299	0	0	532	93
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				488	0	230	1507	3540	0	0	905	216
Arrive On Green				0.15	0.00	0.15	0.34	0.48	0.00	0.00	0.15	0.15
Sat Flow, veh/h				3238	0	1525	2956	5076	0	0	6444	1474
Grp Volume(v), veh/h				419	0	107	851	1299	0	0	532	93
Grp Sat Flow(s),veh/h/ln				1619	0	1525	1478	1638	0	0	1548	1474
Q Serve(g_s), s				11.4	0.0	5.8	21.1	15.0	0.0	0.0	7.2	5.2
Cycle Q Clear(g_c), s				11.4	0.0	5.8	21.1	15.0	0.0	0.0	7.2	5.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				488	0	230	1507	3540	0	0	905	216
V/C Ratio(X)				0.86	0.00	0.47	0.56	0.37	0.00	0.00	0.59	0.43
Avail Cap(c_a), veh/h				511	0	241	1507	3540	0	0	2353	560
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.74	0.74	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.3	0.0	34.9	21.5	10.4	0.0	0.0	35.9	35.0
Incr Delay (d2), s/veh				13.3	0.0	1.5	0.2	0.2	0.0	0.0	2.8	6.2
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				5.2	0.0	5.0	7.5	5.5	0.0	0.0	2.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				50.6	0.0	36.4	21.7	10.6	0.0	0.0	38.7	41.2
LnGrp LOS				D		D	C	B			D	D
Approach Vol, veh/h					526			2150			625	
Approach Delay, s/veh					47.7			15.0			39.1	
Approach LOS					D			B			D	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	70.6	19.4	51.7	19.0
Change Period (Y+Rc), s	5.8	5.8	5.8	* 5.8
Max Green Setting (Gmax), s	64.2	14.2	25.0	* 34
Max Q Clear Time (g_c+I1), s	17.0	13.4	23.1	9.2
Green Ext Time (p_c), s	11.4	0.2	0.5	3.7

Intersection Summary	
HCM 7th Control Delay, s/veh	24.8
HCM 7th LOS	C

Notes

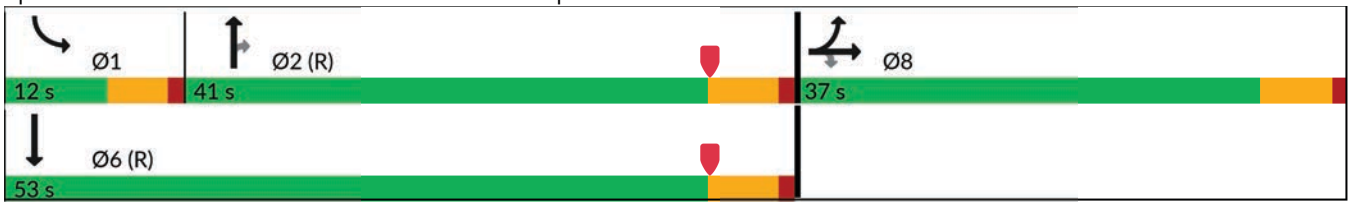
User approved volume balancing among the lanes for turning movement.

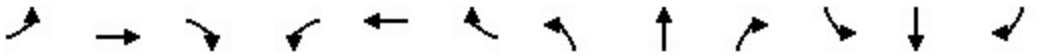
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	431	9	458	1677	512	142	740
Future Volume (vph)	431	9	458	1677	512	142	740
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8	8		2		1	6
Permitted Phases			8		2		
Detector Phase	8	8	8	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	10.8	10.8	10.8	32.8	32.8	10.0	33.8
Total Split (s)	37.0	37.0	37.0	41.0	41.0	12.0	53.0
Total Split (%)	41.1%	41.1%	41.1%	45.6%	45.6%	13.3%	58.9%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.0	5.8
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	24.7	24.7	24.7	41.1	41.1	7.6	53.7
Actuated g/C Ratio	0.27	0.27	0.27	0.46	0.46	0.08	0.60
v/c Ratio	0.75	0.66	0.57	0.60	0.54	0.58	0.26
Control Delay (s/veh)	40.9	27.4	15.5	20.6	4.1	58.0	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.9	27.4	15.5	20.6	4.1	58.0	1.7
LOS	D	C	B	C	A	E	A
Approach Delay (s/veh)		28.2		16.7			10.8
Approach LOS		C		B			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 35.6 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay (s/veh): 18.0	Intersection LOS: B
Intersection Capacity Utilization 84.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 36: Archibald Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	431	9	458	0	0	0	0	1677	512	142	740	0
Future Volume (veh/h)	431	9	458	0	0	0	0	1677	512	142	740	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	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	1700	1800	1800				0	1800	1800	1600	1800	0
Adj Flow Rate, veh/h	543	0	215				0	1711	423	145	755	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	675	0	318				0	3341	805	200	3257	0
Arrive On Green	0.21	0.00	0.21				0.00	0.54	0.54	0.14	1.00	0.00
Sat Flow, veh/h	3238	0	1525				0	6444	1492	2956	5076	0
Grp Volume(v), veh/h	543	0	215				0	1711	423	145	755	0
Grp Sat Flow(s),veh/h/ln	1619	0	1525				0	1548	1492	1478	1638	0
Q Serve(g_s), s	14.4	0.0	11.7				0.0	15.8	16.4	4.2	0.0	0.0
Cycle Q Clear(g_c), s	14.4	0.0	11.7				0.0	15.8	16.4	4.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	675	0	318				0	3341	805	200	3257	0
V/C Ratio(X)	0.80	0.00	0.68				0.00	0.51	0.53	0.73	0.23	0.00
Avail Cap(c_a), veh/h	1123	0	529				0	3341	805	230	3257	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	0.88	0.88	0.00
Uniform Delay (d), s/veh	33.9	0.0	32.8				0.0	13.2	13.3	38.1	0.0	0.0
Incr Delay (d2), s/veh	2.3	0.0	2.5				0.0	0.6	2.4	6.4	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(50%),veh/ln	5.5	0.0	4.3				0.0	4.7	5.1	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.2	0.0	35.3				0.0	13.7	15.8	44.5	0.1	0.0
LnGrp LOS	D		D					B	B	D	A	
Approach Vol, veh/h		758						2134			900	
Approach Delay, s/veh		35.9						14.1			7.3	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	11.1	54.4				65.4		24.6				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	7.0	35.2				47.2		31.2				
Max Q Clear Time (g_c+I1), s	6.2	18.4				2.0		16.4				
Green Ext Time (p_c), s	0.0	11.5				5.2		2.4				

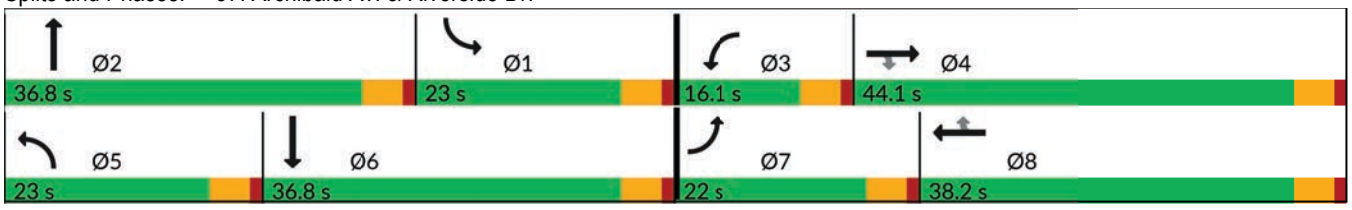
Intersection Summary			
HCM 7th Control Delay, s/veh			16.9
HCM 7th LOS			B

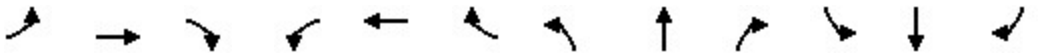
Notes
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	211	324	119	73	384	384	175	1196	207	568
Future Volume (vph)	211	324	119	73	384	384	175	1196	207	568
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.2	38.2	9.6	38.2	38.2	9.6	32.2	9.6	33.2
Total Split (s)	22.0	44.1	44.1	16.1	38.2	38.2	23.0	36.8	23.0	36.8
Total Split (%)	18.3%	36.8%	36.8%	13.4%	31.8%	31.8%	19.2%	30.7%	19.2%	30.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.2	30.6	30.6	8.9	20.1	20.1	15.5	32.4	17.3	34.2
Actuated g/C Ratio	0.16	0.29	0.29	0.08	0.19	0.19	0.15	0.31	0.16	0.32
v/c Ratio	0.85	0.35	0.24	0.57	0.63	0.70	0.78	0.87	0.83	0.52
Control Delay (s/veh)	73.0	31.8	5.2	64.7	43.6	12.4	67.5	43.0	69.8	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.0	31.8	5.2	64.7	43.6	12.4	67.5	43.0	69.8	29.1
LOS	E	C	A	E	D	B	E	D	E	C
Approach Delay (s/veh)		40.2			31.2			46.1		37.7
Approach LOS		D			C			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 105.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay (s/veh): 39.8	Intersection LOS: D
Intersection Capacity Utilization 79.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 37: Archibald Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	324	119	73	384	384	175	1196	36	207	568	199
Future Volume (veh/h)	211	324	119	73	384	384	175	1196	36	207	568	199
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	224	345	81	78	409	315	186	1272	32	220	604	165
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	253	996	436	97	666	292	216	1499	38	250	1254	336
Arrive On Green	0.16	0.29	0.29	0.06	0.19	0.19	0.13	0.30	0.30	0.15	0.33	0.33
Sat Flow, veh/h	1619	3420	1499	1619	3420	1497	1619	4927	124	1619	3856	1033
Grp Volume(v), veh/h	224	345	81	78	409	315	186	846	458	220	511	258
Grp Sat Flow(s),veh/h/ln	1619	1710	1499	1619	1710	1497	1619	1638	1775	1619	1638	1613
Q Serve(g_s), s	13.1	7.7	3.9	4.6	10.6	13.0	10.9	23.4	23.4	12.9	12.1	12.4
Cycle Q Clear(g_c), s	13.1	7.7	3.9	4.6	10.6	13.0	10.9	23.4	23.4	12.9	12.1	12.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		0.64
Lane Grp Cap(c), veh/h	253	996	436	97	666	292	216	996	540	250	1065	524
V/C Ratio(X)	0.88	0.35	0.19	0.80	0.61	1.08	0.86	0.85	0.85	0.88	0.48	0.49
Avail Cap(c_a), veh/h	291	1397	612	192	1188	520	308	1091	591	308	1091	537
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	27.0	25.7	44.9	35.6	18.6	41.0	31.6	31.6	40.0	26.1	26.2
Incr Delay (d2), s/veh	21.9	0.2	0.2	5.6	0.9	56.4	11.8	6.0	10.5	18.7	0.3	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	3.0	1.3	1.9	4.2	8.6	4.8	9.3	10.8	6.1	4.4	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.9	27.2	25.9	50.5	36.5	75.0	52.8	37.6	42.1	58.7	26.4	26.9
LnGrp LOS	E	C	C	D	D	F	D	D	D	E	C	C
Approach Vol, veh/h		650			802			1490			989	
Approach Delay, s/veh		39.0			53.0			40.9			33.8	
Approach LOS		D			D			D			C	

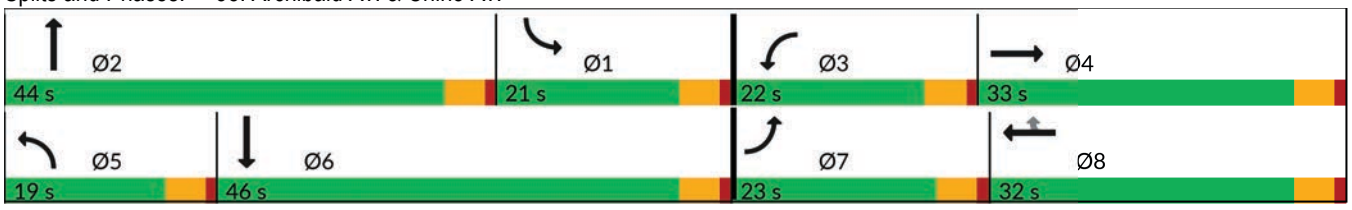
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.5	34.0	10.4	32.8	17.5	36.0	19.7	23.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	32.2	11.5	39.5	18.4	32.2	17.4	33.6
Max Q Clear Time (g_c+I1), s	14.9	25.4	6.6	9.7	12.9	14.4	15.1	15.0
Green Ext Time (p_c), s	0.1	4.0	0.0	2.3	0.1	4.2	0.1	3.3

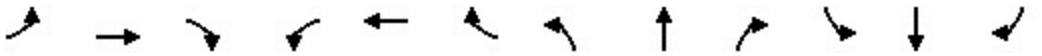
Intersection Summary	
HCM 7th Control Delay, s/veh	41.3
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	127	31	95	30	215	126	995	78	541
Future Volume (vph)	127	31	95	30	215	126	995	78	541
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	23.0	33.0	22.0	32.0	32.0	19.0	44.0	21.0	46.0
Total Split (%)	19.2%	27.5%	18.3%	26.7%	26.7%	15.8%	36.7%	17.5%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.0	13.1	10.5	8.5	8.5	11.7	25.8	9.7	20.7
Actuated g/C Ratio	0.17	0.18	0.15	0.12	0.12	0.16	0.36	0.13	0.29
v/c Ratio	0.49	0.36	0.42	0.15	0.60	0.50	0.57	0.38	0.61
Control Delay (s/veh)	38.0	15.0	38.2	34.6	12.6	39.5	22.1	38.5	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.0	15.0	38.2	34.6	12.6	39.5	22.1	38.5	25.4
LOS	D	B	D	C	B	D	C	D	C
Approach Delay (s/veh)		26.6		21.7			24.0		27.0
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 72.4	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay (s/veh): 24.8	Intersection LOS: C
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 38: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	31	94	95	30	215	126	995	53	78	541	57
Future Volume (veh/h)	127	31	94	95	30	215	126	995	53	78	541	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	132	32	86	99	31	118	131	1036	51	81	564	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	169	51	138	125	166	138	166	1794	88	111	1037	92
Arrive On Green	0.10	0.12	0.12	0.08	0.09	0.09	0.10	0.35	0.35	0.07	0.32	0.32
Sat Flow, veh/h	1619	430	1155	1619	1800	1504	1619	5097	251	1619	3260	288
Grp Volume(v), veh/h	132	0	118	99	31	118	131	731	356	81	311	303
Grp Sat Flow(s),veh/h/ln	1619	0	1585	1619	1800	1504	1619	1800	1748	1619	1800	1748
Q Serve(g_s), s	3.8	0.0	3.4	2.9	0.8	2.7	3.8	7.9	8.0	2.4	6.8	6.9
Cycle Q Clear(g_c), s	3.8	0.0	3.4	2.9	0.8	2.7	3.8	7.9	8.0	2.4	6.8	6.9
Prop In Lane	1.00		0.73	1.00		1.00	1.00		0.14	1.00		0.16
Lane Grp Cap(c), veh/h	169	0	189	125	166	138	166	1267	615	111	573	556
V/C Ratio(X)	0.78	0.00	0.62	0.79	0.19	0.85	0.79	0.58	0.58	0.73	0.54	0.54
Avail Cap(c_a), veh/h	620	0	937	586	1026	857	485	2951	1432	552	1550	1506
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	20.1	21.8	20.2	10.9	21.1	12.7	12.7	21.9	13.5	13.5
Incr Delay (d2), s/veh	7.6	0.0	3.3	10.8	0.5	13.5	8.0	0.4	0.9	8.7	0.8	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	1.2	1.3	0.3	1.6	1.5	2.2	2.2	1.0	2.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.6	0.0	23.5	32.6	20.7	24.5	29.1	13.1	13.5	30.7	14.3	14.4
LnGrp LOS	C		C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		250			248			1218			695	
Approach Delay, s/veh		26.2			27.2			14.9			16.2	
Approach LOS		C			C			B			B	

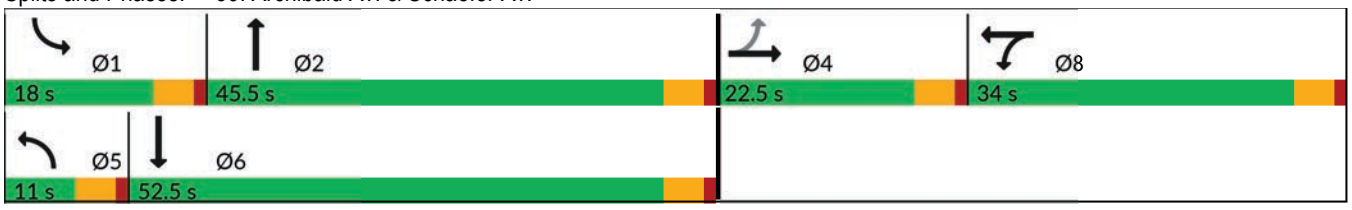
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	21.5	8.3	10.3	9.5	19.9	9.6	9.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	16.4	39.4	17.4	28.4	14.4	41.4	18.4	27.4
Max Q Clear Time (g_c+I1), s	4.4	10.0	4.9	5.4	5.8	8.9	5.8	4.7
Green Ext Time (p_c), s	0.1	7.0	0.2	0.6	0.2	3.4	0.2	0.5

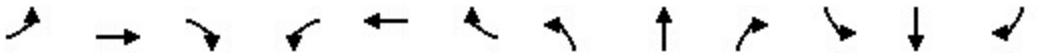
Intersection Summary	
HCM 7th Control Delay, s/veh	17.7
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	116	37	51	25	38	1073	71	726
Future Volume (vph)	116	37	51	25	38	1073	71	726
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	22.5	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	22.5	22.5	34.0	34.0	11.0	45.5	18.0	52.5
Total Split (%)	18.8%	18.8%	28.3%	28.3%	9.2%	37.9%	15.0%	43.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		20.1	10.8	10.8	6.8	26.5	8.7	31.0
Actuated g/C Ratio		0.25	0.14	0.14	0.09	0.33	0.11	0.39
v/c Ratio		2.18	0.24	0.29	0.29	0.69	0.42	0.61
Control Delay (s/veh)		590.9	37.5	19.1	49.3	26.9	47.4	22.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		590.9	37.5	19.1	49.3	26.9	47.4	22.8
LOS		F	D	B	D	C	D	C
Approach Delay (s/veh)		590.9		26.6		27.6		24.9
Approach LOS		F		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 79.3	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.18	
Intersection Signal Delay (s/veh): 67.1	Intersection LOS: E
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	37	10	51	25	49	38	1073	15	71	726	55
Future Volume (veh/h)	116	37	10	51	25	49	38	1073	15	71	726	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	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	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	121	39	10	53	26	39	40	1118	16	74	756	57
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	52	13	128	51	77	69	1832	26	103	1252	94
Arrive On Green	0.13	0.13	0.13	0.08	0.08	0.08	0.04	0.37	0.37	0.06	0.39	0.39
Sat Flow, veh/h	1225	395	101	1619	650	975	1619	4989	71	1619	3223	243
Grp Volume(v), veh/h	170	0	0	53	0	65	40	734	400	74	401	412
Grp Sat Flow(s),veh/h/ln	1721	0	0	1619	0	1625	1619	1638	1785	1619	1710	1756
Q Serve(g_s), s	4.9	0.0	0.0	1.6	0.0	2.0	1.2	9.4	9.4	2.3	9.6	9.6
Cycle Q Clear(g_c), s	4.9	0.0	0.0	1.6	0.0	2.0	1.2	9.4	9.4	2.3	9.6	9.6
Prop In Lane	0.71		0.06	1.00		0.60	1.00		0.04	1.00		0.14
Lane Grp Cap(c), veh/h	227	0	0	128	0	129	69	1203	655	103	664	682
V/C Ratio(X)	0.75	0.00	0.00	0.41	0.00	0.50	0.58	0.61	0.61	0.72	0.60	0.60
Avail Cap(c_a), veh/h	599	0	0	926	0	929	202	2607	1420	422	1594	1637
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	21.5	0.0	0.0	22.5	0.0	22.7	24.2	13.3	13.3	23.6	12.6	12.6
Incr Delay (d2), s/veh	4.9	0.0	0.0	2.1	0.0	3.0	7.6	0.5	0.9	3.5	0.9	0.9
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(50%),veh/ln	2.0	0.0	0.0	0.6	0.0	0.8	0.5	2.5	2.8	0.8	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.4	0.0	0.0	24.6	0.0	25.7	31.8	13.8	14.2	27.1	13.4	13.4
LnGrp LOS	C			C		C	C	B	B	C	B	B
Approach Vol, veh/h		170			118			1174			887	
Approach Delay, s/veh		26.4			25.2			14.5			14.6	
Approach LOS		C			C			B			B	

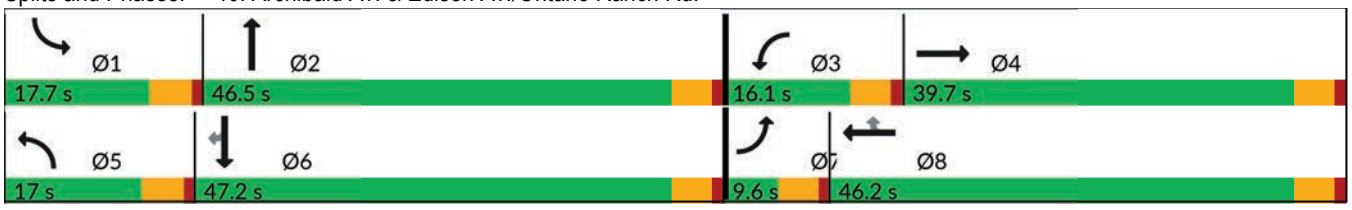
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	23.5		11.4	6.8	24.6		8.7				
Change Period (Y+Rc), s	4.6	4.6		4.6	4.6	4.6		4.6				
Max Green Setting (Gmax), s	13.4	40.9		17.9	6.4	47.9		29.4				
Max Q Clear Time (g_c+I1), s	4.3	11.4		6.9	3.2	11.6		4.0				
Green Ext Time (p_c), s	0.0	7.3		0.6	0.0	4.7		0.4				

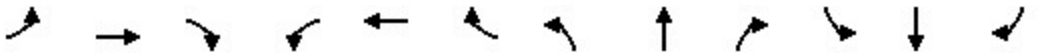
Intersection Summary			
HCM 7th Control Delay, s/veh		15.9	
HCM 7th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	257	137	286	289	146	164	715	383	128	511	209
Future Volume (vph)	113	257	137	286	289	146	164	715	383	128	511	209
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.7		16.1	46.2	46.2	17.0	46.5		17.7	47.2	47.2
Total Split (%)	8.0%	33.1%		13.4%	38.5%	38.5%	14.2%	38.8%		14.8%	39.3%	39.3%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.2	15.9	84.3	12.0	22.7	22.7	12.9	25.7	84.3	11.6	24.3	24.3
Actuated g/C Ratio	0.06	0.19	1.00	0.14	0.27	0.27	0.15	0.30	1.00	0.14	0.29	0.29
v/c Ratio	0.67	0.30	0.10	0.74	0.64	0.30	0.71	0.74	0.27	0.62	0.56	0.41
Control Delay (s/veh)	62.4	30.5	0.1	49.8	34.8	6.0	55.7	31.8	0.4	51.7	27.7	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.4	30.5	0.1	49.8	34.8	6.0	55.7	31.8	0.4	51.7	27.7	11.8
LOS	E	C	A	D	C	A	E	C	A	D	C	B
Approach Delay (s/veh)		29.5			34.9			25.4			27.4	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay (s/veh): 28.6	Intersection LOS: C
Intersection Capacity Utilization 64.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 40: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	257	137	286	289	146	164	715	383	128	511	209
Future Volume (veh/h)	113	257	137	286	289	146	164	715	383	128	511	209
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	122	276	0	308	311	145	176	769	0	138	549	166
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	206	793		398	407	341	214	1054		171	964	430
Arrive On Green	0.07	0.16	0.00	0.13	0.23	0.23	0.13	0.31	0.00	0.11	0.28	0.28
Sat Flow, veh/h	2956	4914	1525	2956	1800	1506	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	122	276	0	308	311	145	176	769	0	138	549	166
Grp Sat Flow(s),veh/h/ln	1478	1638	1525	1478	1800	1506	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	2.5	3.2	0.0	6.4	10.3	5.2	6.7	12.7	0.0	5.3	8.7	5.6
Cycle Q Clear(g_c), s	2.5	3.2	0.0	6.4	10.3	5.2	6.7	12.7	0.0	5.3	8.7	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	793		398	407	341	214	1054		171	964	430
V/C Ratio(X)	0.59	0.35		0.77	0.76	0.43	0.82	0.73		0.81	0.57	0.39
Avail Cap(c_a), veh/h	233	2719		536	1180	987	316	2259		334	2297	1024
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	23.6	0.0	26.5	23.0	21.0	26.8	19.6	0.0	27.7	19.5	18.4
Incr Delay (d2), s/veh	1.6	0.3	0.0	3.3	3.0	0.8	6.6	1.0	0.0	3.4	0.5	0.6
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(50%),veh/ln	0.8	1.1	0.0	2.1	4.0	1.7	2.6	4.2	0.0	1.9	2.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.2	23.9	0.0	29.8	26.0	21.9	33.4	20.6	0.0	31.1	20.0	18.9
LnGrp LOS	C	C		C	C	C	C	C		C	C	B
Approach Vol, veh/h		398			764			945			853	
Approach Delay, s/veh		25.8			26.7			22.9			21.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	24.2	13.1	14.8	13.0	22.5	9.0	18.9
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	13.1	41.9	11.5	35.1	12.4	42.6	5.0	41.6
Max Q Clear Time (g_c+I1), s	7.3	14.7	8.4	5.2	8.7	10.7	4.5	12.3
Green Ext Time (p_c), s	0.1	4.8	0.2	1.6	0.1	3.9	0.0	2.1

Intersection Summary	
HCM 7th Control Delay, s/veh	23.9
HCM 7th LOS	C

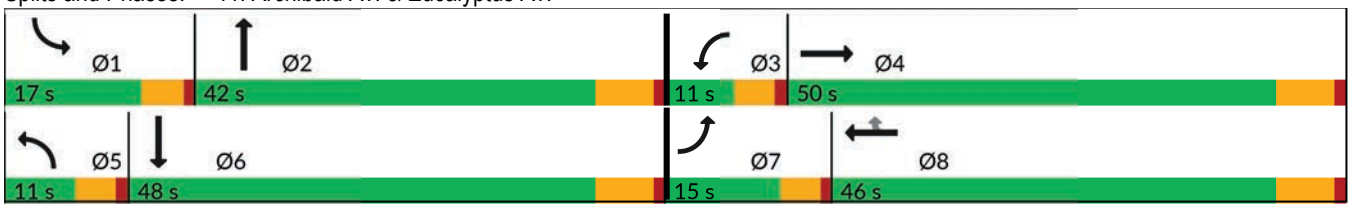
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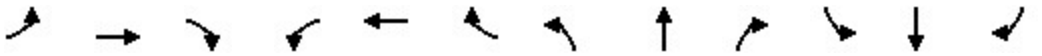
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	78	34	30	81	183	37	958	106	750
Future Volume (vph)	78	34	30	81	183	37	958	106	750
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	42.2	9.6	42.2	42.2	9.6	32.2	9.6	32.2
Total Split (s)	15.0	50.0	11.0	46.0	46.0	11.0	42.0	17.0	48.0
Total Split (%)	12.5%	41.7%	9.2%	38.3%	38.3%	9.2%	35.0%	14.2%	40.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.2	17.7	5.8	14.1	14.1	5.9	22.4	8.1	29.6
Actuated g/C Ratio	0.10	0.24	0.08	0.20	0.20	0.08	0.31	0.11	0.41
v/c Ratio	0.31	0.10	0.15	0.14	0.46	0.18	0.60	0.37	0.51
Control Delay (s/veh)	39.0	14.9	40.5	26.8	8.1	40.4	24.0	38.5	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.0	14.9	40.5	26.8	8.1	40.4	24.0	38.5	19.4
LOS	D	B	D	C	A	D	C	D	B
Approach Delay (s/veh)		27.9		16.5			24.6		21.5
Approach LOS		C		B			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 72.3	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay (s/veh): 22.6	Intersection LOS: C
Intersection Capacity Utilization 46.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 41: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	34	32	30	81	183	37	958	28	106	750	118
Future Volume (veh/h)	78	34	32	30	81	183	37	958	28	106	750	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.99
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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	91	40	17	35	94	111	43	1114	24	123	872	84
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	198	472	187	110	577	253	128	1945	42	223	1555	149
Arrive On Green	0.07	0.20	0.20	0.04	0.17	0.17	0.04	0.31	0.31	0.08	0.34	0.34
Sat Flow, veh/h	2956	2379	944	2956	3420	1501	2956	6282	135	2956	4553	437
Grp Volume(v), veh/h	91	28	29	35	94	111	43	823	315	123	626	330
Grp Sat Flow(s),veh/h/ln	1478	1710	1613	1478	1710	1501	1478	1548	1773	1478	1638	1714
Q Serve(g_s), s	1.7	0.8	0.8	0.7	1.3	3.8	0.8	8.5	8.5	2.3	8.9	8.9
Cycle Q Clear(g_c), s	1.7	0.8	0.8	0.7	1.3	3.8	0.8	8.5	8.5	2.3	8.9	8.9
Prop In Lane	1.00		0.59	1.00		1.00	1.00		0.08	1.00		0.25
Lane Grp Cap(c), veh/h	198	339	320	110	577	253	128	1437	549	223	1119	585
V/C Ratio(X)	0.46	0.08	0.09	0.32	0.16	0.44	0.34	0.57	0.57	0.55	0.56	0.56
Avail Cap(c_a), veh/h	540	1316	1241	332	2391	1050	332	2920	1115	644	2405	1259
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	18.6	18.6	26.7	20.2	21.2	26.4	16.5	16.5	25.4	15.3	15.3
Incr Delay (d2), s/veh	0.6	0.1	0.1	0.6	0.1	1.2	0.6	0.4	0.9	0.8	0.4	0.9
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(50%),veh/ln	0.5	0.3	0.3	0.2	0.5	1.2	0.3	2.3	2.8	0.7	2.5	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.2	18.7	18.7	27.3	20.4	22.4	27.0	16.9	17.5	26.2	15.7	16.1
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		148			240			1181			1079	
Approach Delay, s/veh		23.3			22.3			17.4			17.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	23.8	6.7	17.5	7.1	25.6	8.4	15.8
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	12.4	35.8	6.4	43.8	6.4	41.8	10.4	39.8
Max Q Clear Time (g_c+I1), s	4.3	10.5	2.7	2.8	2.8	10.9	3.7	5.8
Green Ext Time (p_c), s	0.1	7.1	0.0	0.3	0.0	6.0	0.1	0.9

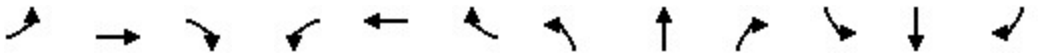
Intersection Summary	
HCM 7th Control Delay, s/veh	18.0
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	213	132	151	145	313	302	712	42	505	238
Future Volume (vph)	213	132	151	145	313	302	712	42	505	238
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			Free							6
Detector Phase	7	4		3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	44.8		9.6	45.8	9.6	32.5	9.6	31.5	31.5
Total Split (s)	13.8	44.8		23.0	54.0	19.0	42.1	10.1	33.2	33.2
Total Split (%)	11.5%	37.3%		19.2%	45.0%	15.8%	35.1%	8.4%	27.7%	27.7%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	None	None
Act Effct Green (s)	9.7	15.0	80.3	13.1	18.4	14.1	32.0	5.8	18.7	18.7
Actuated g/C Ratio	0.12	0.19	1.00	0.16	0.23	0.18	0.40	0.07	0.23	0.23
v/c Ratio	0.63	0.21	0.11	0.60	0.52	0.62	0.34	0.21	0.66	0.47
Control Delay (s/veh)	46.3	29.3	0.1	44.8	26.3	39.7	18.5	44.5	33.3	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.3	29.3	0.1	44.8	26.3	39.7	18.5	44.5	33.3	7.3
LOS	D	C	A	D	C	D	B	D	C	A
Approach Delay (s/veh)		27.8			31.3		24.0		26.0	
Approach LOS		C			C		C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 80.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay (s/veh): 26.5	Intersection LOS: C
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 42: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	132	151	145	313	78	302	712	156	42	505	238
Future Volume (veh/h)	213	132	151	145	313	78	302	712	156	42	505	238
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	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	1600	1800	1800	1700	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	232	143	0	158	340	46	328	774	111	46	549	248
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	333	578		200	543	73	449	2152	301	138	888	376
Arrive On Green	0.11	0.16	0.00	0.12	0.17	0.17	0.15	0.35	0.35	0.05	0.25	0.25
Sat Flow, veh/h	3048	3600	1525	1619	3103	416	3048	6168	863	3048	3600	1525
Grp Volume(v), veh/h	232	143	0	158	196	190	328	675	210	46	549	248
Grp Sat Flow(s),veh/h/ln	1524	1800	1525	1619	1800	1719	1524	1800	1631	1524	1800	1525
Q Serve(g_s), s	4.2	2.0	0.0	5.4	5.8	5.9	5.9	5.3	5.5	0.8	7.8	8.4
Cycle Q Clear(g_c), s	4.2	2.0	0.0	5.4	5.8	5.9	5.9	5.3	5.5	0.8	7.8	8.4
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	333	578		200	315	301	449	1884	569	138	888	376
V/C Ratio(X)	0.70	0.25		0.79	0.62	0.63	0.73	0.36	0.37	0.33	0.62	0.66
Avail Cap(c_a), veh/h	490	2531		521	1555	1484	767	3541	1069	293	1800	763
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	21.0	0.0	24.3	21.8	21.9	23.3	13.9	13.9	26.5	19.1	19.4
Incr Delay (d2), s/veh	2.6	0.2	0.0	6.8	2.0	2.2	2.3	0.1	0.4	1.4	0.7	2.0
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(50%),veh/ln	1.5	0.7	0.0	2.2	2.3	2.2	1.9	1.7	1.6	0.3	2.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.2	21.2	0.0	31.1	23.9	24.1	25.6	14.0	14.3	27.9	19.9	21.3
LnGrp LOS	C	C		C	C	C	C	B	B	C	B	C
Approach Vol, veh/h		375			544			1213			843	
Approach Delay, s/veh		24.9			26.1			17.2			20.7	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	24.5	11.7	13.8	13.0	18.7	10.8	14.6
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	5.5	37.5	18.4	40.2	14.4	28.6	9.2	49.4
Max Q Clear Time (g_c+I1), s	2.8	7.5	7.4	4.0	7.9	10.4	6.2	7.9
Green Ext Time (p_c), s	0.0	5.6	0.3	0.8	0.6	3.7	0.2	2.2

Intersection Summary	
HCM 7th Control Delay, s/veh	20.8
HCM 7th LOS	C

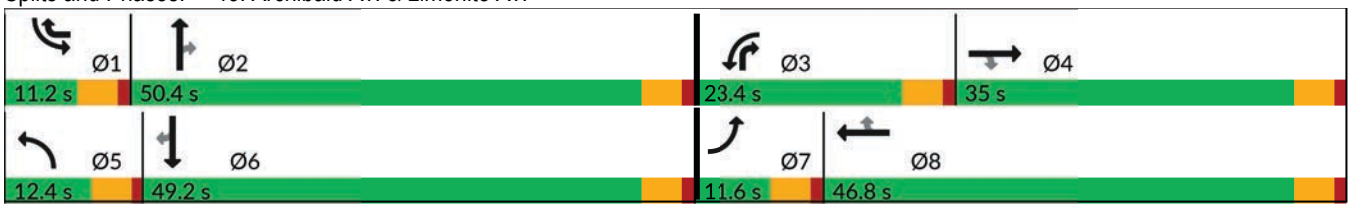
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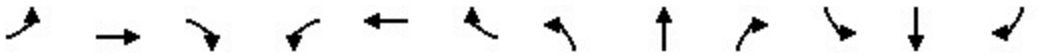
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	378	31	290	582	387	80	628	293	189	416	155
Future Volume (vph)	154	378	31	290	582	387	80	628	293	189	416	155
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.5	22.5	9.6	46.8	9.6	9.6	49.5	9.6	9.6	39.5	39.5
Total Split (s)	11.6	35.0	35.0	23.4	46.8	11.2	12.4	50.4	23.4	11.2	49.2	49.2
Total Split (%)	9.7%	29.2%	29.2%	19.5%	39.0%	9.3%	10.3%	42.0%	19.5%	9.3%	41.0%	41.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.4	17.1	17.1	13.2	22.9	29.9	6.8	23.9	42.0	6.9	26.6	26.6
Actuated g/C Ratio	0.09	0.21	0.21	0.16	0.28	0.37	0.08	0.30	0.52	0.09	0.33	0.33
v/c Ratio	0.62	0.57	0.08	0.65	0.65	0.39	0.35	0.67	0.38	0.81	0.28	0.27
Control Delay (s/veh)	50.9	33.2	0.4	40.8	28.9	10.9	44.3	28.6	8.7	65.0	22.1	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.9	33.2	0.4	40.8	28.9	10.9	44.3	28.6	8.7	65.0	22.1	5.3
LOS	D	C	A	D	C	B	D	C	A	E	C	A
Approach Delay (s/veh)		36.2			26.1			24.1			29.3	
Approach LOS		D			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 80.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 27.8	Intersection LOS: C
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 43: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	378	31	290	582	387	80	628	293	189	416	155
Future Volume (veh/h)	154	378	31	290	582	387	80	628	293	189	416	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	167	411	27	315	633	353	87	683	197	205	452	88
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	239	771	344	405	963	998	172	957	636	279	1552	481
Arrive On Green	0.08	0.23	0.23	0.14	0.28	0.28	0.06	0.28	0.28	0.09	0.32	0.32
Sat Flow, veh/h	2956	3420	1525	2956	3420	2645	2956	3420	1525	2956	4914	1524
Grp Volume(v), veh/h	167	411	27	315	633	353	87	683	197	205	452	88
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1710	1322	1478	1710	1525	1478	1638	1524
Q Serve(g_s), s	3.8	7.4	1.0	7.2	11.4	6.7	2.0	12.6	6.0	4.7	4.8	2.9
Cycle Q Clear(g_c), s	3.8	7.4	1.0	7.2	11.4	6.7	2.0	12.6	6.0	4.7	4.8	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	771	344	405	963	998	172	957	636	279	1552	481
V/C Ratio(X)	0.70	0.53	0.08	0.78	0.66	0.35	0.50	0.71	0.31	0.74	0.29	0.18
Avail Cap(c_a), veh/h	296	1488	663	795	2065	1850	330	2241	1209	279	3136	972
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	23.8	21.3	29.1	22.1	15.7	31.9	22.6	13.6	30.8	18.0	17.4
Incr Delay (d2), s/veh	3.4	0.6	0.1	1.2	0.8	0.2	0.8	1.0	0.3	8.6	0.1	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(50%),veh/ln	1.4	2.7	0.3	2.4	4.1	1.8	0.7	4.4	1.8	1.8	1.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.7	24.4	21.4	30.4	22.9	15.9	32.8	23.6	13.9	39.4	18.1	17.5
LnGrp LOS	C	C	C	C	C	B	C	C	B	D	B	B
Approach Vol, veh/h		605			1301			967			745	
Approach Delay, s/veh		27.1			22.8			22.5			23.9	
Approach LOS		C			C			C			C	

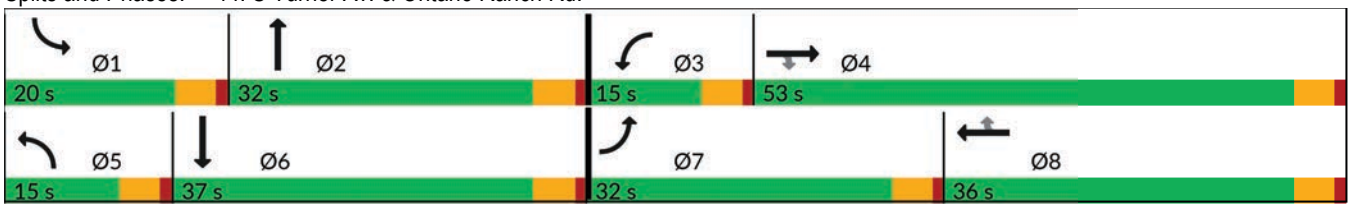
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	24.2	14.2	20.4	8.7	26.7	10.2	24.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	6.6	45.8	18.8	30.4	7.8	44.6	7.0	42.2
Max Q Clear Time (g_c+I1), s	6.7	14.6	9.2	9.4	4.0	6.8	5.8	13.4
Green Ext Time (p_c), s	0.0	5.0	0.4	2.4	0.0	3.1	0.0	5.9

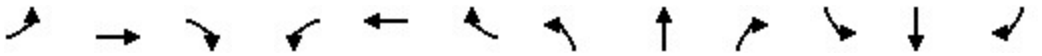
Intersection Summary	
HCM 7th Control Delay, s/veh	23.7
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	140	634	31	38	624	48	48	110	62	50
Future Volume (vph)	140	634	31	38	624	48	48	110	62	50
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.8	23.8	9.6	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	32.0	53.0	53.0	15.0	36.0	36.0	15.0	32.0	20.0	37.0
Total Split (%)	26.7%	44.2%	44.2%	12.5%	30.0%	30.0%	12.5%	26.7%	16.7%	30.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.5	34.7	34.7	7.5	22.6	22.6	7.8	15.0	8.7	17.5
Actuated g/C Ratio	0.18	0.45	0.45	0.10	0.29	0.29	0.10	0.20	0.11	0.23
v/c Ratio	0.58	0.46	0.05	0.29	0.69	0.10	0.34	0.59	0.40	0.28
Control Delay (s/veh)	42.9	19.2	0.1	45.0	30.1	0.4	45.7	36.4	45.0	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.9	19.2	0.1	45.0	30.1	0.4	45.7	36.4	45.0	22.7
LOS	D	B	A	D	C	A	D	D	D	C
Approach Delay (s/veh)		22.6			28.9			38.4		31.2
Approach LOS		C			C			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 76.8	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay (s/veh): 27.5	Intersection LOS: C
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	634	31	38	624	48	48	110	64	62	50	49
Future Volume (veh/h)	140	634	31	38	624	48	48	110	64	62	50	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	165	746	28	45	734	48	56	129	46	73	59	38
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	207	1403	594	75	1108	459	87	180	64	102	156	100
Arrive On Green	0.13	0.39	0.39	0.05	0.31	0.31	0.05	0.14	0.14	0.06	0.15	0.15
Sat Flow, veh/h	1619	3600	1523	1619	3600	1491	1619	1257	448	1619	1023	659
Grp Volume(v), veh/h	165	746	28	45	734	48	56	0	175	73	0	97
Grp Sat Flow(s),veh/h/ln	1619	1800	1523	1619	1800	1491	1619	0	1706	1619	0	1681
Q Serve(g_s), s	5.1	8.2	0.6	1.4	9.1	1.2	1.7	0.0	5.0	2.3	0.0	2.7
Cycle Q Clear(g_c), s	5.1	8.2	0.6	1.4	9.1	1.2	1.7	0.0	5.0	2.3	0.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		0.39
Lane Grp Cap(c), veh/h	207	1403	594	75	1108	459	87	0	244	102	0	256
V/C Ratio(X)	0.80	0.53	0.05	0.60	0.66	0.10	0.65	0.00	0.72	0.72	0.00	0.38
Avail Cap(c_a), veh/h	864	3392	1435	328	2201	911	328	0	910	485	0	1061
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	12.1	9.7	24.0	15.5	12.7	23.8	0.0	21.0	23.6	0.0	19.6
Incr Delay (d2), s/veh	2.6	0.3	0.0	2.9	0.7	0.1	3.0	0.0	3.9	3.5	0.0	0.9
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(50%),veh/ln	1.8	2.5	0.2	0.5	3.0	0.3	0.6	0.0	2.0	0.8	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.4	12.4	9.8	26.9	16.1	12.8	26.8	0.0	25.0	27.1	0.0	20.5
LnGrp LOS	C	B	A	C	B	B	C		C	C		C
Approach Vol, veh/h		939			827			231			170	
Approach Delay, s/veh		14.4			16.5			25.4			23.3	
Approach LOS		B			B			C			C	

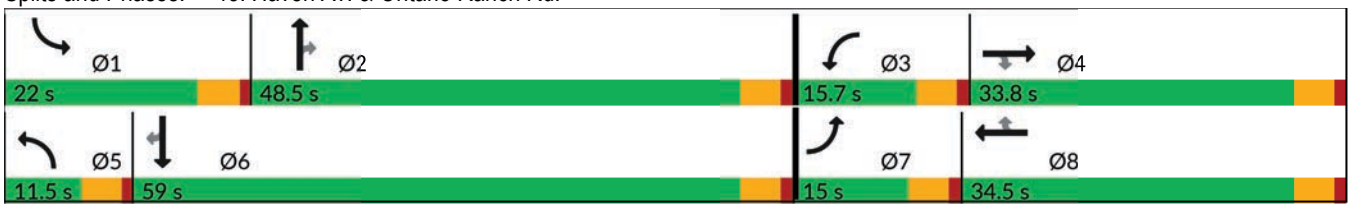
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	11.9	7.0	24.6	7.4	12.4	11.2	20.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	27.4	10.4	48.4	10.4	32.4	27.4	31.4
Max Q Clear Time (g_c+I1), s	4.3	7.0	3.4	10.2	3.7	4.7	7.1	11.1
Green Ext Time (p_c), s	0.0	0.8	0.0	5.4	0.0	0.4	0.2	4.7

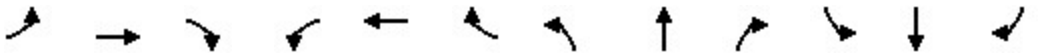
Intersection Summary	
HCM 7th Control Delay, s/veh	17.1
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	558	41	155	482	194	38	397	136	193	300	52
Future Volume (vph)	104	558	41	155	482	194	38	397	136	193	300	52
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	34.5	34.5	9.6	47.8	47.8	9.6	45.8	45.8
Total Split (s)	15.0	33.8	33.8	15.7	34.5	34.5	11.5	48.5	48.5	22.0	59.0	59.0
Total Split (%)	12.5%	28.2%	28.2%	13.1%	28.8%	28.8%	9.6%	40.4%	40.4%	18.3%	49.2%	49.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.0	18.0	18.0	9.3	17.3	17.3	6.4	28.0	28.0	16.2	42.9	42.9
Actuated g/C Ratio	0.11	0.20	0.20	0.10	0.19	0.19	0.07	0.31	0.31	0.18	0.47	0.47
v/c Ratio	0.64	0.62	0.11	0.56	0.44	0.46	0.36	0.78	0.26	0.73	0.38	0.07
Control Delay (s/veh)	61.0	37.6	0.5	50.0	34.5	8.6	56.1	39.7	5.4	54.7	19.1	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.0	37.6	0.5	50.0	34.5	8.6	56.1	39.7	5.4	54.7	19.1	0.9
LOS	E	D	A	D	C	A	E	D	A	D	B	A
Approach Delay (s/veh)		38.9			31.4			32.6			30.0	
Approach LOS		D			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay (s/veh): 33.3	Intersection LOS: C
Intersection Capacity Utilization 67.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 45: Haven Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	558	41	155	482	194	38	397	136	193	300	52
Future Volume (veh/h)	104	558	41	155	482	194	38	397	136	193	300	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	113	607	22	168	524	99	41	432	83	210	326	46
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	141	974	297	244	1201	295	64	535	452	250	742	626
Arrive On Green	0.09	0.20	0.20	0.08	0.19	0.19	0.04	0.30	0.30	0.15	0.41	0.41
Sat Flow, veh/h	1619	4914	1499	2956	6192	1521	1619	1800	1522	1619	1800	1520
Grp Volume(v), veh/h	113	607	22	168	524	99	41	432	83	210	326	46
Grp Sat Flow(s),veh/h/ln	1619	1638	1499	1478	1548	1521	1619	1800	1522	1619	1800	1520
Q Serve(g_s), s	4.7	7.8	0.8	3.8	5.1	3.9	1.7	15.3	2.8	8.7	8.9	1.3
Cycle Q Clear(g_c), s	4.7	7.8	0.8	3.8	5.1	3.9	1.7	15.3	2.8	8.7	8.9	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	974	297	244	1201	295	64	535	452	250	742	626
V/C Ratio(X)	0.80	0.62	0.07	0.69	0.44	0.34	0.64	0.81	0.18	0.84	0.44	0.07
Avail Cap(c_a), veh/h	245	2088	637	478	2694	662	163	1150	973	410	1425	1203
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	25.2	22.4	30.7	24.4	23.9	32.5	22.3	18.0	28.2	14.5	12.2
Incr Delay (d2), s/veh	4.0	0.7	0.1	1.3	0.3	0.7	3.9	3.0	0.2	3.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.7	0.3	1.2	1.6	1.3	0.7	6.0	0.8	3.3	3.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.8	25.9	22.5	32.0	24.6	24.5	36.5	25.3	18.2	31.9	14.9	12.3
LnGrp LOS	C	C	C	C	C	C	D	C	B	C	B	B
Approach Vol, veh/h		742			791			556			582	
Approach Delay, s/veh		27.1			26.2			25.1			20.8	
Approach LOS		C			C			C			C	

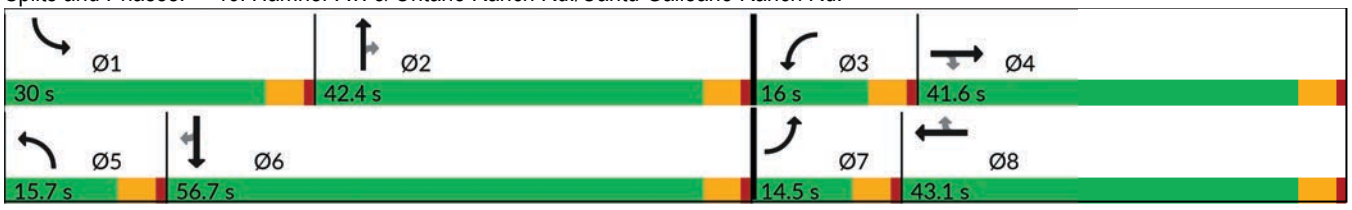
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	25.0	10.3	18.2	7.3	32.9	10.6	17.9
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	17.4	43.9	11.1	29.2	6.9	54.4	10.4	29.9
Max Q Clear Time (g_c+I1), s	10.7	17.3	5.8	9.8	3.7	10.9	6.7	7.1
Green Ext Time (p_c), s	0.2	2.7	0.1	3.6	0.0	2.0	0.0	3.3

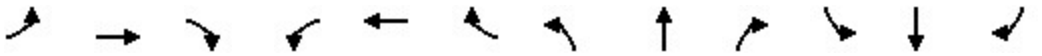
Intersection Summary	
HCM 7th Control Delay, s/veh	25.0
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	1002	102	239	368	165	129	579	394	552	307	95
Future Volume (vph)	195	1002	102	239	368	165	129	579	394	552	307	95
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6
Total Split (s)	14.5	41.6	41.6	16.0	43.1	43.1	15.7	42.4	42.4	30.0	56.7	56.7
Total Split (%)	11.2%	32.0%	32.0%	12.3%	33.2%	33.2%	12.1%	32.6%	32.6%	23.1%	43.6%	43.6%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.9	30.7	30.7	11.6	32.4	32.4	9.1	26.6	26.6	25.3	42.8	42.8
Actuated g/C Ratio	0.09	0.27	0.27	0.10	0.29	0.29	0.08	0.24	0.24	0.22	0.38	0.38
v/c Ratio	0.78	0.77	0.21	0.81	0.27	0.30	0.56	0.52	0.83	0.86	0.17	0.15
Control Delay (s/veh)	73.6	43.0	4.3	73.1	32.5	6.4	62.3	39.1	38.8	58.3	24.0	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.6	43.0	4.3	73.1	32.5	6.4	62.3	39.1	38.8	58.3	24.0	5.4
LOS	E	D	A	E	C	A	E	D	D	E	C	A
Approach Delay (s/veh)		44.6			39.5			41.7			42.0	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 113	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 42.3	Intersection LOS: D
Intersection Capacity Utilization 76.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 46: Hamner Av. & Ontario Ranch Rd./Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	1002	102	239	368	165	129	579	394	552	307	95
Future Volume (veh/h)	195	1002	102	239	368	165	129	579	394	552	307	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	201	1033	33	246	379	104	133	597	316	569	316	73
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	252	1301	404	297	1375	427	184	1241	385	623	1970	604
Arrive On Green	0.09	0.26	0.26	0.10	0.28	0.28	0.06	0.25	0.25	0.21	0.40	0.40
Sat Flow, veh/h	2956	4914	1525	2956	4914	1525	2956	4914	1525	2956	4914	1506
Grp Volume(v), veh/h	201	1033	33	246	379	104	133	597	316	569	316	73
Grp Sat Flow(s),veh/h/ln	1478	1638	1525	1478	1638	1525	1478	1638	1525	1478	1638	1506
Q Serve(g_s), s	7.2	21.0	1.7	8.8	6.5	5.7	4.7	11.1	21.0	20.2	4.4	3.3
Cycle Q Clear(g_c), s	7.2	21.0	1.7	8.8	6.5	5.7	4.7	11.1	21.0	20.2	4.4	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	1301	404	297	1375	427	184	1241	385	623	1970	604
V/C Ratio(X)	0.80	0.79	0.08	0.83	0.28	0.24	0.72	0.48	0.82	0.91	0.16	0.12
Avail Cap(c_a), veh/h	273	1694	526	314	1763	547	306	1731	537	700	2386	731
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	36.7	29.6	47.3	30.1	29.9	49.4	34.1	37.8	41.4	20.6	20.2
Incr Delay (d2), s/veh	12.6	2.0	0.1	14.7	0.1	0.3	2.0	0.3	7.0	14.5	0.0	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(50%),veh/ln	2.9	8.0	0.6	3.7	2.4	2.0	1.7	4.2	8.0	8.2	1.6	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.8	38.8	29.7	62.1	30.3	30.2	51.4	34.4	44.8	55.9	20.6	20.3
LnGrp LOS	E	D	C	E	C	C	D	C	D	E	C	C
Approach Vol, veh/h		1267			729			1046			958	
Approach Delay, s/veh		42.0			41.0			39.7			41.5	
Approach LOS		D			D			D			D	

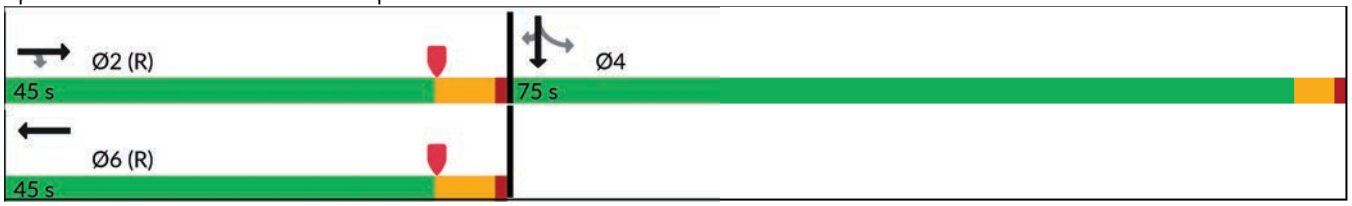
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.2	31.7	15.4	33.0	11.3	47.6	13.8	34.6
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	25.4	37.8	11.4	37.0	11.1	52.1	9.9	38.5
Max Q Clear Time (g_c+I1), s	22.2	23.0	10.8	23.0	6.7	6.4	9.2	8.5
Green Ext Time (p_c), s	0.4	4.1	0.0	5.4	0.1	2.2	0.0	2.6

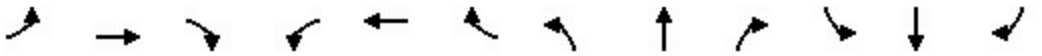
Intersection Summary	
HCM 7th Control Delay, s/veh	41.1
HCM 7th LOS	D

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	950	517	518	223	276	0	963
Future Volume (vph)	950	517	518	223	276	0	963
Turn Type	NA	Perm	NA	Free	Perm	NA	Perm
Protected Phases	2		6			4	
Permitted Phases		2		Free	4		4
Detector Phase	2	2	6		4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	45.0	45.0	45.0		75.0	75.0	75.0
Total Split (%)	37.5%	37.5%	37.5%		62.5%	62.5%	62.5%
Yellow Time (s)	5.5	5.5	5.5		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5		4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Min	C-Min	C-Min		Min	Min	Min
Act Effct Green (s)	63.8	63.8	63.8	120.0	45.1	45.1	45.1
Actuated g/C Ratio	0.53	0.53	0.53	1.00	0.38	0.38	0.38
v/c Ratio	0.34	0.51	0.28	0.15	0.42	0.78	0.77
Control Delay (s/veh)	18.4	3.9	26.9	0.2	28.0	31.8	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	18.4	3.9	26.9	0.2	28.0	31.8	31.2
LOS	B	A	C	A	C	C	C
Approach Delay (s/veh)	13.3		18.8			30.8	
Approach LOS	B		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 37.5 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay (s/veh): 20.8	Intersection LOS: C
Intersection Capacity Utilization 66.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 47: I-15 SB Ramps & Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	950	517	0	518	223	0	0	0	276	0	963
Future Volume (veh/h)	0	950	517	0	518	223	0	0	0	276	0	963
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
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	0	1800	1800	0	1800	1800				1700	1800	1800
Adj Flow Rate, veh/h	0	969	0	0	529	0				188	0	861
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	3163		0	2108					521	0	982
Arrive On Green	0.00	0.59	0.00	0.00	1.00	0.00				0.32	0.00	0.32
Sat Flow, veh/h	0	5400	1525	0	3600	1525				1619	0	3051
Grp Volume(v), veh/h	0	969	0	0	529	0				188	0	861
Grp Sat Flow(s),veh/h/ln	0	1800	1525	0	1800	1525				1619	0	1525
Q Serve(g_s), s	0.0	10.9	0.0	0.0	0.0	0.0				10.7	0.0	32.0
Cycle Q Clear(g_c), s	0.0	10.9	0.0	0.0	0.0	0.0				10.7	0.0	32.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3163		0	2108					521	0	982
V/C Ratio(X)	0.00	0.31		0.00	0.25					0.36	0.00	0.88
Avail Cap(c_a), veh/h	0	3163		0	2108					950	0	1790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.48	0.00	0.00	0.91	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.6	0.0	0.0	0.0	0.0				31.2	0.0	38.4
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.3	0.0				0.4	0.0	2.7
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 BackOfQ(50%),veh/ln	0.0	3.9	0.0	0.0	0.1	0.0				4.1	0.0	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	12.7	0.0	0.0	0.3	0.0				31.6	0.0	41.1
LnGrp LOS		B			A					C		D
Approach Vol, veh/h		969			529						1049	
Approach Delay, s/veh		12.7			0.3						39.4	
Approach LOS		B			A						D	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	76.8	43.2	76.8
Change Period (Y+Rc), s	6.5	4.6	6.5
Max Green Setting (Gmax), s	38.5	70.4	38.5
Max Q Clear Time (g_c+I1), s	12.9	34.0	2.0
Green Ext Time (p_c), s	6.3	4.6	3.2

Intersection Summary	
HCM 7th Control Delay, s/veh	21.1
HCM 7th LOS	C

Notes

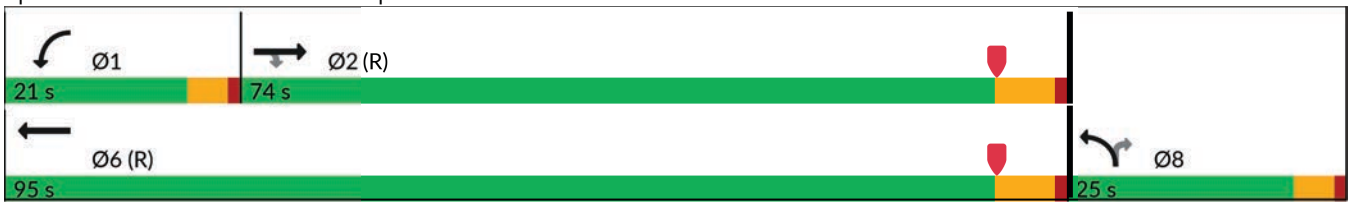
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	472	757	292	364	315	243
Future Volume (vph)	472	757	292	364	315	243
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	61.3	61.3	11.0	22.5	22.5	22.5
Total Split (s)	74.0	74.0	21.0	95.0	25.0	25.0
Total Split (%)	61.7%	61.7%	17.5%	79.2%	20.8%	20.8%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.6	4.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	67.7	67.7	17.1	89.4	19.5	19.5
Actuated g/C Ratio	0.56	0.56	0.14	0.75	0.16	0.16
v/c Ratio	0.16	0.69	0.70	0.09	0.74	0.45
Control Delay (s/veh)	9.3	14.8	57.6	4.6	53.8	9.6
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.3	14.9	57.6	4.6	53.8	9.6
LOS	A	B	E	A	D	A
Approach Delay (s/veh)	12.7			28.2	40.0	
Approach LOS	B			C	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 44.8 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay (s/veh): 23.1	Intersection LOS: C
Intersection Capacity Utilization 80.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 48: I-15 NB Ramps & Cantu Galleano Ranch Rd.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	472	757	292	364	315	243
Future Volume (veh/h)	472	757	292	364	315	243
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		0.98	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	1800	1800	1600	1800	1700	1800
Adj Flow Rate, veh/h	487	635	301	375	333	167
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	3360	928	353	4193	424	200
Arrive On Green	1.00	1.00	0.12	0.78	0.13	0.13
Sat Flow, veh/h	5400	1492	3048	5400	3238	1525
Grp Volume(v), veh/h	487	635	301	375	333	167
Grp Sat Flow(s),veh/h/ln	1800	1492	1524	1800	1619	1525
Q Serve(g_s), s	0.0	0.0	11.6	2.0	12.0	12.8
Cycle Q Clear(g_c), s	0.0	0.0	11.6	2.0	12.0	12.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3360	928	353	4193	424	200
V/C Ratio(X)	0.14	0.68	0.85	0.09	0.78	0.84
Avail Cap(c_a), veh/h	3360	928	417	4193	550	259
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	52.0	3.2	50.5	50.9
Incr Delay (d2), s/veh	0.1	3.8	13.8	0.0	5.6	16.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	4.9	0.5	5.0	5.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.1	3.8	65.8	3.3	56.1	67.4
LnGrp LOS	A	A	E	A	E	E
Approach Vol, veh/h	1122			676	500	
Approach Delay, s/veh	2.2			31.1	59.8	
Approach LOS	A			C	E	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	18.5	81.2			99.7	20.3
Change Period (Y+Rc), s	4.6	6.5			6.5	4.6
Max Green Setting (Gmax), s	16.4	67.5			88.5	20.4
Max Q Clear Time (g_c+I1), s	13.6	2.0			4.0	14.8
Green Ext Time (p_c), s	0.3	6.2			2.3	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	23.3
HCM 7th LOS	C

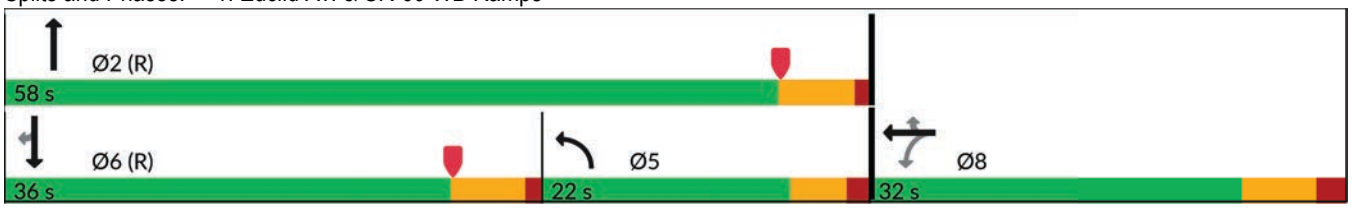
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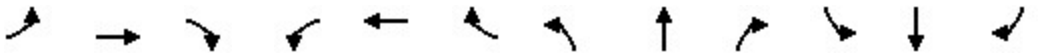
User approved volume balancing among the lanes for turning movement.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	670	0	437	274	922	906	502
Future Volume (vph)	670	0	437	274	922	906	502
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.0	17.0	17.0	15.2	28.0	27.0	27.0
Total Split (s)	32.0	32.0	32.0	22.0	58.0	36.0	36.0
Total Split (%)	35.6%	35.6%	35.6%	24.4%	64.4%	40.0%	40.0%
Yellow Time (s)	5.0	5.0	5.0	3.7	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	1.5	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	5.2	6.0	6.0	6.0
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	25.0	25.0	25.0	16.9	52.0	29.9	29.9
Actuated g/C Ratio	0.28	0.28	0.28	0.19	0.58	0.33	0.33
v/c Ratio	0.95	0.81	0.76	0.96	0.50	0.85	0.63
Control Delay (s/veh)	67.3	36.6	32.2	79.0	20.4	36.5	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Total Delay (s/veh)	67.3	36.6	32.2	79.0	20.9	36.5	5.9
LOS	E	D	C	E	C	D	A
Approach Delay (s/veh)		45.8			34.2	25.6	
Approach LOS		D			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 30.8 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 34.4	Intersection LOS: C
Intersection Capacity Utilization 89.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Euclid Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	670	0	437	274	922	0	0	906	502
Future Volume (veh/h)	0	0	0	670	0	437	274	922	0	0	906	502
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		0.97
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				1700	1800	1800	1700	1800	0	0	1800	1800
Adj Flow Rate, veh/h				816	0	221	291	981	0	0	964	270
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				886	0	412	315	1990	0	0	1098	476
Arrive On Green				0.27	0.00	0.27	0.06	0.19	0.00	0.00	0.32	0.32
Sat Flow, veh/h				3238	0	1506	1619	3510	0	0	3510	1484
Grp Volume(v), veh/h				816	0	221	291	981	0	0	964	270
Grp Sat Flow(s),veh/h/ln				1619	0	1506	1619	1710	0	0	1710	1484
Q Serve(g_s), s				22.0	0.0	11.2	16.1	23.0	0.0	0.0	24.0	13.6
Cycle Q Clear(g_c), s				22.0	0.0	11.2	16.1	23.0	0.0	0.0	24.0	13.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				886	0	412	315	1990	0	0	1098	476
V/C Ratio(X)				0.92	0.00	0.54	0.92	0.49	0.00	0.00	0.88	0.57
Avail Cap(c_a), veh/h				899	0	418	315	1990	0	0	1140	495
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	0.00	1.00	0.49	0.49	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.7	0.0	27.8	41.5	24.5	0.0	0.0	28.9	25.4
Incr Delay (d2), s/veh				14.6	0.0	1.7	19.4	0.4	0.0	0.0	10.0	4.8
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 BackOfQ(50%),veh/ln				10.1	0.0	4.2	8.6	10.4	0.0	0.0	10.5	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				46.3	0.0	29.6	60.8	24.9	0.0	0.0	38.9	30.2
LnGrp LOS				D		C	E	C			D	C
Approach Vol, veh/h					1037			1272			1234	
Approach Delay, s/veh					42.8			33.2			37.0	
Approach LOS					D			C			D	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		58.4			23.5	34.9		31.6				
Change Period (Y+Rc), s		6.0			6.0	* 6		7.0				
Max Green Setting (Gmax), s		52.0			16.8	* 30		25.0				
Max Q Clear Time (g_c+I1), s		25.0			18.1	26.0		24.0				
Green Ext Time (p_c), s		10.0			0.0	2.9		0.6				

Intersection Summary		
HCM 7th Control Delay, s/veh	37.3	
HCM 7th LOS	D	

Notes

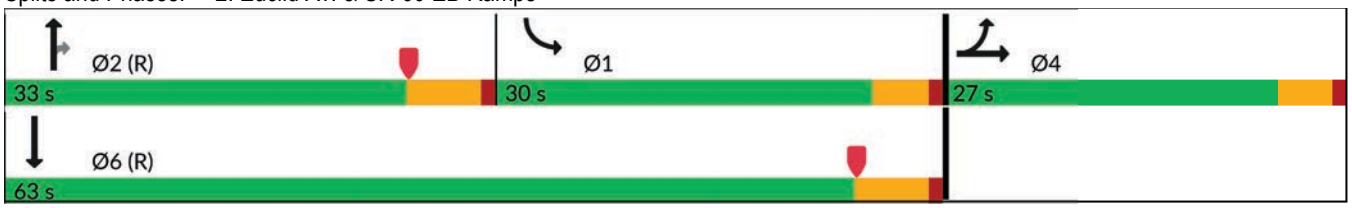
User approved volume balancing among the lanes for turning movement.

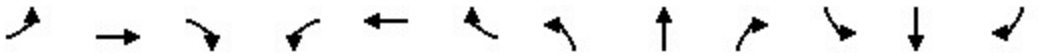
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	303	1	895	550	327	1249
Future Volume (vph)	303	1	895	550	327	1249
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	29.0	29.0	14.7	27.0
Total Split (s)	27.0	27.0	33.0	33.0	30.0	63.0
Total Split (%)	30.0%	30.0%	36.7%	36.7%	33.3%	70.0%
Yellow Time (s)	3.6	3.6	5.0	5.0	3.7	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	22.3	22.3	29.8	29.8	22.5	57.1
Actuated g/C Ratio	0.25	0.25	0.33	0.33	0.25	0.63
v/c Ratio	0.75	0.91	0.82	0.65	0.84	0.60
Control Delay (s/veh)	44.9	55.5	36.3	6.4	30.0	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	44.9	55.5	36.3	6.4	30.0	5.5
LOS	D	E	D	A	C	A
Approach Delay (s/veh)		50.9	24.9			10.6
Approach LOS		D	C			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay (s/veh): 23.2	Intersection LOS: C
Intersection Capacity Utilization 89.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	303	1	328	0	0	0	0	895	550	327	1249	0
Future Volume (veh/h)	303	1	328	0	0	0	0	895	550	327	1249	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99				1.00		0.97	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	1700	1800	1800				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	300	23	284				0	932	416	341	1301	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	368	26	320				0	1023	444	468	2240	0
Arrive On Green	0.23	0.23	0.23				0.00	0.30	0.30	0.29	0.65	0.00
Sat Flow, veh/h	1619	114	1408				0	3510	1485	1619	3510	0
Grp Volume(v), veh/h	300	0	307				0	932	416	341	1301	0
Grp Sat Flow(s),veh/h/ln	1619	0	1522				0	1710	1485	1619	1710	0
Q Serve(g_s), s	15.8	0.0	17.6				0.0	23.6	24.5	17.1	19.1	0.0
Cycle Q Clear(g_c), s	15.8	0.0	17.6				0.0	23.6	24.5	17.1	19.1	0.0
Prop In Lane	1.00		0.93				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	368	0	346				0	1023	444	468	2240	0
V/C Ratio(X)	0.82	0.00	0.89				0.00	0.91	0.94	0.73	0.58	0.00
Avail Cap(c_a), veh/h	403	0	379				0	1026	445	468	2240	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	1.00				0.00	0.84	0.84	0.36	0.36	0.00
Uniform Delay (d), s/veh	33.0	0.0	33.7				0.0	30.4	30.7	28.8	8.6	0.0
Incr Delay (d2), s/veh	11.4	0.0	20.5				0.0	11.7	26.1	2.1	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	7.2	0.0	8.3				0.0	10.6	11.3	6.4	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.4	0.0	54.2				0.0	42.1	56.8	30.9	9.0	0.0
LnGrp LOS	D		D					D	E	C	A	
Approach Vol, veh/h		607						1348			1642	
Approach Delay, s/veh		49.3						46.6			13.6	
Approach LOS		D						D			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	32.0	32.9		25.1		64.9
Change Period (Y+Rc), s	6.0	* 6		4.6		6.0
Max Green Setting (Gmax), s	25.3	* 27		22.4		57.0
Max Q Clear Time (g_c+I1), s	19.1	26.5		19.6		21.1
Green Ext Time (p_c), s	0.5	0.4		0.9		16.2

Intersection Summary	
HCM 7th Control Delay, s/veh	32.0
HCM 7th LOS	C

Notes

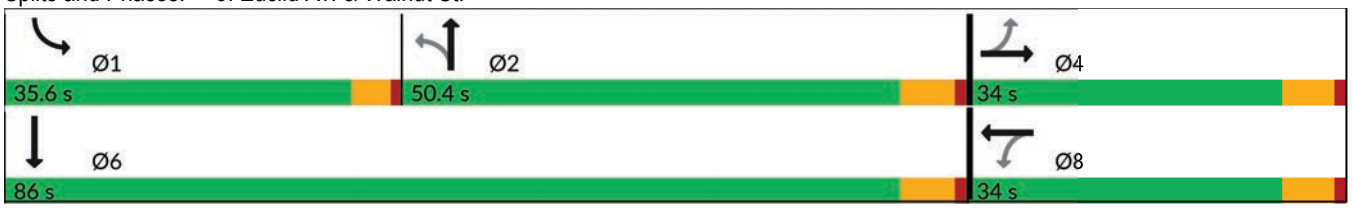
User approved volume balancing among the lanes for turning movement.

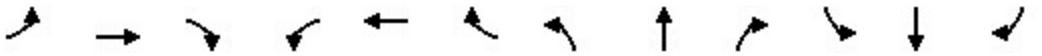
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	135	490	53	273	128	1023	249	1194
Future Volume (vph)	135	490	53	273	128	1023	249	1194
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	34.0	34.0	34.0	34.0	50.4	50.4	35.6	86.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	42.0%	42.0%	29.7%	71.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	25.8	25.8	25.8	25.8	44.8	44.8	12.9	62.4
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.45	0.45	0.13	0.63
v/c Ratio	0.73	0.77	0.59	0.46	0.90	0.50	0.66	0.44
Control Delay (s/veh)	58.5	39.2	62.2	28.6	84.1	21.2	50.7	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.5	39.2	62.2	28.6	84.1	21.2	50.7	10.2
LOS	E	D	E	C	F	C	D	B
Approach Delay (s/veh)		42.5		32.5		27.9		16.7
Approach LOS		D		C		C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay (s/veh): 26.9	Intersection LOS: C
Intersection Capacity Utilization 83.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	490	169	53	273	125	128	1023	49	249	1194	124
Future Volume (veh/h)	135	490	169	53	273	125	128	1023	49	249	1194	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	138	500	151	54	279	126	131	1044	23	254	1218	100
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	262	748	224	173	668	294	248	2020	44	330	2656	218
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.41	0.41	0.41	0.11	0.57	0.57
Sat Flow, veh/h	939	2582	775	749	2308	1015	400	4947	109	2956	4628	380
Grp Volume(v), veh/h	138	330	321	54	205	200	131	691	376	254	862	456
Grp Sat Flow(s),veh/h/ln	939	1710	1647	749	1710	1612	400	1638	1780	1478	1638	1731
Q Serve(g_s), s	11.9	14.5	14.6	5.8	8.2	8.6	24.5	13.5	13.5	7.1	12.9	13.0
Cycle Q Clear(g_c), s	20.5	14.5	14.6	20.5	8.2	8.6	24.5	13.5	13.5	7.1	12.9	13.0
Prop In Lane	1.00		0.47	1.00		0.63	1.00		0.06	1.00		0.22
Lane Grp Cap(c), veh/h	262	495	477	173	495	467	248	1338	727	330	1880	994
V/C Ratio(X)	0.53	0.67	0.67	0.31	0.41	0.43	0.53	0.52	0.52	0.77	0.46	0.46
Avail Cap(c_a), veh/h	301	567	546	204	567	534	294	1717	933	1077	3088	1632
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	26.6	26.7	35.7	24.4	24.5	22.2	18.9	18.9	36.7	10.5	10.5
Incr Delay (d2), s/veh	1.6	2.5	2.7	1.0	0.6	0.6	1.7	0.3	0.6	1.4	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.8	5.6	1.1	3.2	3.1	2.2	4.6	5.1	2.5	3.9	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.4	29.1	29.3	36.7	24.9	25.1	23.9	19.2	19.4	38.2	10.7	10.8
LnGrp LOS	C	C	C	D	C	C	C	B	B	D	B	B
Approach Vol, veh/h		789			459			1198			1572	
Approach Delay, s/veh		30.1			26.4			19.8			15.1	
Approach LOS		C			C			B			B	

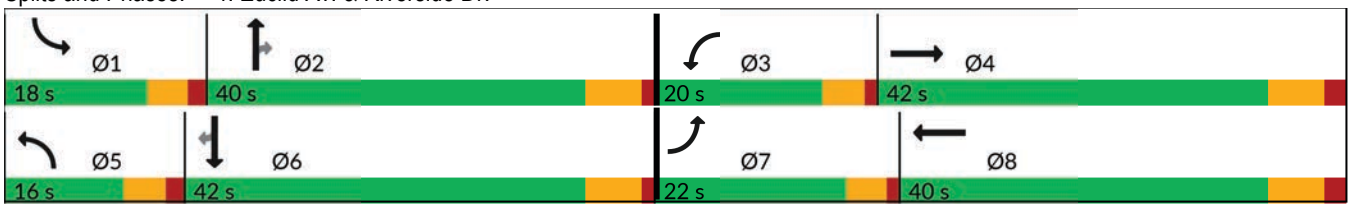
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.1	40.5		30.4		54.6		30.4				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	44.6		28.2		80.2		28.2				
Max Q Clear Time (g_c+I1), s	9.1	26.5		22.5		15.0		22.5				
Green Ext Time (p_c), s	0.4	8.2		2.2		11.1		1.3				

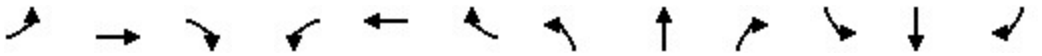
Intersection Summary												
HCM 7th Control Delay, s/veh			20.8									
HCM 7th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	126	338	117	352	73	915	183	116	1001	197
Future Volume (vph)	126	338	117	352	73	915	183	116	1001	197
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	33.0	15.2	36.0	36.0
Total Split (s)	22.0	42.0	20.0	40.0	16.0	40.0	40.0	18.0	42.0	42.0
Total Split (%)	18.3%	35.0%	16.7%	33.3%	13.3%	33.3%	33.3%	15.0%	35.0%	35.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	5.0	3.7	5.0	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	6.0	5.2	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.2	30.1	13.5	29.4	10.5	34.1	34.1	12.0	39.0	39.0
Actuated g/C Ratio	0.13	0.27	0.12	0.26	0.09	0.30	0.30	0.11	0.35	0.35
v/c Ratio	0.65	0.86	0.63	0.51	0.51	0.92	0.35	0.70	0.88	0.32
Control Delay (s/veh)	63.1	57.6	64.0	36.1	63.2	53.9	14.2	72.3	46.8	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.1	57.6	64.0	36.1	63.2	53.9	14.2	72.3	46.8	8.5
LOS	E	E	E	D	E	D	B	E	D	A
Approach Delay (s/veh)		59.0		42.1		48.3			43.3	
Approach LOS		E		D		D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 112.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay (s/veh): 47.1	Intersection LOS: D
Intersection Capacity Utilization 88.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	338	55	117	352	76	73	915	183	116	1001	197
Future Volume (veh/h)	126	338	55	117	352	76	73	915	183	116	1001	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	131	352	35	122	367	40	76	953	104	121	1043	114
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	182	402	40	181	775	84	138	1111	485	151	1138	500
Arrive On Green	0.11	0.25	0.25	0.11	0.25	0.25	0.09	0.32	0.32	0.09	0.33	0.33
Sat Flow, veh/h	1619	1609	160	1619	3106	336	1619	3420	1493	1619	3420	1503
Grp Volume(v), veh/h	131	0	387	122	201	206	76	953	104	121	1043	114
Grp Sat Flow(s),veh/h/ln	1619	0	1769	1619	1710	1732	1619	1710	1493	1619	1710	1503
Q Serve(g_s), s	8.1	0.0	21.9	7.5	10.4	10.6	4.7	27.2	5.3	7.6	30.5	5.7
Cycle Q Clear(g_c), s	8.1	0.0	21.9	7.5	10.4	10.6	4.7	27.2	5.3	7.6	30.5	5.7
Prop In Lane	1.00		0.09	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	0	442	181	427	432	138	1111	485	151	1138	500
V/C Ratio(X)	0.72	0.00	0.87	0.67	0.47	0.48	0.55	0.86	0.21	0.80	0.92	0.23
Avail Cap(c_a), veh/h	269	0	594	238	542	549	168	1116	487	199	1182	519
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	0.0	37.5	44.4	33.2	33.3	45.7	32.9	25.5	46.3	33.4	25.1
Incr Delay (d2), s/veh	2.0	0.0	12.1	2.1	1.2	1.2	3.4	6.8	0.2	15.9	11.0	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(50%),veh/ln	3.3	0.0	10.5	3.0	4.3	4.4	1.9	11.3	1.8	3.6	13.5	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.6	0.0	49.6	46.5	34.4	34.5	49.1	39.7	25.7	62.2	44.3	25.3
LnGrp LOS	D		D	D	C	C	D	D	C	E	D	C
Approach Vol, veh/h		518			529			1133			1278	
Approach Delay, s/veh		48.8			37.2			39.0			44.3	
Approach LOS		D			D			D			D	

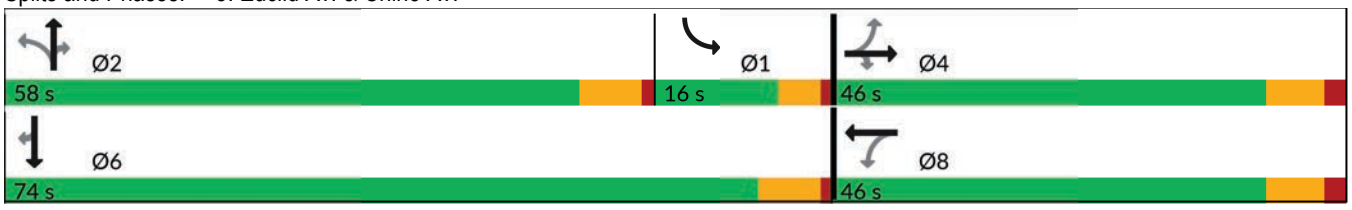
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	39.9	16.3	33.1	14.1	40.7	16.4	33.0
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	12.8	34.0	15.3	35.0	10.8	36.0	17.3	33.0
Max Q Clear Time (g_c+I1), s	9.6	29.2	9.5	23.9	6.7	32.5	10.1	12.6
Green Ext Time (p_c), s	0.1	2.5	0.1	2.2	0.0	2.2	0.1	2.9

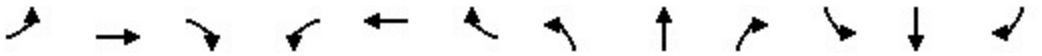
Intersection Summary	
HCM 7th Control Delay, s/veh	42.2
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	92	317	34	79	94	41	1026	199	69	1052	64
Future Volume (vph)	92	317	34	79	94	41	1026	199	69	1052	64
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	46.0	46.0	46.0	46.0	46.0	58.0	58.0	58.0	16.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	48.3%	48.3%	48.3%	13.3%	61.7%	61.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2		7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	27.1	27.1	27.1		27.1	37.6	37.6	37.6	11.7	48.7	48.7
Actuated g/C Ratio	0.30	0.30	0.30		0.30	0.41	0.41	0.41	0.13	0.53	0.53
v/c Ratio	0.32	0.62	0.07		0.78	0.36	0.76	0.30	0.35	0.60	0.08
Control Delay (s/veh)	32.2	35.8	0.3		50.4	32.5	28.6	12.6	51.5	16.1	3.2
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.2	35.8	0.3		50.4	32.5	28.6	12.6	51.5	16.1	3.2
LOS	C	D	A		D	C	C	B	D	B	A
Approach Delay (s/veh)		32.4			50.4		26.3			17.5	
Approach LOS		C			D		C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.3	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay (s/veh): 25.5	Intersection LOS: C
Intersection Capacity Utilization 92.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	317	34	79	94	49	41	1026	199	69	1052	64
Future Volume (veh/h)	92	317	34	79	94	49	41	1026	199	69	1052	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	96	330	23	82	98	45	43	1069	155	72	1096	41
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	287	539	457	124	137	52	165	1358	606	145	1900	827
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.40	0.40	0.40	0.09	0.56	0.56
Sat Flow, veh/h	1195	1800	1525	240	457	174	475	3420	1525	1619	3420	1488
Grp Volume(v), veh/h	96	330	23	225	0	0	43	1069	155	72	1096	41
Grp Sat Flow(s),veh/h/ln	1195	1800	1525	871	0	0	475	1710	1525	1619	1710	1488
Q Serve(g_s), s	0.0	14.9	1.0	10.5	0.0	0.0	7.6	25.9	6.4	4.0	19.8	1.2
Cycle Q Clear(g_c), s	11.6	14.9	1.0	25.4	0.0	0.0	27.5	25.9	6.4	4.0	19.8	1.2
Prop In Lane	1.00		1.00	0.36		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	287	539	457	313	0	0	165	1358	606	145	1900	827
V/C Ratio(X)	0.34	0.61	0.05	0.72	0.00	0.00	0.26	0.79	0.26	0.50	0.58	0.05
Avail Cap(c_a), veh/h	419	739	626	467	0	0	235	1863	831	194	2442	1063
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	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	28.4	23.6	34.1	0.0	0.0	34.3	25.0	19.1	41.0	13.7	9.6
Incr Delay (d2), s/veh	0.7	1.1	0.0	3.1	0.0	0.0	0.8	1.6	0.2	1.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	6.2	0.4	5.0	0.0	0.0	0.9	9.5	2.1	1.5	6.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.9	29.5	23.6	37.2	0.0	0.0	35.1	26.6	19.3	41.9	14.0	9.6
LnGrp LOS	C	C	C	D			D	C	B	D	B	A
Approach Vol, veh/h		449			225			1267			1209	
Approach Delay, s/veh		28.9			37.2			26.0			15.5	
Approach LOS		C			D			C			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.0	44.0		35.5		59.0		35.5				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	11.3	* 52		38.8		67.5		38.8				
Max Q Clear Time (g_c+I1), s	6.0	29.5		16.9		21.8		27.4				
Green Ext Time (p_c), s	0.0	8.1		2.2		8.6		0.9				

Intersection Summary		
HCM 7th Control Delay, s/veh	23.2	
HCM 7th LOS	C	

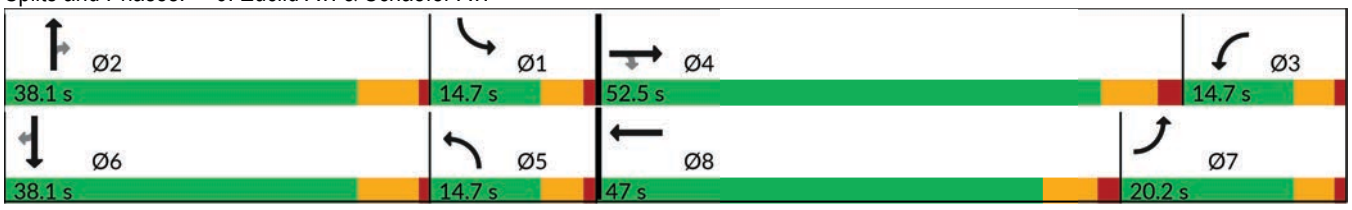
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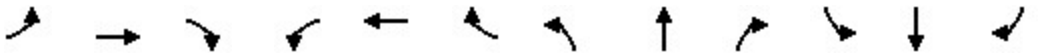
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	203	291	125	55	67	70	1005	106	87	968	104
Future Volume (vph)	203	291	125	55	67	70	1005	106	87	968	104
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	29.5	14.7	37.5	37.5
Total Split (s)	20.2	52.5	52.5	14.7	47.0	14.7	38.1	38.1	14.7	38.1	38.1
Total Split (%)	16.8%	43.8%	43.8%	12.3%	39.2%	12.3%	31.8%	31.8%	12.3%	31.8%	31.8%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	18.7	26.4	26.4	11.3	15.8	10.1	31.9	31.9	10.1	35.2	35.2
Actuated g/C Ratio	0.19	0.26	0.26	0.11	0.16	0.10	0.32	0.32	0.10	0.35	0.35
v/c Ratio	0.74	0.67	0.27	0.33	0.47	0.47	1.01	0.21	0.59	0.88	0.19
Control Delay (s/veh)	55.4	41.6	6.6	47.9	31.1	55.7	64.5	6.2	61.0	42.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.4	41.6	6.6	47.9	31.1	55.7	64.5	6.2	61.0	42.9	5.9
LOS	E	D	A	D	C	E	E	A	E	D	A
Approach Delay (s/veh)		39.1			36.2		58.8			40.9	
Approach LOS		D			D		E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay (s/veh): 47.0	Intersection LOS: D
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	291	125	55	67	58	70	1005	106	87	968	104
Future Volume (veh/h)	203	291	125	55	67	58	70	1005	106	87	968	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	223	320	73	60	74	52	77	1104	113	96	1064	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	304	382	323	140	109	76	174	1182	516	164	1161	504
Arrive On Green	0.19	0.21	0.21	0.09	0.11	0.11	0.11	0.35	0.35	0.10	0.34	0.34
Sat Flow, veh/h	1619	1800	1523	1619	983	691	1619	3420	1493	1619	3420	1486
Grp Volume(v), veh/h	223	320	73	60	0	126	77	1104	113	96	1064	69
Grp Sat Flow(s),veh/h/ln	1619	1800	1523	1619	0	1673	1619	1710	1493	1619	1710	1486
Q Serve(g_s), s	11.7	15.3	3.6	3.2	0.0	6.5	4.0	28.0	4.8	5.1	26.8	2.9
Cycle Q Clear(g_c), s	11.7	15.3	3.6	3.2	0.0	6.5	4.0	28.0	4.8	5.1	26.8	2.9
Prop In Lane	1.00		1.00	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	382	323	140	0	185	174	1182	516	164	1161	504
V/C Ratio(X)	0.73	0.84	0.23	0.43	0.00	0.68	0.44	0.93	0.22	0.59	0.92	0.14
Avail Cap(c_a), veh/h	304	911	771	180	0	744	180	1202	525	180	1202	522
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	33.9	29.3	39.0	0.0	38.5	37.6	28.4	20.8	38.6	28.5	20.6
Incr Delay (d2), s/veh	7.8	3.7	0.3	0.8	0.0	3.2	0.7	13.0	0.2	2.2	10.8	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(50%),veh/ln	5.0	6.7	1.3	1.2	0.0	2.7	1.5	12.2	1.6	2.0	11.4	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.2	37.6	29.6	39.8	0.0	41.7	38.3	41.5	21.0	40.8	39.3	20.7
LnGrp LOS	D	D	C	D		D	D	D	C	D	D	C
Approach Vol, veh/h		616			186			1294			1229	
Approach Delay, s/veh		38.3			41.1			39.5			38.4	
Approach LOS		D			D			D			D	

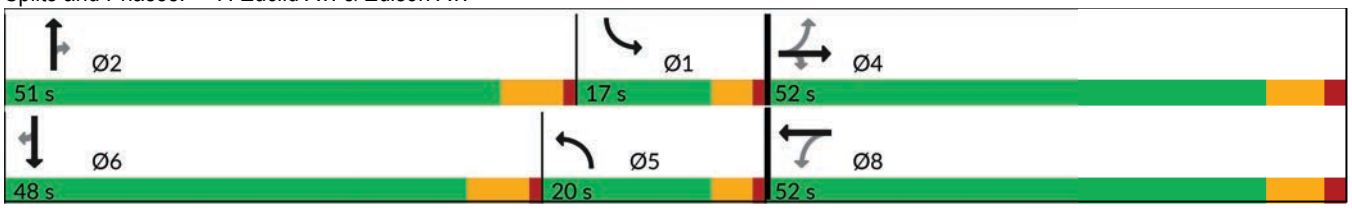
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	37.6	12.5	26.1	14.3	37.0	21.6	17.0
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	10.0	31.6	10.0	45.5	10.0	31.6	15.5	40.0
Max Q Clear Time (g_c+I1), s	7.1	30.0	5.2	17.3	6.0	28.8	13.7	8.5
Green Ext Time (p_c), s	0.0	1.0	0.0	1.5	0.0	1.7	0.1	0.5

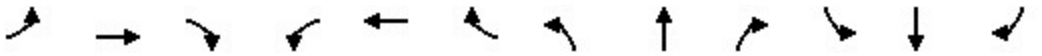
Intersection Summary	
HCM 7th Control Delay, s/veh	38.9
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	214	492	196	47	238	208	996	56	104	796	194
Future Volume (vph)	214	492	196	47	238	208	996	56	104	796	194
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	44.2	44.2	44.2	45.2	45.2	14.7	26.5	26.5	14.7	37.5	37.5
Total Split (s)	52.0	52.0	52.0	52.0	52.0	20.0	51.0	51.0	17.0	48.0	48.0
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	16.7%	42.5%	42.5%	14.2%	40.0%	40.0%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	35.5	35.5	35.5	35.5	35.5	16.2	37.0	37.0	11.5	32.3	32.3
Actuated g/C Ratio	0.34	0.34	0.34	0.34	0.34	0.16	0.36	0.36	0.11	0.31	0.31
v/c Ratio	0.80	0.83	0.31	0.39	0.49	0.47	0.85	0.10	0.60	0.77	0.34
Control Delay (s/veh)	53.9	44.1	4.8	38.1	29.4	47.0	38.7	2.9	63.0	38.1	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.9	44.1	4.8	38.1	29.4	47.0	38.7	2.9	63.0	38.1	6.5
LOS	D	D	A	D	C	D	D	A	E	D	A
Approach Delay (s/veh)		37.9			30.6		38.4			34.8	
Approach LOS		D			C		D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 36.5	Intersection LOS: D
Intersection Capacity Utilization 94.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: Euclid Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	492	196	47	238	50	208	996	56	104	796	194
Future Volume (veh/h)	214	492	196	47	238	50	208	996	56	104	796	194
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	223	512	136	49	248	47	217	1038	43	108	829	175
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	331	681	577	168	555	105	446	1207	527	149	1005	440
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.15	0.35	0.35	0.09	0.29	0.29
Sat Flow, veh/h	1039	1800	1525	751	1467	278	2956	3420	1493	1619	3420	1496
Grp Volume(v), veh/h	223	512	136	49	0	295	217	1038	43	108	829	175
Grp Sat Flow(s),veh/h/ln	1039	1800	1525	751	0	1745	1478	1710	1493	1619	1710	1496
Q Serve(g_s), s	21.2	25.7	6.3	6.3	0.0	13.1	7.0	29.3	2.0	6.7	23.5	9.7
Cycle Q Clear(g_c), s	34.4	25.7	6.3	32.0	0.0	13.1	7.0	29.3	2.0	6.7	23.5	9.7
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	331	681	577	168	0	660	446	1207	527	149	1005	440
V/C Ratio(X)	0.67	0.75	0.24	0.29	0.00	0.45	0.49	0.86	0.08	0.73	0.83	0.40
Avail Cap(c_a), veh/h	386	776	657	207	0	752	446	1464	639	192	1365	597
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	28.1	22.1	42.0	0.0	24.2	40.4	31.3	22.4	45.9	34.2	29.4
Incr Delay (d2), s/veh	3.7	3.6	0.2	1.0	0.0	0.5	0.3	4.6	0.1	6.0	3.1	0.6
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(50%),veh/ln	5.5	11.0	2.2	1.2	0.0	5.2	2.4	11.7	0.7	2.8	9.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.8	31.7	22.3	42.9	0.0	24.7	40.7	35.9	22.5	51.9	37.3	29.9
LnGrp LOS	D	C	C	D		C	D	D	C	D	D	C
Approach Vol, veh/h		871			344			1298			1112	
Approach Delay, s/veh		32.6			27.3			36.3			37.6	
Approach LOS		C			C			D			D	

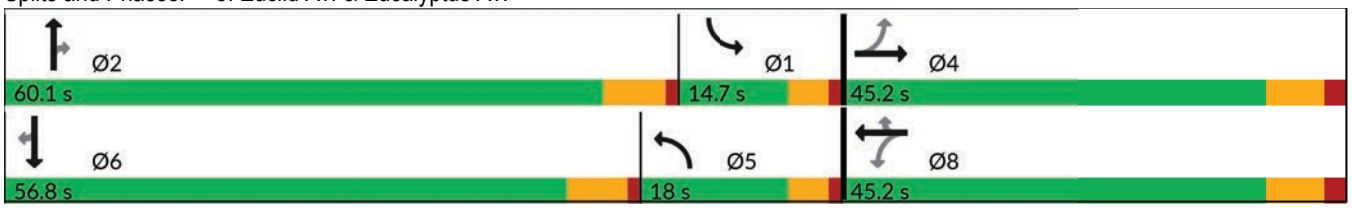
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.3	43.2		46.5	20.4	37.0		46.5				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	12.3	44.5		44.8	15.3	41.5		44.8				
Max Q Clear Time (g_c+I1), s	8.7	31.3		36.4	9.0	25.5		34.0				
Green Ext Time (p_c), s	0.0	5.4		2.9	0.2	5.0		1.4				

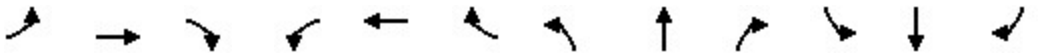
Intersection Summary		
HCM 7th Control Delay, s/veh		34.9
HCM 7th LOS		C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	46	234	28	44	41	270	1312	28	91	1261	63
Future Volume (vph)	46	234	28	44	41	270	1312	28	91	1261	63
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	45.2	45.2	44.2	44.2	44.2	14.7	28.5	28.5	14.7	35.5	35.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	18.0	60.1	60.1	14.7	56.8	56.8
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	15.0%	50.1%	50.1%	12.3%	47.3%	47.3%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	27.0	27.0	27.0	27.0	27.0	13.1	53.4	53.4	11.1	47.7	47.7
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.25	0.12	0.50	0.50	0.10	0.45	0.45
v/c Ratio	0.16	0.96dr	0.47	0.11	0.10	0.81	0.83	0.04	0.32	0.89	0.09
Control Delay (s/veh)	32.4	36.3	59.5	31.1	2.6	65.1	30.5	0.1	51.0	36.8	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.4	36.3	59.5	31.1	2.6	65.1	30.5	0.1	51.0	36.8	3.7
LOS	C	D	E	C	A	E	C	A	D	D	A
Approach Delay (s/veh)		36.1		27.6			35.7			36.3	
Approach LOS		D		C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.5	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 35.8	Intersection LOS: D
Intersection Capacity Utilization 88.0%	ICU Level of Service E
Analysis Period (min) 15	
dr Defacto Right Lane. Recode with 1 though lane as a right lane.	

Splits and Phases: 8: Euclid Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	234	468	28	44	41	270	1312	28	91	1261	63
Future Volume (veh/h)	46	234	468	28	44	41	270	1312	28	91	1261	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1700	1800	1800	1700	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	50	254	336	30	48	33	293	1426	27	99	1371	50
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	378	454	405	114	478	405	346	1589	709	283	1516	676
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.12	0.46	0.46	0.10	0.44	0.44
Sat Flow, veh/h	1264	1710	1525	793	1800	1525	2956	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	50	254	336	30	48	33	293	1426	27	99	1371	50
Grp Sat Flow(s),veh/h/ln	1264	1710	1525	793	1800	1525	1478	1710	1525	1478	1710	1525
Q Serve(g_s), s	3.3	13.5	21.9	3.9	2.1	1.7	10.3	40.4	1.0	3.3	39.3	2.0
Cycle Q Clear(g_c), s	5.4	13.5	21.9	25.8	2.1	1.7	10.3	40.4	1.0	3.3	39.3	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	378	454	405	114	478	405	346	1589	709	283	1516	676
V/C Ratio(X)	0.13	0.56	0.83	0.26	0.10	0.08	0.85	0.90	0.04	0.35	0.90	0.07
Avail Cap(c_a), veh/h	498	615	549	189	648	549	372	1736	774	283	1629	727
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	33.5	36.5	48.7	29.3	29.1	45.7	26.0	15.4	44.7	27.3	16.9
Incr Delay (d2), s/veh	0.1	0.8	6.9	0.9	0.1	0.1	15.2	6.3	0.0	0.5	7.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.5	8.5	0.8	0.9	0.6	4.3	15.7	0.3	1.2	15.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.4	34.3	43.5	49.6	29.3	29.2	60.9	32.2	15.4	45.2	34.5	17.0
LnGrp LOS	C	C	D	D	C	C	E	C	B	D	C	B
Approach Vol, veh/h		640			111			1746			1520	
Approach Delay, s/veh		38.9			34.8			36.8			34.6	
Approach LOS		D			C			D			C	

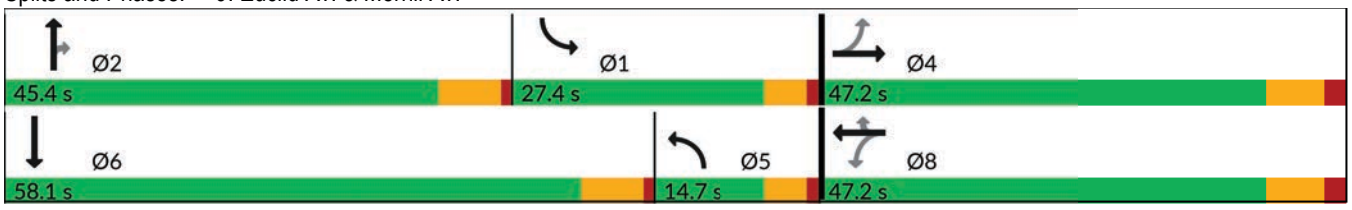
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.8	55.6		35.2	17.0	53.3		35.2				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.0	53.6		38.0	13.3	50.3		38.0				
Max Q Clear Time (g_c+I1), s	5.3	42.4		23.9	12.3	41.3		27.8				
Green Ext Time (p_c), s	0.1	6.6		2.5	0.1	5.5		0.2				

Intersection Summary		
HCM 7th Control Delay, s/veh		36.3
HCM 7th LOS		D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	6	14	144	1	202	3	938	166	444	1087
Future Volume (vph)	6	14	144	1	202	3	938	166	444	1087
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		4		8		5	2		1	6
Permitted Phases	4		8		8			2		
Detector Phase	4	4	8	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	47.2	47.2	47.2	14.7	28.5	28.5	14.7	28.5
Total Split (s)	47.2	47.2	47.2	47.2	47.2	14.7	45.4	45.4	27.4	58.1
Total Split (%)	39.3%	39.3%	39.3%	39.3%	39.3%	12.3%	37.8%	37.8%	22.8%	48.4%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		18.2	18.2	18.2	18.2	10.5	32.5	32.5	18.7	53.9
Actuated g/C Ratio		0.21	0.21	0.21	0.21	0.12	0.37	0.37	0.21	0.61
v/c Ratio		0.09	0.58	0.00	0.44	0.02	0.78	0.27	0.75	0.55
Control Delay (s/veh)		23.2	42.4	29.0	7.3	45.3	31.8	8.0	43.4	14.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		23.2	42.4	29.0	7.3	45.3	31.8	8.0	43.4	14.5
LOS		C	D	C	A	D	C	A	D	B
Approach Delay (s/veh)		23.2		22.0			28.3			22.8
Approach LOS		C		C			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay (s/veh): 24.7	Intersection LOS: C
Intersection Capacity Utilization 73.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Euclid Av. & Merrill Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	14	9	144	1	202	3	938	166	444	1087	3
Future Volume (veh/h)	6	14	9	144	1	202	3	938	166	444	1087	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
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	1800	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	6	15	6	150	1	158	3	977	165	463	1132	3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	93	168	56	315	272	231	245	1296	566	564	1464	4
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.38	0.38	0.19	0.42	0.42
Sat Flow, veh/h	175	1113	368	1334	1800	1525	1619	3420	1493	2956	3499	9
Grp Volume(v), veh/h	27	0	0	150	1	158	3	977	165	463	553	582
Grp Sat Flow(s),veh/h/ln	1656	0	0	1334	1800	1525	1619	1710	1493	1478	1710	1798
Q Serve(g_s), s	0.0	0.0	0.0	6.0	0.0	6.5	0.1	16.4	5.1	9.9	18.3	18.3
Cycle Q Clear(g_c), s	0.9	0.0	0.0	6.9	0.0	6.5	0.1	16.4	5.1	9.9	18.3	18.3
Prop In Lane	0.22		0.22	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	317	0	0	315	272	231	245	1296	566	564	715	752
V/C Ratio(X)	0.09	0.00	0.00	0.48	0.00	0.68	0.01	0.75	0.29	0.82	0.77	0.77
Avail Cap(c_a), veh/h	1037	0	0	923	1092	926	246	2018	881	1018	1339	1407
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	0.0	26.6	23.8	26.5	23.8	17.8	14.3	25.6	16.5	16.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	1.3	0.0	0.9	0.3	1.2	1.8	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	2.0	0.0	2.2	0.0	5.2	1.4	3.1	5.8	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.2	0.0	0.0	27.0	23.8	27.8	23.8	18.7	14.6	26.8	18.3	18.2
LnGrp LOS	C			C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		27			309			1145			1598	
Approach Delay, s/veh		24.2			27.4			18.1			20.7	
Approach LOS		C			C			B			C	

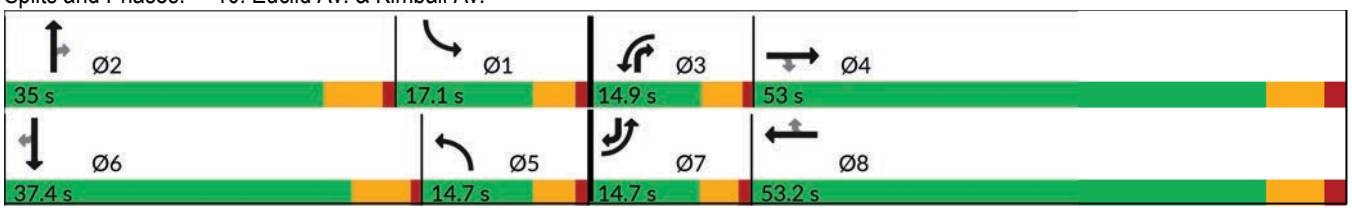
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.3	31.5		17.2	14.7	34.1		17.2				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	22.7	38.9		40.0	10.0	51.6		40.0				
Max Q Clear Time (g_c+I1), s	11.9	18.4		2.9	2.1	20.3		8.9				
Green Ext Time (p_c), s	0.7	6.6		0.1	0.0	7.2		0.4				

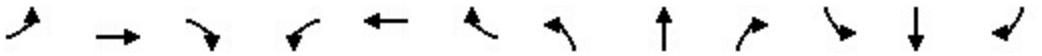
Intersection Summary		
HCM 7th Control Delay, s/veh	20.5	
HCM 7th LOS	C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	933	56	54	558	196	99	559	73	508	490	186
Future Volume (vph)	240	933	56	54	558	196	99	559	73	508	490	186
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	14.7	37.4	14.7
Total Split (s)	14.7	53.0	53.0	14.9	53.2	53.2	14.7	35.0	14.9	17.1	37.4	14.7
Total Split (%)	12.3%	44.2%	44.2%	12.4%	44.3%	44.3%	12.3%	29.2%	12.4%	14.3%	31.2%	12.3%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	3.7	5.4	3.7
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	4.7	6.4	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.3	36.2	36.2	10.4	32.1	32.1	14.0	21.7	33.9	12.8	20.6	32.7
Actuated g/C Ratio	0.10	0.36	0.36	0.10	0.32	0.32	0.14	0.22	0.34	0.13	0.20	0.32
v/c Ratio	0.81	0.76	0.10	0.34	0.51	0.33	0.46	0.76	0.14	1.39	0.70	0.33
Control Delay (s/veh)	68.6	34.0	0.3	54.3	29.0	4.9	53.4	45.2	4.0	225.1	43.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.6	34.0	0.3	54.3	29.0	4.9	53.4	45.2	4.0	225.1	43.8	5.9
LOS	E	C	A	D	C	A	D	D	A	F	D	A
Approach Delay (s/veh)		39.2			24.8			42.2			115.6	
Approach LOS		D			C			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay (s/veh): 59.7	Intersection LOS: E
Intersection Capacity Utilization 88.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	933	56	54	558	196	99	559	73	508	490	186
Future Volume (veh/h)	240	933	56	54	558	196	99	559	73	508	490	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
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	1600	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	253	982	27	57	587	113	104	588	40	535	516	101
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	331	1179	493	135	1088	461	243	731	437	411	680	449
Arrive On Green	0.16	0.49	0.49	0.13	0.45	0.45	0.23	0.30	0.30	0.20	0.28	0.28
Sat Flow, veh/h	3048	3600	1506	1619	3600	1525	1619	3600	1525	3048	3600	1499
Grp Volume(v), veh/h	253	982	27	57	587	113	104	588	40	535	516	101
Grp Sat Flow(s),veh/h/ln	1524	1800	1506	1619	1800	1525	1619	1800	1525	1524	1800	1499
Q Serve(g_s), s	7.3	21.6	0.5	3.0	10.8	2.6	5.1	13.8	0.9	12.4	12.0	2.3
Cycle Q Clear(g_c), s	7.3	21.6	0.5	3.0	10.8	2.6	5.1	13.8	0.9	12.4	12.0	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	331	1179	493	135	1088	461	243	731	437	411	680	449
V/C Ratio(X)	0.76	0.83	0.05	0.42	0.54	0.25	0.43	0.80	0.09	1.30	0.76	0.23
Avail Cap(c_a), veh/h	332	1794	750	180	1802	763	243	1116	600	411	1214	671
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	21.2	5.4	38.2	20.5	7.2	32.2	30.3	8.2	36.7	31.0	8.0
Incr Delay (d2), s/veh	9.2	2.2	0.0	2.1	0.2	0.1	0.4	2.5	0.1	152.4	1.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	6.6	0.3	1.2	3.7	1.3	1.8	5.1	0.4	12.6	4.5	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.5	23.4	5.5	40.3	20.7	7.3	32.7	32.8	8.3	189.1	32.8	8.3
LnGrp LOS	D	C	A	D	C	A	C	C	A	F	C	A
Approach Vol, veh/h		1262			757			732			1152	
Approach Delay, s/veh		27.6			20.1			31.5			103.2	
Approach LOS		C			C			C			F	

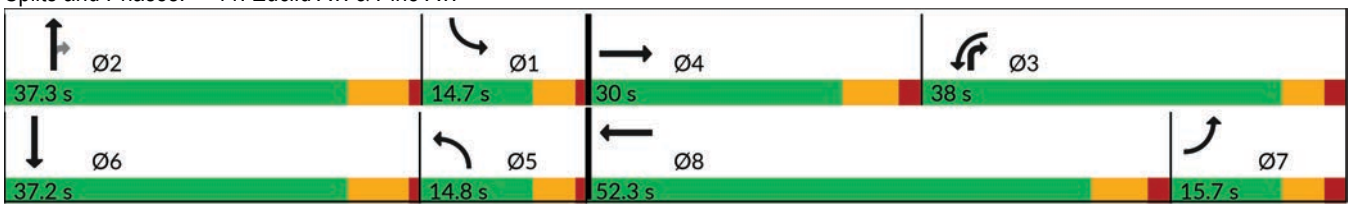
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	25.2	12.4	37.3	18.5	23.8	14.7	35.0
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	12.4	28.5	10.2	45.8	10.0	31.0	10.0	46.0
Max Q Clear Time (g_c+I1), s	14.4	15.8	5.0	23.6	7.1	14.0	9.3	12.8
Green Ext Time (p_c), s	0.0	2.8	0.0	6.5	0.0	3.0	0.0	2.4

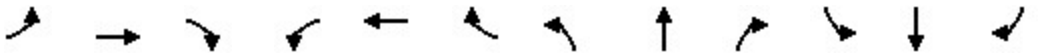
Intersection Summary	
HCM 7th Control Delay, s/veh	49.2
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	18	366	635	169	29	536	1135	80	479
Future Volume (vph)	18	366	635	169	29	536	1135	80	479
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	15.7	30.0	38.0	52.3	14.8	37.3	38.0	14.7	37.2
Total Split (%)	13.1%	25.0%	31.7%	43.6%	12.3%	31.1%	31.7%	12.3%	31.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.3	23.2	32.6	58.5	11.1	20.5	53.9	10.1	22.4
Actuated g/C Ratio	0.10	0.22	0.30	0.55	0.10	0.19	0.50	0.09	0.21
v/c Ratio	0.12	1.18	0.69	0.22	0.17	0.79	1.37	0.53	0.66
Control Delay (s/veh)	49.4	143.0	39.1	16.2	49.2	50.2	193.8	62.9	44.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.4	143.0	39.1	16.2	49.2	50.2	193.8	62.9	44.2
LOS	D	F	D	B	D	D	F	E	D
Approach Delay (s/veh)		139.5		33.5		146.1			46.9
Approach LOS		F		C		F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay (s/veh): 103.0	Intersection LOS: F
Intersection Capacity Utilization 122.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	366	84	635	169	36	29	536	1135	80	479	11
Future Volume (veh/h)	18	366	84	635	169	36	29	536	1135	80	479	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	18	370	0	641	171	31	29	541	698	81	484	11
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	490	389		698	211	38	272	883	716	138	570	13
Arrive On Green	0.45	0.32	0.00	0.34	0.21	0.21	0.25	0.37	0.37	0.13	0.24	0.24
Sat Flow, veh/h	1619	1800	0	3048	1479	268	1619	3600	1493	1619	3504	80
Grp Volume(v), veh/h	18	370	0	641	0	202	29	541	698	81	248	247
Grp Sat Flow(s),veh/h/ln	1619	1800	0	1524	0	1747	1619	1800	1493	1619	1800	1784
Q Serve(g_s), s	0.7	21.4	0.0	21.5	0.0	11.7	1.5	13.1	21.9	5.0	14.0	14.1
Cycle Q Clear(g_c), s	0.7	21.4	0.0	21.5	0.0	11.7	1.5	13.1	21.9	5.0	14.0	14.1
Prop In Lane	1.00		0.00	1.00		0.15	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	490	389		698	0	249	272	883	716	138	293	290
V/C Ratio(X)	0.04	0.95		0.92	0.00	0.81	0.11	0.61	0.98	0.59	0.85	0.85
Avail Cap(c_a), veh/h	490	389		924	0	743	272	1041	781	152	519	514
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	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	20.5	35.5	0.0	34.0	0.0	40.5	33.7	29.5	20.7	44.7	39.0	39.0
Incr Delay (d2), s/veh	0.0	33.6	0.0	9.9	0.0	8.7	0.1	0.4	24.7	2.6	2.7	2.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	11.5	0.0	7.4	0.0	5.1	0.6	4.8	16.1	2.0	5.5	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.5	69.1	0.0	43.9	0.0	49.2	33.8	29.9	45.5	47.3	41.7	41.7
LnGrp LOS	C	E		D		D	C	C	D	D	D	D
Approach Vol, veh/h		388			843			1268			576	
Approach Delay, s/veh		66.9			45.2			38.6			42.5	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	32.6	30.1	30.0	22.6	23.8	37.9	22.2
Change Period (Y+Rc), s	4.7	6.5	5.7	7.0	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.0	30.8	32.3	23.0	10.1	30.7	10.0	45.3
Max Q Clear Time (g_c+I1), s	7.0	23.9	23.5	23.4	3.5	16.1	2.7	13.7
Green Ext Time (p_c), s	0.0	2.3	0.9	0.0	0.0	1.3	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	44.7
HCM 7th LOS	D

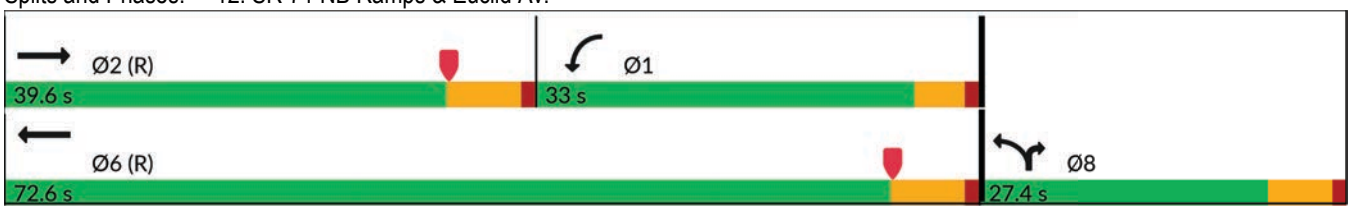
Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	994	496	790	90	777
Future Volume (vph)	994	496	790	90	777
Turn Type	NA	Prot	NA	Prot	Prot
Protected Phases	2	1	6	8	8
Permitted Phases					
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	31.5	12.7	24.5	13.8	13.8
Total Split (s)	39.6	33.0	72.6	27.4	27.4
Total Split (%)	39.6%	33.0%	72.6%	27.4%	27.4%
Yellow Time (s)	5.5	3.7	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.7	6.5	5.8	5.8
Lead/Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	None
Act Effct Green (s)	33.1	28.3	66.1	21.6	21.6
Actuated g/C Ratio	0.33	0.28	0.66	0.22	0.22
v/c Ratio	1.08	1.14	0.37	0.15	1.14
Control Delay (s/veh)	74.3	121.8	8.2	32.5	96.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.3	121.8	8.2	32.5	96.5
LOS	E	F	A	C	F
Approach Delay (s/veh)	74.3		52.0	89.9	
Approach LOS	E		D	F	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 69.7	Intersection LOS: E
Intersection Capacity Utilization 95.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: SR-71 NB Ramps & Euclid Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	994	151	496	790	90	777
Future Volume (veh/h)	994	151	496	790	90	777
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1700	1800	1600	1800
Adj Flow Rate, veh/h	1046	0	522	832	95	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1112		668	2745	220	
Arrive On Green	0.33	0.00	0.41	0.80	0.07	0.00
Sat Flow, veh/h	3600	0	1619	3510	2956	1525
Grp Volume(v), veh/h	1046	0	522	832	95	0
Grp Sat Flow(s),veh/h/ln	1710	0	1619	1710	1478	1525
Q Serve(g_s), s	29.7	0.0	27.9	6.3	3.1	0.0
Cycle Q Clear(g_c), s	29.7	0.0	27.9	6.3	3.1	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1112		668	2745	220	
V/C Ratio(X)	0.94		0.78	0.30	0.43	
Avail Cap(c_a), veh/h	1132		668	2745	639	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.8	0.0	25.5	2.6	44.3	0.0
Incr Delay (d2), s/veh	10.4	0.0	5.4	0.3	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	0.0	10.5	0.9	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	43.2	0.0	30.9	2.9	45.6	0.0
LnGrp LOS	D		C	A	D	
Approach Vol, veh/h	1046			1354	95	
Approach Delay, s/veh	43.2			13.7	45.6	
Approach LOS	D			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	47.8	39.0				86.8	13.2
Change Period (Y+Rc), s	6.5	* 6.5				6.5	5.8
Max Green Setting (Gmax), s	28.3	* 33				66.1	21.6
Max Q Clear Time (g_c+I1), s	29.9	31.7				8.3	5.1
Green Ext Time (p_c), s	0.0	0.8				4.5	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	27.3
HCM 7th LOS	C

Notes

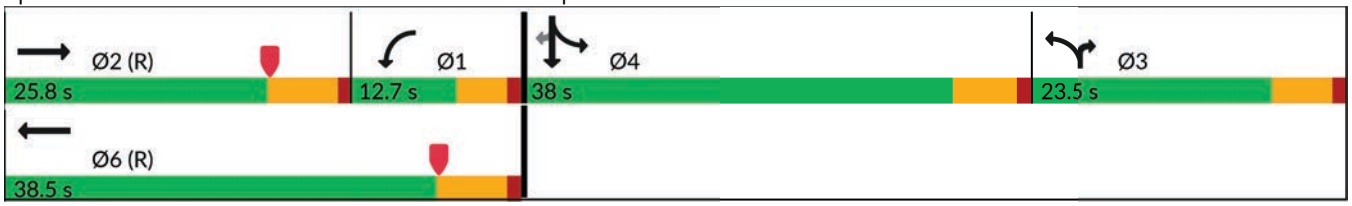
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

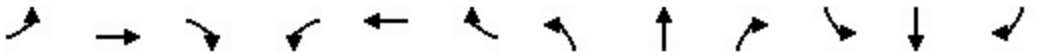
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	591	78	212	17	155	916	59	41
Future Volume (vph)	591	78	212	17	155	916	59	41
Turn Type	NA	Prot	NA	Prot	Prot	Split	NA	Perm
Protected Phases	2	1	6	3	3	4	4	
Permitted Phases								4
Detector Phase	2	1	6	3	3	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	25.2	12.7	27.2	23.5	23.5	34.8	34.8	34.8
Total Split (s)	25.8	12.7	38.5	23.5	23.5	38.0	38.0	38.0
Total Split (%)	25.8%	12.7%	38.5%	23.5%	23.5%	38.0%	38.0%	38.0%
Yellow Time (s)	5.2	3.7	5.2	4.5	4.5	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	4.7	6.2	5.5	5.5	5.8	5.8	5.8
Lead/Lag	Lead	Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	29.6	8.0	39.8	8.8	8.8	33.9	33.9	33.9
Actuated g/C Ratio	0.30	0.08	0.40	0.09	0.09	0.34	0.34	0.34
v/c Ratio	0.65	0.63	0.16	0.13	0.56	0.97	0.92	0.07
Control Delay (s/veh)	34.6	59.6	16.3	43.3	14.5	68.6	56.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.6	59.6	16.3	43.3	14.5	68.6	56.3	0.2
LOS	C	E	B	D	B	E	E	A
Approach Delay (s/veh)	34.6		27.9				59.9	
Approach LOS	C		C				E	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay (s/veh): 44.5	Intersection LOS: D
Intersection Capacity Utilization 74.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: Euclid Av. & SR-71 SB Off-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	591	34	78	212	0	17	0	155	916	59	41
Future Volume (veh/h)	0	591	34	78	212	0	17	0	155	916	59	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1800	1800	1700	1800	1800	1700	0	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	616	16	81	221	0	18	0	75	998	0	25
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	667	17	486	1908		0	0	0	1043	0	491
Arrive On Green	0.00	0.20	0.20	0.60	1.00	0.00	0.00	0.00	0.00	0.32	0.00	0.32
Sat Flow, veh/h	0	3493	88	1619	3510	0		0		3238	0	1525
Grp Volume(v), veh/h	0	309	323	81	221	0		0.0		998	0	25
Grp Sat Flow(s),veh/h/ln	0	1710	1782	1619	1710	0				1619	0	1525
Q Serve(g_s), s	0.0	17.8	17.8	2.2	0.0	0.0				30.2	0.0	1.1
Cycle Q Clear(g_c), s	0.0	17.8	17.8	2.2	0.0	0.0				30.2	0.0	1.1
Prop In Lane	0.00		0.05	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	335	349	486	1908					1043	0	491
V/C Ratio(X)	0.00	0.92	0.92	0.17	0.12					0.96	0.00	0.05
Avail Cap(c_a), veh/h	0	335	349	486	1908					1043	0	491
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.95	0.95	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	39.5	39.5	14.4	0.0	0.0				33.2	0.0	23.4
Incr Delay (d2), s/veh	0.0	33.0	32.3	0.1	0.1	0.0				18.3	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
%ile BackOfQ(50%),veh/ln	0.0	10.2	10.5	0.8	0.0	0.0				14.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	72.4	71.7	14.5	0.1	0.0				51.6	0.0	23.4
LnGrp LOS		E	E	B	A					D		C
Approach Vol, veh/h		632			302						1023	
Approach Delay, s/veh		72.1			4.0						50.9	
Approach LOS		E			A						D	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	36.2	25.8		38.0		62.0						
Change Period (Y+Rc), s	6.2	* 6.2		5.8		6.2						
Max Green Setting (Gmax), s	8.0	* 20		32.2		32.3						
Max Q Clear Time (g_c+I1), s	4.2	19.8		32.2		2.0						
Green Ext Time (p_c), s	0.0	0.0		0.0		0.8						

Intersection Summary												
HCM 7th Control Delay, s/veh			50.5									
HCM 7th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	598	20	15	319	31	15	21	61	22	5	8
Future Vol, veh/h	10	598	20	15	319	31	15	21	61	22	5	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	11	650	22	16	347	34	16	23	66	24	5	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	380	0	0	672	0	0	1065	1096	661	1079	1090	364
Stage 1	-	-	-	-	-	-	683	683	-	396	396	-
Stage 2	-	-	-	-	-	-	382	413	-	683	693	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1189	-	-	928	-	-	202	215	466	198	217	686
Stage 1	-	-	-	-	-	-	443	453	-	633	607	-
Stage 2	-	-	-	-	-	-	645	597	-	442	447	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1189	-	-	928	-	-	188	207	466	146	209	686
Mov Cap-2 Maneuver	-	-	-	-	-	-	188	207	-	146	209	-
Stage 1	-	-	-	-	-	-	436	446	-	619	594	-
Stage 2	-	-	-	-	-	-	616	584	-	355	441	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.13	0.37	22.42	28.97
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	311	28	-	-	73	-	-	188
HCM Lane V/C Ratio	0.339	0.009	-	-	0.018	-	-	0.203
HCM Ctrl Dly (s/v)	22.4	8.1	0	-	8.9	0	-	29
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	1.5	0	-	-	0.1	-	-	0.7

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	237	9	21	131	0	27	4	42	0	1	0
Future Vol, veh/h	0	237	9	21	131	0	27	4	42	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	258	10	23	142	0	29	4	46	0	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	142	0	0	267	0	0	451	451	262	448	455	142
Stage 1	-	-	-	-	-	-	262	262	-	188	188	-
Stage 2	-	-	-	-	-	-	189	188	-	260	267	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1453	-	-	1308	-	-	522	507	781	525	504	911
Stage 1	-	-	-	-	-	-	747	695	-	818	748	-
Stage 2	-	-	-	-	-	-	818	748	-	749	691	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1453	-	-	1308	-	-	511	498	781	480	494	911
Mov Cap-2 Maneuver	-	-	-	-	-	-	511	498	-	480	494	-
Stage 1	-	-	-	-	-	-	747	695	-	803	734	-
Stage 2	-	-	-	-	-	-	801	734	-	701	691	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	1.08	11.46	12.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	637	1453	-	-	249	-	-	494
HCM Lane V/C Ratio	0.125	-	-	-	0.017	-	-	0.002
HCM Ctrl Dly (s/v)	11.5	0	-	-	7.8	0	-	12.3
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	310	31	8	110	19	15	142	17	17	138	43
Future Vol, veh/h	45	310	31	8	110	19	15	142	17	17	138	43
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	51	352	35	9	125	22	17	161	19	19	157	49
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	18.3	10.9	11.9	12.3
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	12%	6%	9%
Vol Thru, %	82%	80%	80%	70%
Vol Right, %	10%	8%	14%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	174	386	137	198
LT Vol	15	45	8	17
Through Vol	142	310	110	138
RT Vol	17	31	19	43
Lane Flow Rate	198	439	156	225
Geometry Grp	1	1	1	1
Degree of Util (X)	0.327	0.658	0.252	0.364
Departure Headway (Hd)	5.951	5.399	5.836	5.827
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	599	667	610	612
Service Time	4.032	3.462	3.921	3.908
HCM Lane V/C Ratio	0.331	0.658	0.256	0.368
HCM Control Delay, s/veh	11.9	18.3	10.9	12.3
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	1.4	4.9	1	1.7

Intersection	
Intersection Delay, s/veh	35.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	506	39	10	283	30	13	85	3	15	96	28
Future Vol, veh/h	46	506	39	10	283	30	13	85	3	15	96	28
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	51	556	43	11	311	33	14	93	3	16	105	31
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	55.2	16.7	12.2	12.7
HCM LOS	F	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	8%	3%	11%
Vol Thru, %	84%	86%	88%	69%
Vol Right, %	3%	7%	9%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	591	323	139
LT Vol	13	46	10	15
Through Vol	85	506	283	96
RT Vol	3	39	30	28
Lane Flow Rate	111	649	355	153
Geometry Grp	1	1	1	1
Degree of Util (X)	0.22	0.988	0.578	0.291
Departure Headway (Hd)	7.12	5.479	5.864	6.865
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	503	669	614	522
Service Time	5.184	3.479	3.911	4.927
HCM Lane V/C Ratio	0.221	0.97	0.578	0.293
HCM Control Delay, s/veh	12.2	55.2	16.7	12.7
HCM Lane LOS	B	F	C	B
HCM 95th-tile Q	0.8	15.1	3.7	1.2

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	186	20	0	102	8	15	36	6	7	17	14
Future Vol, veh/h	25	186	20	0	102	8	15	36	6	7	17	14
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	30	227	24	0	124	10	18	44	7	9	21	17
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

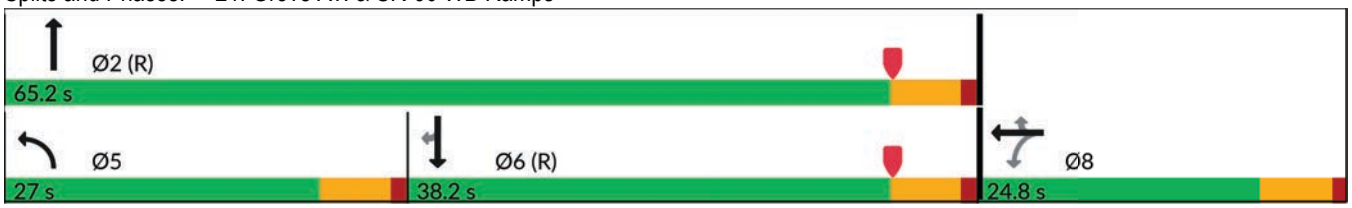
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.5	8.3	8.4	8.1
HCM LOS	A	A	A	A

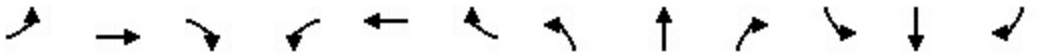
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	11%	0%	18%
Vol Thru, %	63%	81%	93%	45%
Vol Right, %	11%	9%	7%	37%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	231	110	38
LT Vol	15	25	0	7
Through Vol	36	186	102	17
RT Vol	6	20	8	14
Lane Flow Rate	70	282	134	46
Geometry Grp	1	1	1	1
Degree of Util (X)	0.094	0.336	0.165	0.061
Departure Headway (Hd)	4.87	4.297	4.435	4.728
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	735	837	809	757
Service Time	2.9	2.319	2.46	2.762
HCM Lane V/C Ratio	0.095	0.337	0.166	0.061
HCM Control Delay, s/veh	8.4	9.5	8.3	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	1.5	0.6	0.2

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	276	266	748	853	725
Future Volume (vph)	0	276	266	748	853	725
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	15.8	24.8	15.8	15.8
Total Split (s)	24.8	24.8	27.0	65.2	38.2	38.2
Total Split (%)	27.6%	27.6%	30.0%	72.4%	42.4%	42.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	15.4	15.4	18.3	63.0	38.8	38.8
Actuated g/C Ratio	0.17	0.17	0.20	0.70	0.43	0.43
v/c Ratio	0.74	0.61	0.83	0.32	0.59	0.73
Control Delay (s/veh)	50.2	13.3	45.9	5.4	23.1	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.2	13.3	45.9	5.4	23.1	9.0
LOS	D	B	D	A	C	A
Approach Delay (s/veh)	29.3			16.0	16.6	
Approach LOS	C			B	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 30.8 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 18.4	Intersection LOS: B
Intersection Capacity Utilization 91.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 21: Grove Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	212	0	276	266	748	0	0	853	725
Future Volume (veh/h)	0	0	0	212	0	276	266	748	0	0	853	725
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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				1700	1800	1800	1700	1800	0	0	1800	1800
Adj Flow Rate, veh/h				216	0	199	271	763	0	0	870	595
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				269	0	239	297	2443	0	0	1595	693
Arrive On Green				0.16	0.00	0.16	0.37	1.00	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1714	0	1525	1619	3510	0	0	3510	1485
Grp Volume(v), veh/h				216	0	199	271	763	0	0	870	595
Grp Sat Flow(s),veh/h/ln				1714	0	1525	1619	1710	0	0	1710	1485
Q Serve(g_s), s				10.9	0.0	11.4	14.3	0.0	0.0	0.0	16.4	32.1
Cycle Q Clear(g_c), s				10.9	0.0	11.4	14.3	0.0	0.0	0.0	16.4	32.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				269	0	239	297	2443	0	0	1595	693
V/C Ratio(X)				0.80	0.00	0.83	0.91	0.31	0.00	0.00	0.55	0.86
Avail Cap(c_a), veh/h				362	0	322	381	2443	0	0	1595	693
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	0.39	0.39	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				36.6	0.0	36.8	27.8	0.0	0.0	0.0	17.2	21.4
Incr Delay (d2), s/veh				8.1	0.0	11.6	9.4	0.1	0.0	0.0	1.3	13.1
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				4.9	0.0	4.8	4.8	0.0	0.0	0.0	6.0	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				44.7	0.0	48.4	37.2	0.1	0.0	0.0	18.5	34.5
LnGrp LOS				D		D	D	A			B	C
Approach Vol, veh/h					415			1034			1465	
Approach Delay, s/veh					46.5			9.8			25.0	
Approach LOS					D			A			C	

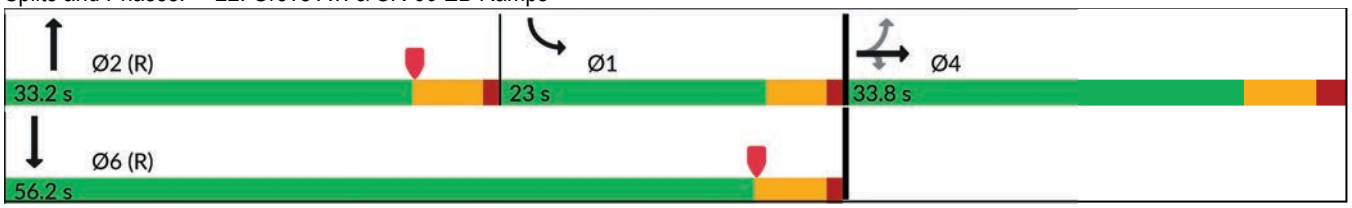
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	70.1		22.3	47.8		19.9						
Change Period (Y+Rc), s	5.8		5.8	5.8		5.8						
Max Green Setting (Gmax), s	59.4		21.2	32.4		19.0						
Max Q Clear Time (g_c+I1), s	2.0		16.3	34.1		13.4						
Green Ext Time (p_c), s	4.4		0.2	0.0		0.7						

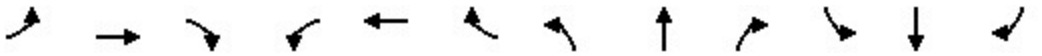
Intersection Summary	
HCM 7th Control Delay, s/veh	22.7
HCM 7th LOS	C

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	1	237	621	340	725
Future Volume (vph)	1	237	621	340	725
Turn Type	NA	Perm	NA	Prot	NA
Protected Phases	4		2	1	6
Permitted Phases		4			
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	31.8	15.0	25.8
Total Split (s)	33.8	33.8	33.2	23.0	56.2
Total Split (%)	37.6%	37.6%	36.9%	25.6%	62.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	5.8	5.0	5.8
Lead/Lag			Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	24.1	24.1	29.1	19.2	53.3
Actuated g/C Ratio	0.27	0.27	0.32	0.21	0.59
v/c Ratio	0.88	0.44	0.86	1.01	0.37
Control Delay (s/veh)	52.7	9.2	35.5	78.3	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.7	9.2	35.5	78.3	10.8
LOS	D	A	D	E	B
Approach Delay (s/veh)	36.4		35.5		32.3
Approach LOS	D		D		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay (s/veh): 34.4	Intersection LOS: C
Intersection Capacity Utilization 91.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	1	237	0	0	0	0	621	315	340	725	0
Future Volume (veh/h)	394	1	237	0	0	0	0	621	315	340	725	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	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	1700	1800	1800				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	402	1	130				0	634	252	347	740	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	444	1	395				0	691	275	395	2054	0
Arrive On Green	0.26	0.26	0.26				0.00	0.29	0.29	0.49	1.00	0.00
Sat Flow, veh/h	1710	4	1522				0	2457	940	1619	3510	0
Grp Volume(v), veh/h	403	0	130				0	458	428	347	740	0
Grp Sat Flow(s),veh/h/ln	1714	0	1522				0	1710	1597	1619	1710	0
Q Serve(g_s), s	20.5	0.0	6.2				0.0	23.3	23.3	17.3	0.0	0.0
Cycle Q Clear(g_c), s	20.5	0.0	6.2				0.0	23.3	23.3	17.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.59	1.00		0.00
Lane Grp Cap(c), veh/h	445	0	395				0	499	466	395	2054	0
V/C Ratio(X)	0.91	0.00	0.33				0.00	0.92	0.92	0.88	0.36	0.00
Avail Cap(c_a), veh/h	514	0	457				0	521	486	395	2054	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	0.78	0.78	0.00
Uniform Delay (d), s/veh	32.3	0.0	27.0				0.0	30.8	30.8	21.8	0.0	0.0
Incr Delay (d2), s/veh	16.8	0.0	0.2				0.0	24.2	25.5	15.5	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	9.9	0.0	2.1				0.0	12.2	11.6	5.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.0	0.0	27.2				0.0	55.0	56.3	37.4	0.4	0.0
LnGrp LOS	D		C					D	E	D	A	
Approach Vol, veh/h		533						886			1087	
Approach Delay, s/veh		43.7						55.6			12.2	
Approach LOS		D						E			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	27.8	32.1		30.2		59.8
Change Period (Y+Rc), s	5.8	* 5.8		6.8		5.8
Max Green Setting (Gmax), s	18.0	* 27		27.0		50.4
Max Q Clear Time (g_c+I1), s	19.3	25.3		22.5		2.0
Green Ext Time (p_c), s	0.0	1.0		0.8		4.2

Intersection Summary	
HCM 7th Control Delay, s/veh	34.2
HCM 7th LOS	C

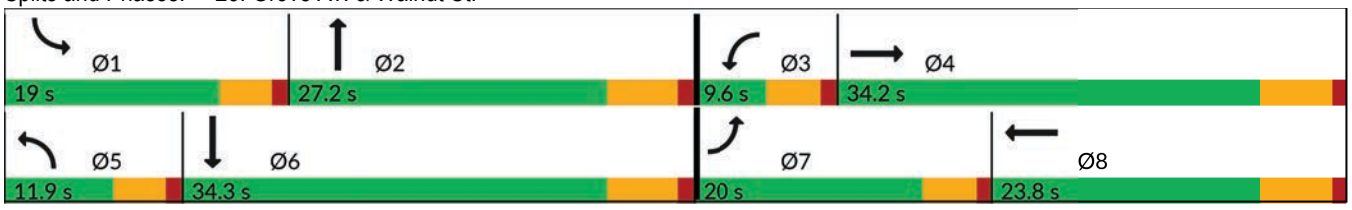
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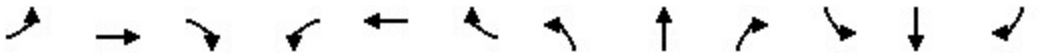
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	174	339	16	182	59	572	162	478
Future Volume (vph)	174	339	16	182	59	572	162	478
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	9.6	23.8
Total Split (s)	20.0	34.2	9.6	23.8	11.9	27.2	19.0	34.3
Total Split (%)	22.2%	38.0%	10.7%	26.4%	13.2%	30.2%	21.1%	38.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.2	27.3	5.1	12.0	6.6	18.9	11.6	28.8
Actuated g/C Ratio	0.16	0.36	0.07	0.16	0.09	0.25	0.15	0.38
v/c Ratio	0.70	0.36	0.16	0.52	0.44	0.76	0.69	0.50
Control Delay (s/veh)	47.3	18.7	42.1	21.8	46.9	34.2	47.8	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.3	18.7	42.1	21.8	46.9	34.2	47.8	20.6
LOS	D	B	D	C	D	C	D	C
Approach Delay (s/veh)		27.1		22.8		35.3		26.3
Approach LOS		C		C		D		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 76.1	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 28.6	Intersection LOS: C
Intersection Capacity Utilization 66.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Grove Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	339	83	16	182	121	59	572	49	162	478	135
Future Volume (veh/h)	174	339	83	16	182	121	59	572	49	162	478	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	181	353	75	17	190	102	61	596	41	169	498	106
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	776	163	33	349	179	85	781	54	208	887	188
Arrive On Green	0.14	0.28	0.28	0.02	0.16	0.16	0.05	0.24	0.24	0.13	0.32	0.32
Sat Flow, veh/h	1619	2805	589	1619	2175	1112	1619	3243	223	1619	2799	592
Grp Volume(v), veh/h	181	213	215	17	147	145	61	314	323	169	303	301
Grp Sat Flow(s),veh/h/ln	1619	1710	1684	1619	1710	1578	1619	1710	1756	1619	1710	1682
Q Serve(g_s), s	6.8	6.4	6.6	0.6	4.9	5.3	2.3	10.6	10.7	6.3	9.2	9.3
Cycle Q Clear(g_c), s	6.8	6.4	6.6	0.6	4.9	5.3	2.3	10.6	10.7	6.3	9.2	9.3
Prop In Lane	1.00		0.35	1.00		0.71	1.00		0.13	1.00		0.35
Lane Grp Cap(c), veh/h	221	473	466	33	275	253	85	412	423	208	542	533
V/C Ratio(X)	0.82	0.45	0.46	0.51	0.54	0.57	0.72	0.76	0.76	0.81	0.56	0.56
Avail Cap(c_a), veh/h	400	779	768	130	494	456	190	587	603	374	782	769
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	18.6	18.7	30.2	24.0	24.2	29.1	22.0	22.0	26.4	17.7	17.7
Incr Delay (d2), s/veh	2.9	0.7	0.7	4.5	1.6	2.0	4.2	3.6	3.6	3.0	0.9	0.9
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(50%),veh/ln	2.5	2.3	2.3	0.3	1.9	1.9	0.9	4.1	4.2	2.4	3.3	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.0	19.3	19.4	34.7	25.6	26.2	33.3	25.6	25.6	29.4	18.6	18.7
LnGrp LOS	C	B	B	C	C	C	C	C	C	C	B	B
Approach Vol, veh/h		609			309			698			773	
Approach Delay, s/veh		22.2			26.4			26.3			21.0	
Approach LOS		C			C			C			C	

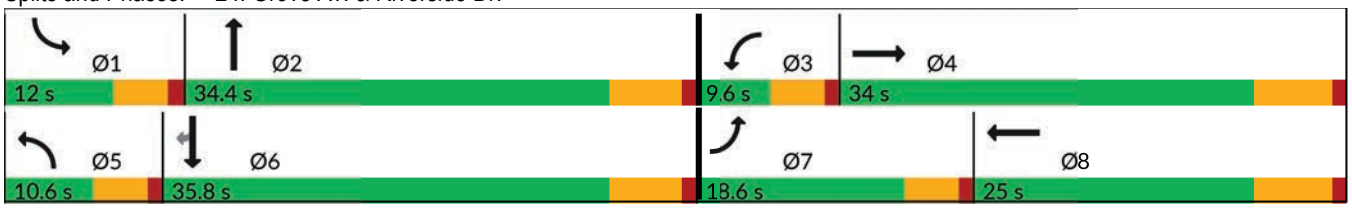
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	20.8	5.9	23.0	7.9	25.5	13.1	15.8
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	14.4	21.4	5.0	28.4	7.3	28.5	15.4	18.0
Max Q Clear Time (g_c+I1), s	8.3	12.7	2.6	8.6	4.3	11.3	8.8	7.3
Green Ext Time (p_c), s	0.1	2.3	0.0	2.2	0.0	3.2	0.1	1.1

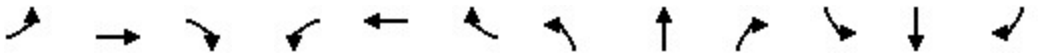
Intersection Summary	
HCM 7th Control Delay, s/veh	23.6
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	128	401	33	415	27	423	84	263	123
Future Volume (vph)	128	401	33	415	27	423	84	263	123
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	18.6	34.0	9.6	25.0	10.6	34.4	12.0	35.8	35.8
Total Split (%)	20.7%	37.8%	10.7%	27.8%	11.8%	38.2%	13.3%	39.8%	39.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.8	25.1	5.5	18.2	6.0	26.2	7.3	31.1	31.1
Actuated g/C Ratio	0.14	0.32	0.07	0.23	0.08	0.34	0.09	0.40	0.40
v/c Ratio	0.59	0.78	0.30	0.67	0.23	0.84	0.57	0.37	0.17
Control Delay (s/veh)	47.1	37.0	48.0	33.3	44.4	41.2	56.2	21.5	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.1	37.0	48.0	33.3	44.4	41.2	56.2	21.5	0.9
LOS	D	D	D	C	D	D	E	C	A
Approach Delay (s/veh)		39.3		34.2		41.4		22.3	
Approach LOS		D		C		D		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay (s/veh): 34.7	Intersection LOS: C
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	401	35	33	415	107	27	423	67	84	263	123
Future Volume (veh/h)	128	401	35	33	415	107	27	423	67	84	263	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	131	409	36	34	423	83	28	432	60	86	268	89
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	469	41	56	634	123	48	489	68	107	635	538
Arrive On Green	0.10	0.29	0.29	0.03	0.22	0.22	0.03	0.32	0.32	0.07	0.35	0.35
Sat Flow, veh/h	1619	1627	143	1619	2846	554	1619	1547	215	1619	1800	1525
Grp Volume(v), veh/h	131	0	445	34	253	253	28	0	492	86	268	89
Grp Sat Flow(s),veh/h/ln	1619	0	1770	1619	1710	1690	1619	0	1761	1619	1800	1525
Q Serve(g_s), s	5.7	0.0	17.2	1.5	9.7	9.9	1.2	0.0	19.0	3.8	8.1	2.9
Cycle Q Clear(g_c), s	5.7	0.0	17.2	1.5	9.7	9.9	1.2	0.0	19.0	3.8	8.1	2.9
Prop In Lane	1.00		0.08	1.00		0.33	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	162	0	511	56	381	376	48	0	557	107	635	538
V/C Ratio(X)	0.81	0.00	0.87	0.61	0.66	0.67	0.58	0.00	0.88	0.81	0.42	0.17
Avail Cap(c_a), veh/h	315	0	685	113	447	442	135	0	701	167	751	637
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	24.3	34.2	25.5	25.5	34.4	0.0	23.3	33.1	17.7	16.0
Incr Delay (d2), s/veh	3.6	0.0	9.3	4.0	2.9	3.2	4.1	0.0	10.8	7.1	0.4	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(50%),veh/ln	2.2	0.0	7.5	0.6	3.8	3.8	0.5	0.0	8.6	1.6	3.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.3	0.0	33.6	38.3	28.4	28.7	38.5	0.0	34.1	40.2	18.2	16.1
LnGrp LOS	D		C	D	C	C	D		C	D	B	B
Approach Vol, veh/h		576			540			520			443	
Approach Delay, s/veh		34.0			29.2			34.3			22.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	28.5	7.1	26.9	6.7	31.1	11.8	22.2
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	7.4	28.6	5.0	27.8	6.0	30.0	14.0	18.8
Max Q Clear Time (g_c+I1), s	5.8	21.0	3.5	19.2	3.2	10.1	7.7	11.9
Green Ext Time (p_c), s	0.0	1.7	0.0	1.6	0.0	1.6	0.1	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	30.3
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	25.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	99	194	74	8	109	31	25	369	18	18	285	16
Future Vol, veh/h	99	194	74	8	109	31	25	369	18	18	285	16
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	103	202	77	8	114	32	26	384	19	19	297	17
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	26.5	14.3	31.6	21.7
HCM LOS	D	B	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	27%	5%	6%
Vol Thru, %	90%	53%	74%	89%
Vol Right, %	4%	20%	21%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	412	367	148	319
LT Vol	25	99	8	18
Through Vol	369	194	109	285
RT Vol	18	74	31	16
Lane Flow Rate	429	382	154	332
Geometry Grp	1	1	1	1
Degree of Util (X)	0.8	0.731	0.326	0.641
Departure Headway (Hd)	6.71	6.88	7.601	6.942
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	536	524	472	518
Service Time	4.769	4.938	5.679	5.006
HCM Lane V/C Ratio	0.8	0.729	0.326	0.641
HCM Control Delay, s/veh	31.6	26.5	14.3	21.7
HCM Lane LOS	D	D	B	C
HCM 95th-tile Q	7.6	6.1	1.4	4.5

Intersection	
Intersection Delay, s/veh	21.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	83	232	23	7	74	33	22	294	0	21	295	34
Future Vol, veh/h	83	232	23	7	74	33	22	294	0	21	295	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	92	258	26	8	82	37	24	327	0	23	328	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	23	12.8	20.5	22.7
HCM LOS	C	B	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	25%	6%	6%
Vol Thru, %	93%	69%	65%	84%
Vol Right, %	0%	7%	29%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	316	338	114	350
LT Vol	22	83	7	21
Through Vol	294	232	74	295
RT Vol	0	23	33	34
Lane Flow Rate	351	376	127	389
Geometry Grp	1	1	1	1
Degree of Util (X)	0.636	0.687	0.256	0.69
Departure Headway (Hd)	6.526	6.59	7.288	6.391
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	548	545	495	560
Service Time	4.616	4.673	5.288	4.478
HCM Lane V/C Ratio	0.641	0.69	0.257	0.695
HCM Control Delay, s/veh	20.5	23	12.8	22.7
HCM Lane LOS	C	C	B	C
HCM 95th-tile Q	4.4	5.3	1	5.3

Intersection	
Intersection Delay, s/veh	59.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	59	443	15	4	280	51	14	196	1	72	192	31
Future Vol, veh/h	59	443	15	4	280	51	14	196	1	72	192	31
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	64	482	16	4	304	55	15	213	1	78	209	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	112.2	31.3	20.9	28.1
HCM LOS	F	D	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	11%	1%	24%
Vol Thru, %	93%	86%	84%	65%
Vol Right, %	0%	3%	15%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	517	335	295
LT Vol	14	59	4	72
Through Vol	196	443	280	192
RT Vol	1	15	51	31
Lane Flow Rate	229	562	364	321
Geometry Grp	1	1	1	1
Degree of Util (X)	0.522	1.144	0.754	0.694
Departure Headway (Hd)	8.761	7.328	7.898	8.308
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	415	500	462	439
Service Time	6.761	5.328	5.898	6.308
HCM Lane V/C Ratio	0.552	1.124	0.788	0.731
HCM Control Delay, s/veh	20.9	112.2	31.3	28.1
HCM Lane LOS	C	F	D	D
HCM 95th-tile Q	2.9	19.6	6.3	5.2

Intersection	
Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	235	8	7	110	211	3	15	3	325	13	11
Future Vol, veh/h	22	235	8	7	110	211	3	15	3	325	13	11
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	25	270	9	8	126	243	3	17	3	374	15	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	14.6	15.3	10.1	20.1
HCM LOS	B	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	8%	2%	93%
Vol Thru, %	71%	89%	34%	4%
Vol Right, %	14%	3%	64%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	265	328	349
LT Vol	3	22	7	325
Through Vol	15	235	110	13
RT Vol	3	8	211	11
Lane Flow Rate	24	305	377	401
Geometry Grp	1	1	1	1
Degree of Util (X)	0.045	0.494	0.563	0.663
Departure Headway (Hd)	6.756	5.842	5.378	5.953
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	533	612	664	606
Service Time	4.756	3.925	3.457	4.02
HCM Lane V/C Ratio	0.045	0.498	0.568	0.662
HCM Control Delay, s/veh	10.1	14.6	15.3	20.1
HCM Lane LOS	B	B	C	C
HCM 95th-tile Q	0.1	2.7	3.5	4.9

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	19	168	18	48	30	62	211	11	16	217	45
Future Vol, veh/h	74	19	168	18	48	30	62	211	11	16	217	45
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	82	21	187	20	53	33	69	234	12	18	241	50
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	12.8	10.4	13.9	13.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	28%	19%	6%
Vol Thru, %	74%	7%	50%	78%
Vol Right, %	4%	64%	31%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	284	261	96	278
LT Vol	62	74	18	16
Through Vol	211	19	48	217
RT Vol	11	168	30	45
Lane Flow Rate	316	290	107	309
Geometry Grp	1	1	1	1
Degree of Util (X)	0.488	0.441	0.179	0.47
Departure Headway (Hd)	5.569	5.476	6.026	5.481
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	644	652	590	655
Service Time	3.636	3.547	4.115	3.549
HCM Lane V/C Ratio	0.491	0.445	0.181	0.472
HCM Control Delay, s/veh	13.9	12.8	10.4	13.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.7	2.3	0.6	2.5

Intersection	
Intersection Delay, s/veh	136.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	475	10	48	307	93	18	162	85	222	128	12
Future Vol, veh/h	21	475	10	48	307	93	18	162	85	222	128	12
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	23	522	11	53	337	102	20	178	93	244	141	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	215	148.2	41.8	81.3
HCM LOS	F	F	E	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	4%	11%	61%
Vol Thru, %	61%	94%	69%	35%
Vol Right, %	32%	2%	21%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	265	506	448	362
LT Vol	18	21	48	222
Through Vol	162	475	307	128
RT Vol	85	10	93	12
Lane Flow Rate	291	556	492	398
Geometry Grp	1	1	1	1
Degree of Util (X)	0.755	1.384	1.212	0.994
Departure Headway (Hd)	11.189	9.611	9.904	10.633
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	326	384	369	346
Service Time	9.189	7.611	7.904	8.633
HCM Lane V/C Ratio	0.893	1.448	1.333	1.15
HCM Control Delay, s/veh	41.8	215	148.2	81.3
HCM Lane LOS	E	F	F	F
HCM 95th-tile Q	5.8	25.6	18.5	11.1

Intersection	
Intersection Delay, s/veh	16.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	213	100	2	153	91	71	116	8	93	72	2
Future Vol, veh/h	10	213	100	2	153	91	71	116	8	93	72	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	251	118	2	180	107	84	136	9	109	85	2
Number of Lanes	0	1	0	0	1	0	1	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	1	1	1
HCM Control Delay, s/veh	21.2	16.1	12.3	15.4
HCM LOS	C	C	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	3%	1%	56%
Vol Thru, %	0%	100%	0%	66%	62%	43%
Vol Right, %	0%	0%	100%	31%	37%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	116	8	323	246	167
LT Vol	71	0	0	10	2	93
Through Vol	0	116	0	213	153	72
RT Vol	0	0	8	100	91	2
Lane Flow Rate	84	136	9	380	289	196
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.178	0.272	0.017	0.672	0.522	0.41
Departure Headway (Hd)	7.677	7.164	6.447	6.368	6.49	7.519
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	467	501	554	566	556	479
Service Time	5.427	4.915	4.196	4.108	4.232	5.269
HCM Lane V/C Ratio	0.18	0.271	0.016	0.671	0.52	0.409
HCM Control Delay, s/veh	12.1	12.6	9.3	21.2	16.1	15.4
HCM Lane LOS	B	B	A	C	C	C
HCM 95th-tile Q	0.6	1.1	0.1	5	3	2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	442	19	23	366	18	70
Future Volume (vph)	442	19	23	366	18	70
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	2	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.2	24.2	28.6	28.6
Total Split (s)	83.0	83.0	83.0	83.0	37.0	37.0
Total Split (%)	69.2%	69.2%	69.2%	69.2%	30.8%	30.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	19.5	19.5	19.5	19.5	8.2	8.2
Actuated g/C Ratio	0.66	0.66	0.66	0.66	0.28	0.28
v/c Ratio	0.24	0.02	0.06	0.37	0.05	0.17
Control Delay (s/veh)	6.5	5.7	8.2	8.6	10.6	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.5	5.7	8.2	8.6	10.6	4.3
LOS	A	A	A	A	B	A
Approach Delay (s/veh)	6.5			8.5	5.6	
Approach LOS	A			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 29.7	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay (s/veh): 7.3	Intersection LOS: A
Intersection Capacity Utilization 34.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 34: Hellman Av. & Eucalyptus Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	442	19	23	366	18	70
Future Volume (veh/h)	442	19	23	366	18	70
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1700	1800	1700	1800
Adj Flow Rate, veh/h	533	19	28	441	22	71
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1460	651	581	768	158	149
Arrive On Green	0.43	0.43	0.43	0.43	0.10	0.10
Sat Flow, veh/h	3510	1525	821	1800	1619	1525
Grp Volume(v), veh/h	533	19	28	441	22	71
Grp Sat Flow(s),veh/h/ln	1710	1525	821	1800	1619	1525
Q Serve(g_s), s	2.4	0.2	0.5	4.2	0.3	1.0
Cycle Q Clear(g_c), s	2.4	0.2	2.9	4.2	0.3	1.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1460	651	581	768	158	149
V/C Ratio(X)	0.37	0.03	0.05	0.57	0.14	0.48
Avail Cap(c_a), veh/h	11565	5158	3007	6087	2310	2176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.4	3.8	5.4	4.9	9.4	9.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.1	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.2	0.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	4.6	3.8	5.5	5.6	9.5	10.6
LnGrp LOS	A	A	A	A	A	B
Approach Vol, veh/h	552			469	93	
Approach Delay, s/veh	4.5			5.6	10.3	
Approach LOS	A			A	B	

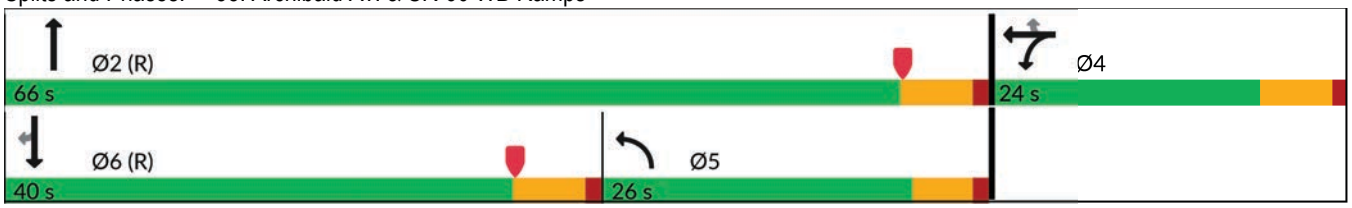
Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	6.8	15.9	15.9
Change Period (Y+Rc), s	4.6	6.2	6.2
Max Green Setting (Gmax), s	32.4	76.8	76.8
Max Q Clear Time (g_c+I1), s	3.0	4.4	6.2
Green Ext Time (p_c), s	0.1	3.8	2.9

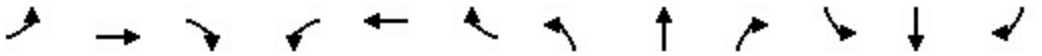
Intersection Summary	
HCM 7th Control Delay, s/veh	5.5
HCM 7th LOS	A

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	414	6	246	537	611	1245	323
Future Volume (vph)	414	6	246	537	611	1245	323
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4	4		5	2	6	
Permitted Phases			4				6
Detector Phase	4	4	4	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	8.0	8.0	8.0
Minimum Split (s)	10.8	10.8	10.8	10.0	43.8	38.8	38.8
Total Split (s)	24.0	24.0	24.0	26.0	66.0	40.0	40.0
Total Split (%)	26.7%	26.7%	26.7%	28.9%	73.3%	44.4%	44.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.0	5.8	5.8	5.8
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	17.5	17.5	17.5	20.2	60.9	35.8	35.8
Actuated g/C Ratio	0.19	0.19	0.19	0.22	0.68	0.40	0.40
v/c Ratio	0.84	0.80	0.48	0.87	0.20	0.54	0.43
Control Delay (s/veh)	59.6	53.7	8.4	42.1	0.5	22.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.6	53.7	8.4	42.1	0.5	22.4	4.1
LOS	E	D	A	D	A	C	A
Approach Delay (s/veh)		41.6			20.0	18.6	
Approach LOS		D			B	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 29.6 (33%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay (s/veh): 23.6	Intersection LOS: C
Intersection Capacity Utilization 68.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 35: Archibald Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	414	6	246	537	611	0	0	1245	323
Future Volume (veh/h)	0	0	0	414	6	246	537	611	0	0	1245	323
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
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				1700	1800	1800	1600	1800	0	0	1800	1800
Adj Flow Rate, veh/h				489	0	90	577	657	0	0	1339	224
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				571	0	269	959	3414	0	0	1893	455
Arrive On Green				0.18	0.00	0.18	0.32	0.69	0.00	0.00	0.31	0.31
Sat Flow, veh/h				3238	0	1525	2956	5076	0	0	6444	1488
Grp Volume(v), veh/h				489	0	90	577	657	0	0	1339	224
Grp Sat Flow(s),veh/h/ln				1619	0	1525	1478	1638	0	0	1548	1488
Q Serve(g_s), s				13.2	0.0	4.6	14.7	4.2	0.0	0.0	17.2	11.1
Cycle Q Clear(g_c), s				13.2	0.0	4.6	14.7	4.2	0.0	0.0	17.2	11.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				571	0	269	959	3414	0	0	1893	455
V/C Ratio(X)				0.86	0.00	0.33	0.60	0.19	0.00	0.00	0.71	0.49
Avail Cap(c_a), veh/h				655	0	308	959	3414	0	0	2353	565
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	1.00	0.90	0.90	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				36.0	0.0	32.4	25.5	4.8	0.0	0.0	27.7	25.5
Incr Delay (d2), s/veh				9.8	0.0	0.7	0.7	0.1	0.0	0.0	2.3	3.8
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 BackOfQ(50%),veh/ln				5.7	0.0	4.2	4.9	1.1	0.0	0.0	6.2	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				45.8	0.0	33.2	26.2	5.0	0.0	0.0	29.9	29.3
LnGrp LOS				D		C	C	A			C	C
Approach Vol, veh/h					579			1234			1563	
Approach Delay, s/veh					43.8			14.9			29.8	
Approach LOS					D			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	68.3	21.7	35.0	33.3
Change Period (Y+Rc), s	5.8	5.8	5.8	* 5.8
Max Green Setting (Gmax), s	60.2	18.2	21.0	* 34
Max Q Clear Time (g_c+I1), s	6.2	15.2	16.7	19.2
Green Ext Time (p_c), s	4.6	0.7	0.6	8.3

Intersection Summary	
HCM 7th Control Delay, s/veh	26.8
HCM 7th LOS	C

Notes

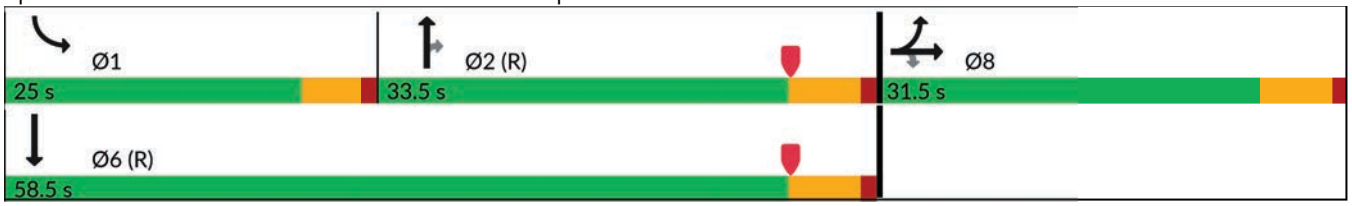
User approved volume balancing among the lanes for turning movement.

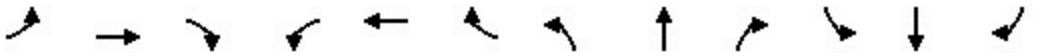
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	141	0	598	1005	427	450	1207
Future Volume (vph)	141	0	598	1005	427	450	1207
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8	8		2		1	6
Permitted Phases			8		2		
Detector Phase	8	8	8	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	10.8	10.8	10.8	32.8	32.8	10.0	33.8
Total Split (s)	31.5	31.5	31.5	33.5	33.5	25.0	58.5
Total Split (%)	35.0%	35.0%	35.0%	37.2%	37.2%	27.8%	65.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.0	5.8
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	20.7	20.7	20.7	34.9	34.9	17.8	57.7
Actuated g/C Ratio	0.23	0.23	0.23	0.39	0.39	0.20	0.64
v/c Ratio	0.38	0.83	0.79	0.45	0.52	0.82	0.41
Control Delay (s/veh)	31.0	40.4	36.9	22.6	4.9	55.4	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.0	40.4	36.9	22.6	4.9	55.4	2.0
LOS	C	D	D	C	A	E	A
Approach Delay (s/veh)		37.3		17.4			16.5
Approach LOS		D		B			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 29.6 (33%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 20.8	Intersection LOS: C
Intersection Capacity Utilization 68.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 36: Archibald Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	0	598	0	0	0	0	1005	427	450	1207	0
Future Volume (veh/h)	141	0	598	0	0	0	0	1005	427	450	1207	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1700	1800	1800				0	1800	1800	1600	1800	0
Adj Flow Rate, veh/h	100	0	478				0	1069	303	479	1284	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	309	0	583				0	2751	678	533	3342	0
Arrive On Green	0.19	0.00	0.19				0.00	0.44	0.44	0.36	1.00	0.00
Sat Flow, veh/h	1619	0	3051				0	6444	1525	2956	5076	0
Grp Volume(v), veh/h	100	0	478				0	1069	303	479	1284	0
Grp Sat Flow(s),veh/h/ln	1619	0	1525				0	1548	1525	1478	1638	0
Q Serve(g_s), s	4.8	0.0	13.5				0.0	10.4	12.4	13.8	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	13.5				0.0	10.4	12.4	13.8	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	309	0	583				0	2751	678	533	3342	0
V/C Ratio(X)	0.32	0.00	0.82				0.00	0.39	0.45	0.90	0.38	0.00
Avail Cap(c_a), veh/h	462	0	871				0	2751	678	657	3342	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	0.78	0.78	0.00
Uniform Delay (d), s/veh	31.4	0.0	34.9				0.0	16.8	17.3	28.0	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	3.9				0.0	0.4	2.1	9.7	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	1.8	0.0	5.0				0.0	3.3	4.2	4.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.0	0.0	38.9				0.0	17.2	19.5	37.7	0.3	0.0
LnGrp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		578						1372			1763	
Approach Delay, s/veh		37.7						17.7			10.4	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	21.2	45.8				67.0		23.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	20.0	27.7				52.7		25.7				
Max Q Clear Time (g_c+I1), s	15.8	14.4				2.0		15.5				
Green Ext Time (p_c), s	0.4	6.4				10.8		1.7				

Intersection Summary			
HCM 7th Control Delay, s/veh			17.4
HCM 7th LOS			B

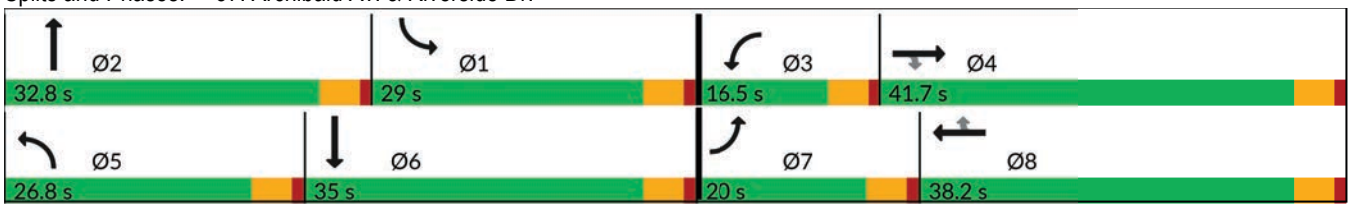
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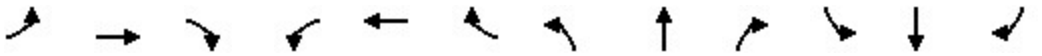
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	202	431	202	114	354	173	245	818	338	956
Future Volume (vph)	202	431	202	114	354	173	245	818	338	956
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.2	38.2	9.6	38.2	38.2	9.6	32.2	9.6	33.2
Total Split (s)	20.0	41.7	41.7	16.5	38.2	38.2	26.8	32.8	29.0	35.0
Total Split (%)	16.7%	34.8%	34.8%	13.8%	31.8%	31.8%	22.3%	27.3%	24.2%	29.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.5	22.9	22.9	10.5	17.9	17.9	19.3	24.1	25.6	30.4
Actuated g/C Ratio	0.15	0.23	0.23	0.10	0.18	0.18	0.19	0.24	0.25	0.30
v/c Ratio	0.84	0.57	0.41	0.69	0.60	0.43	0.82	0.77	0.85	0.82
Control Delay (s/veh)	72.2	38.6	7.1	68.1	42.8	8.7	62.3	41.4	59.0	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.2	38.6	7.1	68.1	42.8	8.7	62.3	41.4	59.0	38.8
LOS	E	D	A	E	D	A	E	D	E	D
Approach Delay (s/veh)		39.1			38.1			45.9		43.3
Approach LOS		D			D			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 42.4	Intersection LOS: D
Intersection Capacity Utilization 81.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 37: Archibald Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	431	202	114	354	173	245	818	53	338	956	201
Future Volume (veh/h)	202	431	202	114	354	173	245	818	53	338	956	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	206	440	135	116	361	125	250	835	42	345	976	179
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	238	776	340	143	574	248	284	1116	56	386	1231	225
Arrive On Green	0.15	0.23	0.23	0.09	0.17	0.17	0.18	0.23	0.23	0.24	0.30	0.30
Sat Flow, veh/h	1619	3420	1498	1619	3420	1480	1619	4789	240	1619	4159	760
Grp Volume(v), veh/h	206	440	135	116	361	125	250	570	307	345	768	387
Grp Sat Flow(s),veh/h/ln	1619	1710	1498	1619	1710	1480	1619	1638	1753	1619	1638	1643
Q Serve(g_s), s	10.7	9.8	6.6	6.1	8.5	3.9	13.0	13.9	14.0	17.8	18.6	18.7
Cycle Q Clear(g_c), s	10.7	9.8	6.6	6.1	8.5	3.9	13.0	13.9	14.0	17.8	18.6	18.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.46
Lane Grp Cap(c), veh/h	238	776	340	143	574	248	284	763	408	386	969	486
V/C Ratio(X)	0.86	0.57	0.40	0.81	0.63	0.50	0.88	0.75	0.75	0.89	0.79	0.80
Avail Cap(c_a), veh/h	289	1472	645	223	1333	577	417	1072	573	458	1155	579
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	29.6	28.3	38.6	33.4	11.2	34.6	30.7	30.7	31.8	27.9	27.9
Incr Delay (d2), s/veh	17.5	0.7	0.8	5.9	1.1	1.6	10.2	1.8	3.5	16.0	3.3	6.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	3.8	2.3	2.5	3.3	2.2	5.5	5.2	5.8	8.1	7.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.4	30.2	29.1	44.5	34.5	12.7	44.9	32.5	34.2	47.8	31.2	34.4
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		781			602			1127			1500	
Approach Delay, s/veh		36.1			31.9			35.7			35.8	
Approach LOS		D			C			D			D	

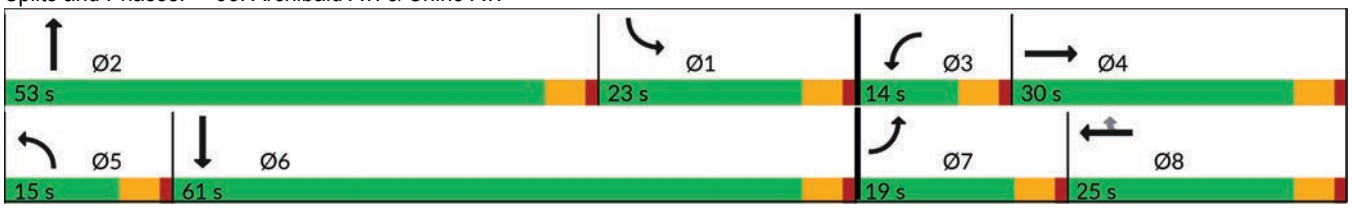
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.2	24.7	12.2	24.2	19.7	30.1	17.3	19.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	24.4	28.2	11.9	37.1	22.2	30.4	15.4	33.6
Max Q Clear Time (g_c+I1), s	19.8	16.0	8.1	11.8	15.0	20.7	12.7	10.5
Green Ext Time (p_c), s	0.2	4.0	0.0	3.0	0.2	4.7	0.1	2.4

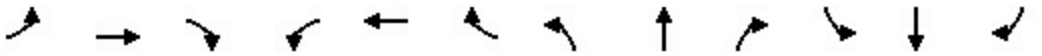
Intersection Summary	
HCM 7th Control Delay, s/veh	35.3
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	71	16	51	28	105	56	830	100	1047
Future Volume (vph)	71	16	51	28	105	56	830	100	1047
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	19.0	30.0	14.0	25.0	25.0	15.0	53.0	23.0	61.0
Total Split (%)	15.8%	25.0%	11.7%	20.8%	20.8%	12.5%	44.2%	19.2%	50.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.7	14.3	10.1	10.5	10.5	10.5	31.8	20.5	41.3
Actuated g/C Ratio	0.16	0.19	0.14	0.14	0.14	0.14	0.43	0.28	0.56
v/c Ratio	0.30	0.17	0.25	0.12	0.30	0.26	0.41	0.24	0.60
Control Delay (s/veh)	41.8	18.1	44.0	39.5	2.6	43.4	24.7	28.8	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.8	18.1	44.0	39.5	2.6	43.4	24.7	28.8	19.4
LOS	D	B	D	D	A	D	C	C	B
Approach Delay (s/veh)		31.4		19.7			25.8		20.1
Approach LOS		C		B			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 73.9	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay (s/veh): 22.9	Intersection LOS: C
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 38: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	16	39	51	28	105	56	830	54	100	1047	63
Future Volume (veh/h)	71	16	39	51	28	105	56	830	54	100	1047	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	76	17	34	55	30	58	60	892	50	108	1126	58
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	103	43	85	85	123	105	90	1527	85	354	1575	81
Arrive On Green	0.06	0.08	0.08	0.05	0.07	0.07	0.06	0.30	0.30	0.22	0.46	0.46
Sat Flow, veh/h	1619	536	1071	1619	1800	1525	1619	5066	283	1619	3390	175
Grp Volume(v), veh/h	76	0	51	55	30	58	60	633	309	108	598	586
Grp Sat Flow(s),veh/h/ln	1619	0	1607	1619	1800	1525	1619	1800	1749	1619	1800	1764
Q Serve(g_s), s	2.4	0.0	1.6	1.8	0.8	1.1	1.9	7.9	7.9	3.0	14.1	14.1
Cycle Q Clear(g_c), s	2.4	0.0	1.6	1.8	0.8	1.1	1.9	7.9	7.9	3.0	14.1	14.1
Prop In Lane	1.00		0.67	1.00		1.00	1.00		0.16	1.00		0.10
Lane Grp Cap(c), veh/h	103	0	128	85	123	105	90	1085	527	354	837	820
V/C Ratio(X)	0.74	0.00	0.40	0.65	0.24	0.55	0.67	0.58	0.59	0.31	0.71	0.72
Avail Cap(c_a), veh/h	441	0	772	288	694	588	318	3293	1600	563	1919	1881
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	0.0	23.1	24.6	23.3	8.0	24.5	15.7	15.7	17.3	11.3	11.4
Incr Delay (d2), s/veh	9.8	0.0	2.0	8.0	1.0	4.5	8.3	0.5	1.0	0.5	1.2	1.2
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(50%),veh/ln	1.1	0.0	0.6	0.8	0.3	0.7	0.8	2.5	2.5	0.9	3.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.2	0.0	25.1	32.6	24.3	12.5	32.8	16.2	16.7	17.8	12.5	12.5
LnGrp LOS	C		C	C	C	B	C	B	B	B	B	B
Approach Vol, veh/h		127			143			1002			1292	
Approach Delay, s/veh		30.5			22.7			17.3			13.0	
Approach LOS		C			C			B			B	

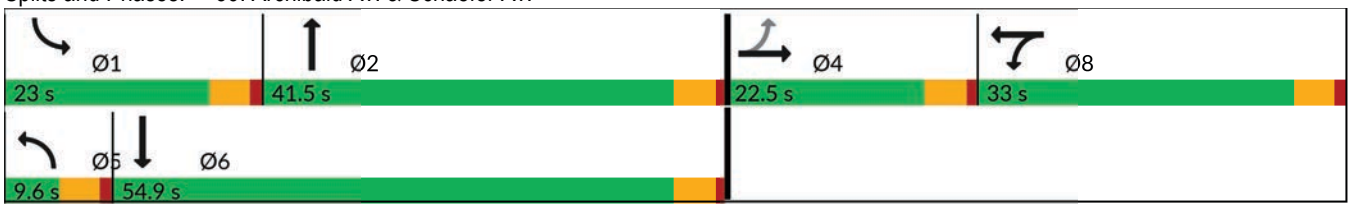
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	20.5	7.4	8.8	7.5	29.2	8.0	8.2
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	48.4	9.4	25.4	10.4	56.4	14.4	20.4
Max Q Clear Time (g_c+I1), s	5.0	9.9	3.8	3.6	3.9	16.1	4.4	3.1
Green Ext Time (p_c), s	0.2	6.0	0.0	0.2	0.0	8.5	0.1	0.2

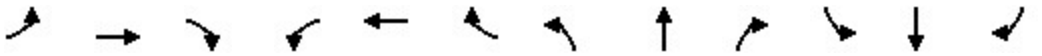
Intersection Summary	
HCM 7th Control Delay, s/veh	16.1
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	163	57	35	45	84	933	123	997
Future Volume (vph)	163	57	35	45	84	933	123	997
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	22.5	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	22.5	22.5	33.0	33.0	9.6	41.5	23.0	54.9
Total Split (%)	18.8%	18.8%	27.5%	27.5%	8.0%	34.6%	19.2%	45.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		18.8	10.8	10.8	5.3	32.0	11.9	38.7
Actuated g/C Ratio		0.21	0.12	0.12	0.06	0.36	0.13	0.43
v/c Ratio		4.07	0.17	0.33	0.94	0.58	0.60	0.84
Control Delay (s/veh)		Error	39.7	32.4	126.6	26.6	52.8	29.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		Error	39.7	32.4	126.6	26.6	52.8	29.8
LOS		F	D	C	F	C	D	C
Approach Delay (s/veh)		1440.0		34.8		34.6		32.0
Approach LOS		F		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.9	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.07	
Intersection Signal Delay (s/veh): 172.2	Intersection LOS: F
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	57	50	35	45	26	84	933	40	123	997	177
Future Volume (veh/h)	163	57	50	35	45	26	84	933	40	123	997	177
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	170	59	52	36	47	25	88	972	39	128	1039	184
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	197	68	60	112	72	38	105	1969	79	158	1276	225
Arrive On Green	0.19	0.19	0.19	0.07	0.07	0.07	0.06	0.41	0.41	0.10	0.44	0.44
Sat Flow, veh/h	1024	355	313	1714	1106	588	1619	4847	194	1619	2904	513
Grp Volume(v), veh/h	281	0	0	36	0	72	88	657	354	128	611	612
Grp Sat Flow(s),veh/h/ln	1692	0	0	1714	0	1694	1619	1638	1765	1619	1710	1708
Q Serve(g_s), s	12.4	0.0	0.0	1.5	0.0	3.2	4.1	11.5	11.5	6.0	24.0	24.2
Cycle Q Clear(g_c), s	12.4	0.0	0.0	1.5	0.0	3.2	4.1	11.5	11.5	6.0	24.0	24.2
Prop In Lane	0.60		0.19	1.00		0.35	1.00		0.11	1.00		0.30
Lane Grp Cap(c), veh/h	325	0	0	112	0	110	105	1331	717	158	751	750
V/C Ratio(X)	0.86	0.00	0.00	0.32	0.00	0.65	0.84	0.49	0.49	0.81	0.81	0.82
Avail Cap(c_a), veh/h	393	0	0	631	0	624	105	1567	844	386	1115	1113
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	30.2	0.0	0.0	34.4	0.0	35.2	35.7	17.0	17.0	34.1	18.9	18.9
Incr Delay (d2), s/veh	15.5	0.0	0.0	1.6	0.0	6.3	42.2	0.3	0.5	3.7	2.9	3.0
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(50%),veh/ln	6.0	0.0	0.0	0.7	0.0	1.4	2.7	3.6	4.0	2.3	8.2	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.6	0.0	0.0	36.1	0.0	41.6	77.9	17.3	17.6	37.8	21.8	21.9
LnGrp LOS	D			D		D	E	B	B	D	C	C
Approach Vol, veh/h		281			108			1099			1351	
Approach Delay, s/veh		45.6			39.7			22.2			23.4	
Approach LOS		D			D			C			C	

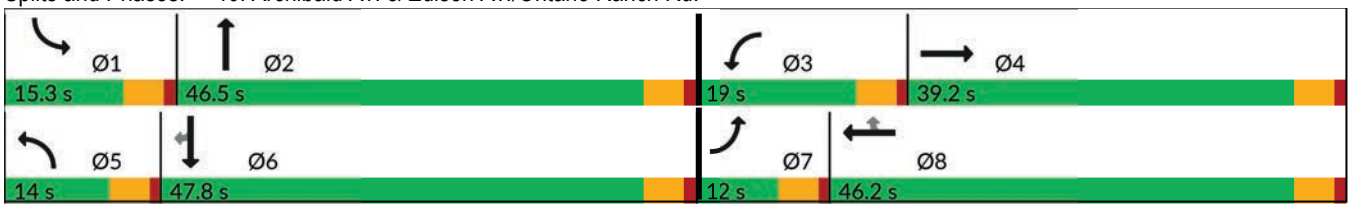
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	35.9		19.4	9.6	38.5		9.6				
Change Period (Y+Rc), s	4.6	4.6		4.6	4.6	4.6		4.6				
Max Green Setting (Gmax), s	18.4	36.9		17.9	5.0	50.3		28.4				
Max Q Clear Time (g_c+I1), s	8.0	13.5		14.4	6.1	26.2		5.2				
Green Ext Time (p_c), s	0.1	6.0		0.5	0.0	7.7		0.4				

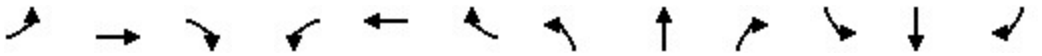
Intersection Summary		
HCM 7th Control Delay, s/veh		25.8
HCM 7th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	416	216	393	288	77	100	679	330	81	776	118
Future Volume (vph)	188	416	216	393	288	77	100	679	330	81	776	118
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	12.0	39.2		19.0	46.2	46.2	14.0	46.5		15.3	47.8	47.8
Total Split (%)	10.0%	32.7%		15.8%	38.5%	38.5%	11.7%	38.8%		12.8%	39.8%	39.8%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	7.6	16.0	86.8	14.9	23.2	23.2	9.2	30.8	86.8	8.7	27.7	27.7
Actuated g/C Ratio	0.09	0.18	1.00	0.17	0.27	0.27	0.11	0.35	1.00	0.10	0.32	0.32
v/c Ratio	0.68	0.48	0.15	0.82	0.63	0.17	0.61	0.59	0.23	0.53	0.75	0.21
Control Delay (s/veh)	54.6	33.7	0.2	52.0	35.2	4.8	58.0	27.0	0.3	53.9	31.6	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	54.6	33.7	0.2	52.0	35.2	4.8	58.0	27.0	0.3	53.9	31.6	4.2
LOS	D	C	A	D	D	A	E	C	A	D	C	A
Approach Delay (s/veh)		29.7			40.8			21.9			30.2	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay (s/veh): 29.8	Intersection LOS: C
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 40: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	416	216	393	288	77	100	679	330	81	776	118
Future Volume (veh/h)	188	416	216	393	288	77	100	679	330	81	776	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	198	438	0	414	303	52	105	715	0	85	817	105
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	287	747		500	423	359	131	1163		106	1110	495
Arrive On Green	0.09	0.15	0.00	0.17	0.24	0.24	0.08	0.34	0.00	0.07	0.32	0.32
Sat Flow, veh/h	3326	4914	1525	2956	1800	1525	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	198	438	0	414	303	52	105	715	0	85	817	105
Grp Sat Flow(s),veh/h/ln	1663	1638	1525	1478	1800	1525	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	3.9	5.6	0.0	9.1	10.4	1.8	4.3	11.7	0.0	3.5	14.3	3.4
Cycle Q Clear(g_c), s	3.9	5.6	0.0	9.1	10.4	1.8	4.3	11.7	0.0	3.5	14.3	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	287	747		500	423	359	131	1163		106	1110	495
V/C Ratio(X)	0.69	0.59		0.83	0.72	0.14	0.80	0.61		0.80	0.74	0.21
Avail Cap(c_a), veh/h	366	2526		633	1113	943	226	2129		257	2195	979
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	26.6	0.0	27.0	23.7	20.4	30.4	18.5	0.0	31.0	20.2	16.5
Incr Delay (d2), s/veh	2.2	0.7	0.0	5.8	2.3	0.2	4.3	0.5	0.0	5.3	1.0	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(50%),veh/ln	1.5	2.0	0.0	3.2	4.1	0.6	1.6	3.9	0.0	1.4	4.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.0	27.3	0.0	32.8	25.9	20.6	34.7	19.1	0.0	36.3	21.1	16.7
LnGrp LOS	C	C		C	C	C	C	B		D	C	B
Approach Vol, veh/h		636			769			820			1007	
Approach Delay, s/veh		28.8			29.3			21.1			22.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.5	16.0	14.8	10.0	26.4	10.4	20.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	10.7	41.9	14.4	34.6	9.4	43.2	7.4	41.6
Max Q Clear Time (g_c+I1), s	5.5	13.7	11.1	7.6	6.3	16.3	5.9	12.4
Green Ext Time (p_c), s	0.0	4.4	0.3	2.7	0.0	5.6	0.1	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	24.8
HCM 7th LOS	C

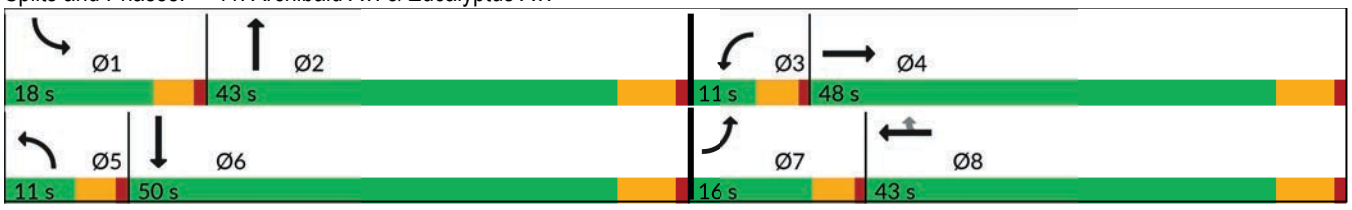
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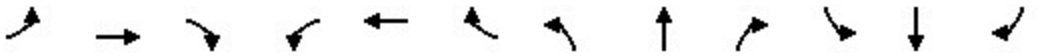
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	100	71	24	42	59	25	949	118	1086
Future Volume (vph)	100	71	24	42	59	25	949	118	1086
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	42.2	9.6	42.2	42.2	9.6	32.2	9.6	32.2
Total Split (s)	16.0	48.0	11.0	43.0	43.0	11.0	43.0	18.0	50.0
Total Split (%)	13.3%	40.0%	9.2%	35.8%	35.8%	9.2%	35.8%	15.0%	41.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.1	23.0	7.4	17.3	17.3	7.4	28.5	9.5	34.5
Actuated g/C Ratio	0.14	0.35	0.11	0.26	0.26	0.11	0.43	0.14	0.53
v/c Ratio	0.26	0.08	0.08	0.05	0.11	0.08	0.39	0.29	0.40
Control Delay (s/veh)	36.9	17.3	39.8	25.9	0.4	39.8	21.6	36.6	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.9	17.3	39.8	25.9	0.4	39.8	21.6	36.6	16.9
LOS	D	B	D	C	A	D	C	D	B
Approach Delay (s/veh)		27.4		16.5			22.1		18.6
Approach LOS		C		B			C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 65.7	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay (s/veh): 20.4	Intersection LOS: C
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 41: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	71	22	24	42	59	25	949	46	118	1086	144
Future Volume (veh/h)	100	71	22	24	42	59	25	949	46	118	1086	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	105	75	21	25	44	24	26	999	34	124	1143	124
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	219	449	121	86	422	186	89	1960	66	234	2087	225
Arrive On Green	0.07	0.17	0.17	0.03	0.12	0.12	0.03	0.32	0.32	0.08	0.37	0.37
Sat Flow, veh/h	2956	2663	718	2956	3420	1503	2956	6193	210	2956	5708	615
Grp Volume(v), veh/h	105	47	49	25	44	24	26	748	285	124	928	339
Grp Sat Flow(s),veh/h/ln	1478	1710	1671	1478	1710	1503	1478	1548	1759	1478	1548	1680
Q Serve(g_s), s	1.8	1.3	1.3	0.4	0.6	0.8	0.5	7.0	7.0	2.1	8.4	8.5
Cycle Q Clear(g_c), s	1.8	1.3	1.3	0.4	0.6	0.8	0.5	7.0	7.0	2.1	8.4	8.5
Prop In Lane	1.00		0.43	1.00		1.00	1.00		0.12	1.00		0.37
Lane Grp Cap(c), veh/h	219	288	282	86	422	186	89	1470	557	234	1698	614
V/C Ratio(X)	0.48	0.16	0.17	0.29	0.10	0.13	0.29	0.51	0.51	0.53	0.55	0.55
Avail Cap(c_a), veh/h	635	1346	1315	356	2370	1042	356	3219	1219	746	3831	1385
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	18.9	18.9	25.2	20.7	20.7	25.2	14.8	14.8	23.5	13.4	13.4
Incr Delay (d2), s/veh	0.6	0.3	0.3	0.7	0.1	0.3	0.7	0.3	0.7	0.7	0.3	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	0.5	0.1	0.2	0.2	0.1	1.8	2.2	0.6	2.1	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.2	19.1	19.2	25.9	20.8	21.0	25.9	15.1	15.5	24.2	13.6	14.2
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		201			93			1059			1391	
Approach Delay, s/veh		21.8			22.2			15.4			14.7	
Approach LOS		C			C			B			B	

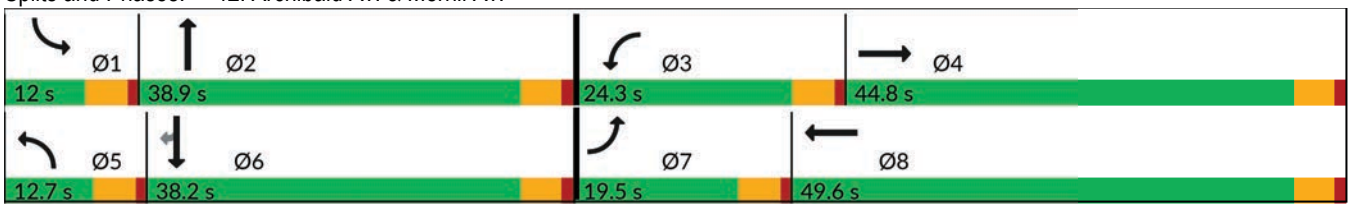
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	23.0	6.1	15.1	6.2	25.6	8.5	12.8
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	13.4	36.8	6.4	41.8	6.4	43.8	11.4	36.8
Max Q Clear Time (g_c+I1), s	4.1	9.0	2.4	3.3	2.5	10.5	3.8	2.8
Green Ext Time (p_c), s	0.1	6.5	0.0	0.5	0.0	8.9	0.1	0.3

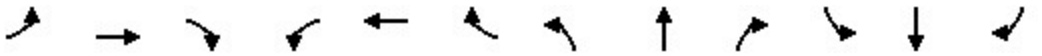
Intersection Summary	
HCM 7th Control Delay, s/veh	15.8
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	411	356	269	131	172	141	562	71	676	361
Future Volume (vph)	411	356	269	131	172	141	562	71	676	361
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			Free							6
Detector Phase	7	4		3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	44.8		9.6	45.8	9.6	32.5	9.6	31.5	31.5
Total Split (s)	19.5	44.8		24.3	49.6	12.7	38.9	12.0	38.2	38.2
Total Split (%)	16.3%	37.3%		20.3%	41.3%	10.6%	32.4%	10.0%	31.8%	31.8%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	None	None
Act Effct Green (s)	15.5	19.6	84.9	13.1	17.2	8.2	28.5	7.1	24.8	24.8
Actuated g/C Ratio	0.18	0.23	1.00	0.15	0.20	0.10	0.34	0.08	0.29	0.29
v/c Ratio	0.82	0.47	0.20	0.58	0.33	0.53	0.32	0.31	0.71	0.55
Control Delay (s/veh)	49.3	30.9	0.3	45.9	24.6	47.7	21.9	45.3	32.1	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.3	30.9	0.3	45.9	24.6	47.7	21.9	45.3	32.1	6.3
LOS	D	C	A	D	C	D	C	D	C	A
Approach Delay (s/veh)		30.3			32.5		26.3		24.5	
Approach LOS		C			C		C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.9	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay (s/veh): 27.6	Intersection LOS: C
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 42: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	411	356	269	131	172	50	141	562	131	71	676	361
Future Volume (veh/h)	411	356	269	131	172	50	141	562	131	71	676	361
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	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	1600	1800	1800	1700	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	452	391	0	144	189	34	155	618	93	78	743	370
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	547	803		181	462	81	231	2101	305	171	1162	492
Arrive On Green	0.18	0.22	0.00	0.11	0.16	0.16	0.08	0.34	0.34	0.06	0.32	0.32
Sat Flow, veh/h	3048	3600	1525	1619	2971	523	3048	6133	891	3048	3600	1524
Grp Volume(v), veh/h	452	391	0	144	113	110	155	541	170	78	743	370
Grp Sat Flow(s),veh/h/ln	1524	1800	1525	1619	1800	1694	1524	1800	1625	1524	1800	1524
Q Serve(g_s), s	9.9	6.5	0.0	6.0	3.9	4.1	3.4	5.1	5.3	1.7	12.2	15.0
Cycle Q Clear(g_c), s	9.9	6.5	0.0	6.0	3.9	4.1	3.4	5.1	5.3	1.7	12.2	15.0
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	547	803		181	280	263	231	1850	556	171	1162	492
V/C Ratio(X)	0.83	0.49		0.80	0.40	0.42	0.67	0.29	0.30	0.46	0.64	0.75
Avail Cap(c_a), veh/h	658	2096		462	1173	1104	357	2682	807	327	1752	742
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	23.4	0.0	29.9	26.3	26.3	31.1	16.6	16.7	31.6	19.9	20.9
Incr Delay (d2), s/veh	7.3	0.5	0.0	7.7	0.9	1.1	3.3	0.1	0.3	1.9	0.6	2.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	2.5	0.0	2.5	1.6	1.6	1.2	1.7	1.7	0.6	4.3	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.6	23.8	0.0	37.6	27.2	27.4	34.4	16.7	17.0	33.4	20.5	23.3
LnGrp LOS	C	C		D	C	C	C	B	B	C	C	C
Approach Vol, veh/h		843			367			866			1191	
Approach Delay, s/veh		29.6			31.3			19.9			22.2	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	28.3	12.3	20.0	9.8	26.9	17.0	15.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	7.4	34.3	19.7	40.2	8.1	33.6	14.9	45.0
Max Q Clear Time (g_c+I1), s	3.7	7.3	8.0	8.5	5.4	17.0	11.9	6.1
Green Ext Time (p_c), s	0.0	4.3	0.3	2.4	0.1	5.3	0.5	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	24.5
HCM 7th LOS	C

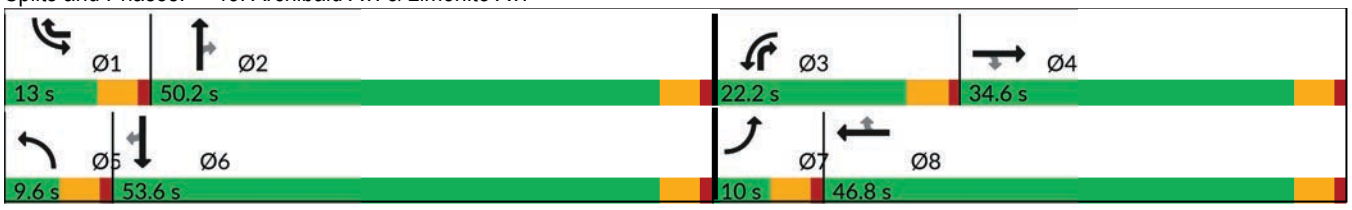
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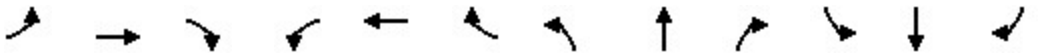
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	168	633	69	357	397	248	46	429	265	343	592	161
Future Volume (vph)	168	633	69	357	397	248	46	429	265	343	592	161
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.5	22.5	9.6	46.8	9.6	9.6	49.5	9.6	9.6	39.5	39.5
Total Split (s)	10.0	34.6	34.6	22.2	46.8	13.0	9.6	50.2	22.2	13.0	53.6	53.6
Total Split (%)	8.3%	28.8%	28.8%	18.5%	39.0%	10.8%	8.0%	41.8%	18.5%	10.8%	44.7%	44.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.6	21.7	21.7	15.1	31.2	40.0	5.2	19.6	34.7	8.8	27.9	27.9
Actuated g/C Ratio	0.07	0.26	0.26	0.18	0.37	0.47	0.06	0.23	0.41	0.10	0.33	0.33
v/c Ratio	0.87	0.73	0.14	0.69	0.32	0.18	0.26	0.55	0.41	1.14	0.37	0.27
Control Delay (s/veh)	82.0	35.7	0.6	42.7	20.7	2.3	48.2	31.2	13.3	134.2	23.8	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.0	35.7	0.6	42.7	20.7	2.3	48.2	31.2	13.3	134.2	23.8	5.1
LOS	F	D	A	D	C	A	D	C	B	F	C	A
Approach Delay (s/veh)		41.8			23.9			25.9			55.6	
Approach LOS		D			C			C			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 37.9	Intersection LOS: D
Intersection Capacity Utilization 71.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 43: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	633	69	357	397	248	46	429	265	343	592	161
Future Volume (veh/h)	168	633	69	357	397	248	46	429	265	343	592	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	171	646	54	364	405	168	47	438	201	350	604	95
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	231	876	391	455	1135	1217	127	691	536	359	1379	428
Arrive On Green	0.08	0.26	0.26	0.15	0.33	0.33	0.04	0.20	0.20	0.12	0.28	0.28
Sat Flow, veh/h	2956	3420	1525	2956	3420	2682	2956	3420	1489	2956	4914	1525
Grp Volume(v), veh/h	171	646	54	364	405	168	47	438	201	350	604	95
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1710	1341	1478	1710	1489	1478	1638	1525
Q Serve(g_s), s	3.9	12.0	1.9	8.2	6.2	2.5	1.1	8.1	6.9	8.2	7.0	3.3
Cycle Q Clear(g_c), s	3.9	12.0	1.9	8.2	6.2	2.5	1.1	8.1	6.9	8.2	7.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	876	391	455	1135	1217	127	691	536	359	1379	428
V/C Ratio(X)	0.74	0.74	0.14	0.80	0.36	0.14	0.37	0.63	0.38	0.97	0.44	0.22
Avail Cap(c_a), veh/h	231	1485	662	753	2088	1964	214	2257	1217	359	3484	1082
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	23.6	19.8	28.2	17.5	11.0	32.2	25.2	16.6	30.2	20.4	19.1
Incr Delay (d2), s/veh	10.6	1.2	0.2	1.3	0.2	0.1	0.7	1.0	0.4	40.3	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.4	0.6	2.7	2.2	0.6	0.4	2.9	2.1	4.6	2.3	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.8	24.8	20.0	29.5	17.7	11.1	32.8	26.2	17.0	70.5	20.6	19.3
LnGrp LOS	D	C	B	C	B	B	C	C	B	E	C	B
Approach Vol, veh/h		871			937			686			1049	
Approach Delay, s/veh		27.8			21.1			24.0			37.1	
Approach LOS		C			C			C			D	

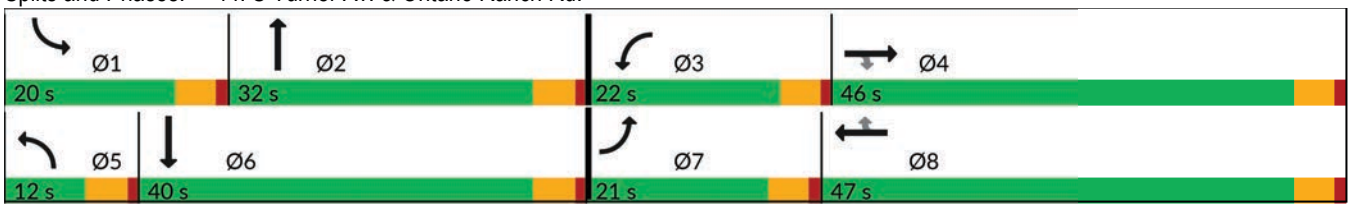
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	18.6	15.2	22.3	7.6	24.0	10.0	27.5
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	8.4	45.6	17.6	30.0	5.0	49.0	5.4	42.2
Max Q Clear Time (g_c+I1), s	10.2	10.1	10.2	14.0	3.1	9.0	5.9	8.2
Green Ext Time (p_c), s	0.0	3.3	0.4	3.7	0.0	4.2	0.0	3.2

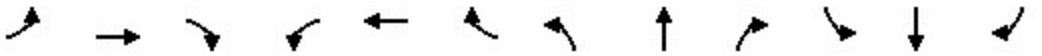
Intersection Summary	
HCM 7th Control Delay, s/veh	28.1
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	73	776	48	85	753	42	15	42	69	65
Future Volume (vph)	73	776	48	85	753	42	15	42	69	65
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.8	23.8	9.6	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	21.0	46.0	46.0	22.0	47.0	47.0	12.0	32.0	20.0	40.0
Total Split (%)	17.5%	38.3%	38.3%	18.3%	39.2%	39.2%	10.0%	26.7%	16.7%	33.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.5	29.8	29.8	11.0	30.3	30.3	8.2	11.4	10.4	19.5
Actuated g/C Ratio	0.17	0.48	0.48	0.18	0.49	0.49	0.13	0.18	0.17	0.31
v/c Ratio	0.28	0.47	0.06	0.31	0.45	0.05	0.08	0.30	0.27	0.23
Control Delay (s/veh)	35.5	19.9	0.1	35.2	19.1	0.1	38.3	20.9	35.7	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.5	19.9	0.1	35.2	19.1	0.1	38.3	20.9	35.7	18.6
LOS	D	B	A	D	B	A	D	C	D	B
Approach Delay (s/veh)		20.1			19.8			23.3		24.9
Approach LOS		C			B			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 62.4	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay (s/veh): 20.6	Intersection LOS: C
Intersection Capacity Utilization 50.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	776	48	85	753	42	15	42	54	69	65	55
Future Volume (veh/h)	73	776	48	85	753	42	15	42	54	69	65	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	77	817	43	89	793	41	16	44	31	73	68	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	112	1318	559	122	1340	568	33	71	50	109	118	80
Arrive On Green	0.07	0.37	0.37	0.08	0.37	0.37	0.02	0.07	0.07	0.07	0.12	0.12
Sat Flow, veh/h	1619	3600	1525	1619	3600	1525	1619	981	691	1619	992	671
Grp Volume(v), veh/h	77	817	43	89	793	41	16	0	75	73	0	114
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	0	1671	1619	0	1663
Q Serve(g_s), s	2.0	8.2	0.8	2.4	7.8	0.8	0.4	0.0	1.9	1.9	0.0	2.8
Cycle Q Clear(g_c), s	2.0	8.2	0.8	2.4	7.8	0.8	0.4	0.0	1.9	1.9	0.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		0.40
Lane Grp Cap(c), veh/h	112	1318	559	122	1340	568	33	0	121	109	0	199
V/C Ratio(X)	0.69	0.62	0.08	0.73	0.59	0.07	0.49	0.00	0.62	0.67	0.00	0.57
Avail Cap(c_a), veh/h	604	3392	1437	641	3474	1472	273	0	1042	568	0	1340
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.0	11.4	9.1	19.9	11.1	8.9	21.3	0.0	19.8	20.0	0.0	18.3
Incr Delay (d2), s/veh	2.8	0.5	0.1	3.1	0.4	0.1	4.2	0.0	5.1	2.7	0.0	2.6
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(50%),veh/ln	0.7	2.3	0.2	0.8	2.1	0.2	0.2	0.0	0.8	0.7	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.7	11.9	9.1	23.0	11.5	8.9	25.5	0.0	24.9	22.7	0.0	20.9
LnGrp LOS	C	B	A	C	B	A	C		C	C		C
Approach Vol, veh/h		937			923			91			187	
Approach Delay, s/veh		12.7			12.5			25.0			21.6	
Approach LOS		B			B			C			C	

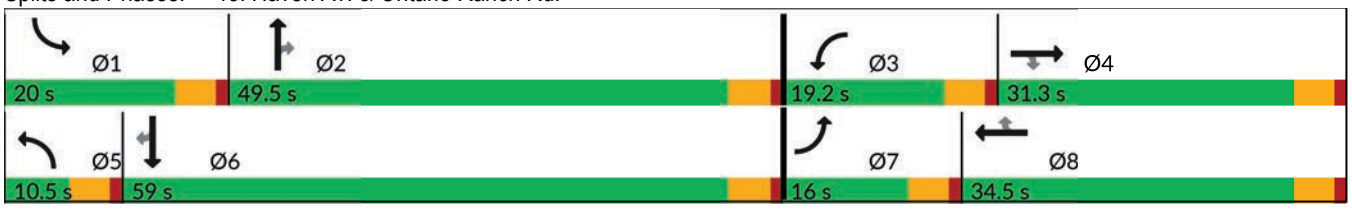
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	7.8	7.9	20.7	5.5	9.8	7.6	21.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	27.4	17.4	41.4	7.4	35.4	16.4	42.4
Max Q Clear Time (g_c+I1), s	3.9	3.9	4.4	10.2	2.4	4.8	4.0	9.8
Green Ext Time (p_c), s	0.0	0.3	0.1	5.9	0.0	0.6	0.1	5.7

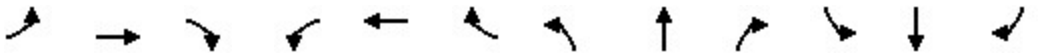
Intersection Summary	
HCM 7th Control Delay, s/veh	13.9
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	167	715	67	226	791	221	23	260	84	225	378	58
Future Volume (vph)	167	715	67	226	791	221	23	260	84	225	378	58
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	34.5	34.5	9.6	47.8	47.8	9.6	45.8	45.8
Total Split (s)	16.0	31.3	31.3	19.2	34.5	34.5	10.5	49.5	49.5	20.0	59.0	59.0
Total Split (%)	13.3%	26.1%	26.1%	16.0%	28.8%	28.8%	8.8%	41.3%	41.3%	16.7%	49.2%	49.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.7	21.4	21.4	11.6	21.2	21.2	5.6	21.5	21.5	15.9	38.5	38.5
Actuated g/C Ratio	0.13	0.24	0.24	0.13	0.24	0.24	0.06	0.24	0.24	0.18	0.43	0.43
v/c Ratio	0.86	0.66	0.15	0.64	0.58	0.45	0.25	0.65	0.19	0.86	0.53	0.09
Control Delay (s/veh)	76.7	35.1	0.7	47.6	32.4	7.2	52.6	38.0	2.0	66.9	23.6	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	76.7	35.1	0.7	47.6	32.4	7.2	52.6	38.0	2.0	66.9	23.6	1.5
LOS	E	D	A	D	C	A	D	D	A	E	C	A
Approach Delay (s/veh)		40.0			30.7			30.7			36.4	
Approach LOS		D			C			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 34.6	Intersection LOS: C
Intersection Capacity Utilization 68.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 45: Haven Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	715	67	226	791	221	23	260	84	225	378	58
Future Volume (veh/h)	167	715	67	226	791	221	23	260	84	225	378	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	182	777	46	246	860	154	25	283	45	245	411	45
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	217	1278	397	328	1465	356	44	360	305	283	625	527
Arrive On Green	0.13	0.26	0.26	0.11	0.24	0.24	0.03	0.20	0.20	0.17	0.35	0.35
Sat Flow, veh/h	1619	4914	1525	2956	6192	1506	1619	1800	1525	1619	1800	1516
Grp Volume(v), veh/h	182	777	46	246	860	154	25	283	45	245	411	45
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1478	1548	1506	1619	1800	1525	1619	1800	1516
Q Serve(g_s), s	7.9	10.0	1.7	5.8	8.9	6.3	1.1	10.8	1.8	10.6	14.0	1.4
Cycle Q Clear(g_c), s	7.9	10.0	1.7	5.8	8.9	6.3	1.1	10.8	1.8	10.6	14.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	1278	397	328	1465	356	44	360	305	283	625	527
V/C Ratio(X)	0.84	0.61	0.12	0.75	0.59	0.43	0.57	0.79	0.15	0.87	0.66	0.09
Avail Cap(c_a), veh/h	255	1815	563	597	2561	623	132	1118	948	345	1355	1141
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	23.5	20.4	31.2	24.5	23.5	34.7	27.5	23.8	29.0	20.0	15.9
Incr Delay (d2), s/veh	16.4	0.5	0.1	1.3	0.4	0.8	4.2	3.8	0.2	15.2	1.2	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(50%),veh/ln	3.8	3.5	0.5	1.9	2.9	2.0	0.5	4.6	0.6	5.0	5.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.9	24.0	20.5	32.5	24.8	24.3	38.9	31.3	24.1	44.2	21.1	15.9
LnGrp LOS	D	C	C	C	C	C	D	C	C	D	C	B
Approach Vol, veh/h		1005			1260			353			701	
Approach Delay, s/veh		28.0			26.3			30.9			28.9	
Approach LOS		C			C			C			C	

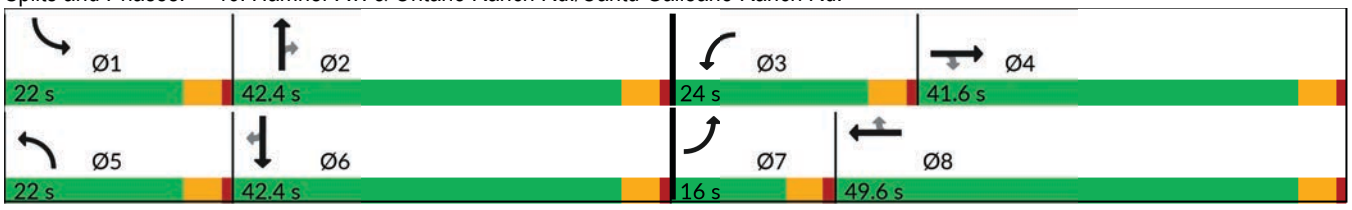
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	19.0	12.6	23.4	6.6	29.7	14.3	21.7
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	44.9	14.6	26.7	5.9	54.4	11.4	29.9
Max Q Clear Time (g_c+I1), s	12.6	12.8	7.8	12.0	3.1	16.0	9.9	10.9
Green Ext Time (p_c), s	0.1	1.7	0.2	4.2	0.0	2.6	0.0	5.5

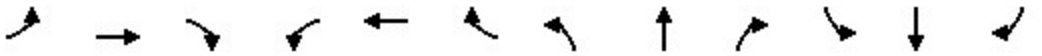
Intersection Summary	
HCM 7th Control Delay, s/veh	27.8
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	633	234	352	861	147	303	424	287	291	671	263
Future Volume (vph)	128	633	234	352	861	147	303	424	287	291	671	263
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6
Total Split (s)	16.0	41.6	41.6	24.0	49.6	49.6	22.0	42.4	42.4	22.0	42.4	42.4
Total Split (%)	12.3%	32.0%	32.0%	18.5%	38.2%	38.2%	16.9%	32.6%	32.6%	16.9%	32.6%	32.6%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.0	22.5	22.5	17.2	30.7	30.7	15.2	23.8	23.8	14.8	23.5	23.5
Actuated g/C Ratio	0.09	0.23	0.23	0.18	0.31	0.31	0.16	0.24	0.24	0.15	0.24	0.24
v/c Ratio	0.51	0.61	0.47	0.74	0.61	0.27	0.72	0.38	0.55	0.71	0.62	0.55
Control Delay (s/veh)	53.3	36.8	7.3	50.0	30.8	5.7	51.4	32.7	10.9	51.4	36.2	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.3	36.8	7.3	50.0	30.8	5.7	51.4	32.7	10.9	51.4	36.2	14.9
LOS	D	D	A	D	C	A	D	C	B	D	D	B
Approach Delay (s/veh)		32.0			33.1			32.1			35.3	
Approach LOS		C			C			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 97.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay (s/veh): 33.2	Intersection LOS: C
Intersection Capacity Utilization 65.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 46: Hamner Av. & Ontario Ranch Rd./Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	633	234	352	861	147	303	424	287	291	671	263
Future Volume (veh/h)	128	633	234	352	861	147	303	424	287	291	671	263
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	139	688	113	383	936	119	329	461	184	316	729	200
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	207	1075	333	468	1510	462	412	1180	362	399	1159	355
Arrive On Green	0.07	0.22	0.22	0.16	0.31	0.31	0.14	0.24	0.24	0.14	0.24	0.24
Sat Flow, veh/h	2956	4914	1523	2956	4914	1505	2956	4914	1506	2956	4914	1504
Grp Volume(v), veh/h	139	688	113	383	936	119	329	461	184	316	729	200
Grp Sat Flow(s),veh/h/ln	1478	1638	1523	1478	1638	1505	1478	1638	1506	1478	1638	1504
Q Serve(g_s), s	3.4	9.5	4.7	9.3	12.1	4.4	8.0	5.8	7.9	7.7	9.9	8.7
Cycle Q Clear(g_c), s	3.4	9.5	4.7	9.3	12.1	4.4	8.0	5.8	7.9	7.7	9.9	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	1075	333	468	1510	462	412	1180	362	399	1159	355
V/C Ratio(X)	0.67	0.64	0.34	0.82	0.62	0.26	0.80	0.39	0.51	0.79	0.63	0.56
Avail Cap(c_a), veh/h	453	2446	758	772	2975	911	692	2499	766	692	2499	765
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	26.4	24.5	30.2	22.0	19.4	31.0	23.7	24.4	31.1	25.5	25.0
Incr Delay (d2), s/veh	1.4	0.6	0.6	1.4	0.4	0.3	1.4	0.2	1.1	1.4	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.3	1.5	3.0	4.0	1.4	2.7	2.0	2.6	2.6	3.5	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.2	27.0	25.1	31.6	22.4	19.7	32.3	23.9	25.6	32.5	26.1	26.4
LnGrp LOS	D	C	C	C	C	B	C	C	C	C	C	C
Approach Vol, veh/h		940			1438			974			1245	
Approach Delay, s/veh		28.0			24.7			27.1			27.7	
Approach LOS		C			C			C			C	

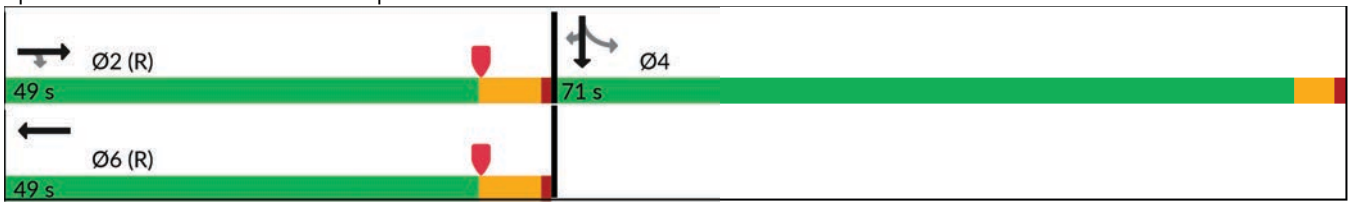
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	22.5	16.4	20.9	15.0	22.1	9.8	27.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	17.4	37.8	19.4	37.0	17.4	37.8	11.4	45.0
Max Q Clear Time (g_c+I1), s	9.7	9.9	11.3	11.5	10.0	11.9	5.4	14.1
Green Ext Time (p_c), s	0.4	3.5	0.5	4.6	0.4	5.4	0.1	6.8

Intersection Summary	
HCM 7th Control Delay, s/veh	26.7
HCM 7th LOS	C

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1129	591	664	220	281	0	1347
Future Volume (vph)	1129	591	664	220	281	0	1347
Turn Type	NA	Perm	NA	Free	Perm	NA	Perm
Protected Phases	2		6			4	
Permitted Phases		2		Free	4		4
Detector Phase	2	2	6		4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	49.0	49.0	49.0		71.0	71.0	71.0
Total Split (%)	40.8%	40.8%	40.8%		59.2%	59.2%	59.2%
Yellow Time (s)	5.5	5.5	5.5		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5		4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Min	C-Min	C-Min		Min	Min	Min
Act Effct Green (s)	45.8	45.8	45.8	120.0	63.1	63.1	63.1
Actuated g/C Ratio	0.38	0.38	0.38	1.00	0.53	0.53	0.53
v/c Ratio	0.60	0.66	0.53	0.16	0.32	0.89	0.89
Control Delay (s/veh)	31.9	6.0	37.4	0.2	16.8	36.3	36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.9	6.0	37.4	0.2	16.8	36.3	36.7
LOS	C	A	D	A	B	D	D
Approach Delay (s/veh)	23.0		28.2			33.4	
Approach LOS	C		C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 8.1 (7%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 28.1	Intersection LOS: C
Intersection Capacity Utilization 87.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 47: I-15 SB Ramps & Cantu Galleano Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	1129	591	0	664	220	0	0	0	281	0	1347
Future Volume (veh/h)	0	1129	591	0	664	220	0	0	0	281	0	1347
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
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	0	1800	1800	0	1800	1800				1700	1800	1800
Adj Flow Rate, veh/h	0	1227	0	0	722	0				203	0	1322
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	0	0	0	0	0				0	0	0
Cap, veh/h	0	2347		0	1564					766	0	1443
Arrive On Green	0.00	0.43	0.00	0.00	0.87	0.00				0.47	0.00	0.47
Sat Flow, veh/h	0	5400	1525	0	3600	1525				1619	0	3051
Grp Volume(v), veh/h	0	1227	0	0	722	0				203	0	1322
Grp Sat Flow(s),veh/h/ln	0	1800	1525	0	1800	1525				1619	0	1525
Q Serve(g_s), s	0.0	20.0	0.0	0.0	5.3	0.0				9.1	0.0	48.4
Cycle Q Clear(g_c), s	0.0	20.0	0.0	0.0	5.3	0.0				9.1	0.0	48.4
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2347		0	1564					766	0	1443
V/C Ratio(X)	0.00	0.52		0.00	0.46					0.27	0.00	0.92
Avail Cap(c_a), veh/h	0	2347		0	1564					896	0	1688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.75	0.00	0.00	0.89	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.8	0.0	0.0	4.8	0.0				19.1	0.0	29.4
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.9	0.0				0.2	0.0	7.5
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	0.0	8.0	0.0	0.0	1.5	0.0				3.3	0.0	17.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	25.5	0.0	0.0	5.7	0.0				19.2	0.0	36.9
LnGrp LOS		C			A					B		D
Approach Vol, veh/h		1227			722						1525	
Approach Delay, s/veh		25.5			5.7						34.6	
Approach LOS		C			A						C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	58.6	61.4	58.6
Change Period (Y+Rc), s	6.5	4.6	6.5
Max Green Setting (Gmax), s	42.5	66.4	42.5
Max Q Clear Time (g_c+I1), s	22.0	50.4	7.3
Green Ext Time (p_c), s	7.7	6.4	4.7

Intersection Summary	
HCM 7th Control Delay, s/veh	25.3
HCM 7th LOS	C

Notes

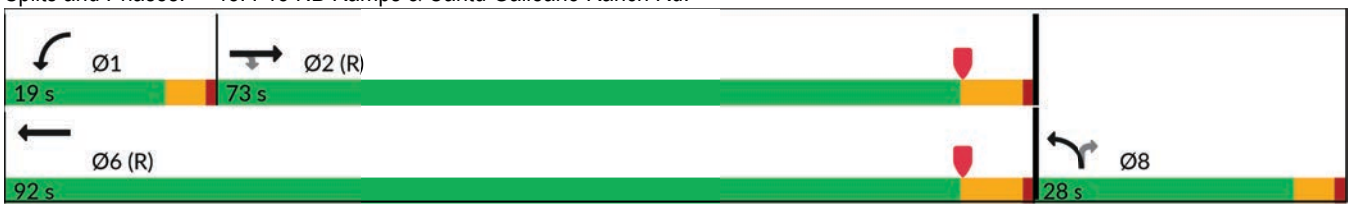
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	609	801	255	476	427	197
Future Volume (vph)	609	801	255	476	427	197
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	61.3	61.3	11.0	22.5	22.5	22.5
Total Split (s)	73.0	73.0	19.0	92.0	28.0	28.0
Total Split (%)	60.8%	60.8%	15.8%	76.7%	23.3%	23.3%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.6	4.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	67.1	67.1	15.1	86.8	22.1	22.1
Actuated g/C Ratio	0.56	0.56	0.13	0.72	0.18	0.18
v/c Ratio	0.22	0.76	0.73	0.13	0.81	0.44
Control Delay (s/veh)	20.6	30.4	61.9	5.4	57.9	9.0
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.6	30.8	61.9	5.4	57.9	9.0
LOS	C	C	E	A	E	A
Approach Delay (s/veh)	26.4			25.1	44.0	
Approach LOS	C			C	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 15.4 (13%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 30.0	Intersection LOS: C
Intersection Capacity Utilization 82.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 48: I-15 NB Ramps & Cantu Galleano Ranch Rd.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	609	801	255	476	427	197
Future Volume (veh/h)	609	801	255	476	427	197
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1600	1800	1700	1800
Adj Flow Rate, veh/h	662	606	277	517	464	141
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	3225	910	327	4011	533	251
Arrive On Green	1.00	1.00	0.11	0.74	0.16	0.16
Sat Flow, veh/h	5400	1524	3048	5400	3238	1525
Grp Volume(v), veh/h	662	606	277	517	464	141
Grp Sat Flow(s),veh/h/ln	1800	1524	1524	1800	1619	1525
Q Serve(g_s), s	0.0	0.4	10.7	3.3	16.8	10.2
Cycle Q Clear(g_c), s	0.0	0.4	10.7	3.3	16.8	10.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3225	910	327	4011	533	251
V/C Ratio(X)	0.21	0.67	0.85	0.13	0.87	0.56
Avail Cap(c_a), veh/h	3225	910	366	4011	631	297
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.1	0.1	52.6	4.4	48.9	46.1
Incr Delay (d2), s/veh	0.1	3.2	15.5	0.1	11.1	2.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	4.6	0.9	7.4	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.2	3.2	68.1	4.5	59.9	48.1
LnGrp LOS	A	A	E	A	E	D
Approach Vol, veh/h	1268			794	605	
Approach Delay, s/veh	1.6			26.7	57.2	
Approach LOS	A			C	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	17.5	78.2				95.6	24.4
Change Period (Y+Rc), s	4.6	6.5				6.5	4.6
Max Green Setting (Gmax), s	14.4	66.5				85.5	23.4
Max Q Clear Time (g_c+I1), s	12.7	2.4				5.3	18.8
Green Ext Time (p_c), s	0.2	7.5				3.3	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	21.7
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 6.3:

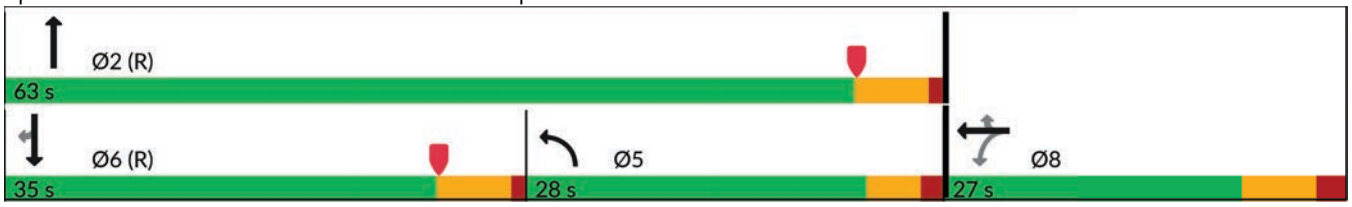
OPENING YEAR (2031) WITH PROJECT INTERSECTION ANALYSIS

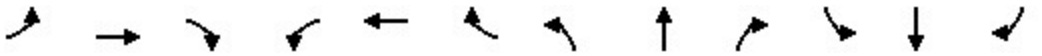
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Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	510	0	412	452	904	883	579
Future Volume (vph)	510	0	412	452	904	883	579
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.0	17.0	17.0	15.2	28.0	27.0	27.0
Total Split (s)	27.0	27.0	27.0	28.0	63.0	35.0	35.0
Total Split (%)	30.0%	30.0%	30.0%	31.1%	70.0%	38.9%	38.9%
Yellow Time (s)	5.0	5.0	5.0	3.7	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	1.5	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	5.2	6.0	6.0	6.0
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	20.0	20.0	20.0	22.9	57.0	28.9	28.9
Actuated g/C Ratio	0.22	0.22	0.22	0.25	0.63	0.32	0.32
v/c Ratio	0.99	0.78	0.68	1.15	0.43	0.84	0.70
Control Delay (s/veh)	82.4	36.3	24.0	111.1	4.5	36.6	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.4	36.3	24.0	111.1	4.5	36.6	8.1
LOS	F	D	C	F	A	D	A
Approach Delay (s/veh)		48.5			40.0	25.3	
Approach LOS		D			D	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36.8 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay (s/veh): 36.4	Intersection LOS: D
Intersection Capacity Utilization 109.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: Euclid Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	510	0	412	452	904	0	0	883	579
Future Volume (veh/h)	0	0	0	510	0	412	452	904	0	0	883	579
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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				1700	1800	1800	1700	1800	0	0	1800	1800
Adj Flow Rate, veh/h				623	0	197	471	942	0	0	920	373
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				698	0	329	426	2188	0	0	1060	459
Arrive On Green				0.22	0.00	0.22	0.53	1.00	0.00	0.00	0.31	0.31
Sat Flow, veh/h				3238	0	1525	1619	3510	0	0	3510	1481
Grp Volume(v), veh/h				623	0	197	471	942	0	0	920	373
Grp Sat Flow(s),veh/h/ln				1619	0	1525	1619	1710	0	0	1710	1481
Q Serve(g_s), s				16.8	0.0	10.5	23.7	0.0	0.0	0.0	22.9	20.9
Cycle Q Clear(g_c), s				16.8	0.0	10.5	23.7	0.0	0.0	0.0	22.9	20.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				698	0	329	426	2188	0	0	1060	459
V/C Ratio(X)				0.89	0.00	0.60	1.10	0.43	0.00	0.00	0.87	0.81
Avail Cap(c_a), veh/h				720	0	339	426	2188	0	0	1102	477
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	0.23	0.23	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.3	0.0	31.8	21.3	0.0	0.0	0.0	29.3	28.6
Incr Delay (d2), s/veh				13.6	0.0	3.4	55.7	0.1	0.0	0.0	9.6	14.5
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				7.8	0.0	4.1	11.5	0.0	0.0	0.0	10.0	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				47.8	0.0	35.2	77.0	0.1	0.0	0.0	38.9	43.2
LnGrp LOS				D		D	F	A			D	D
Approach Vol, veh/h					820			1413			1293	
Approach Delay, s/veh					44.8			25.8			40.2	
Approach LOS					D			C			D	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	63.6		29.7	33.9		26.4						
Change Period (Y+Rc), s	6.0		6.0	* 6		7.0						
Max Green Setting (Gmax), s	57.0		22.8	* 29		20.0						
Max Q Clear Time (g_c+I1), s	2.0		25.7	24.9		18.8						
Green Ext Time (p_c), s	11.4		0.0	3.0		0.6						

Intersection Summary	
HCM 7th Control Delay, s/veh	35.5
HCM 7th LOS	D

Notes

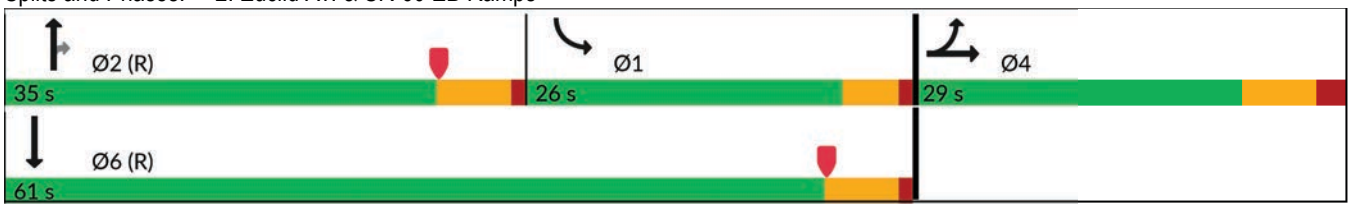
User approved volume balancing among the lanes for turning movement.

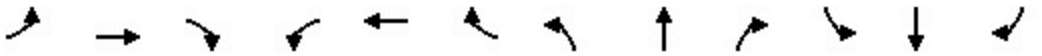
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	376	6	978	760	363	1031
Future Volume (vph)	376	6	978	760	363	1031
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	27.7	27.7	26.0	26.0	14.7	24.0
Total Split (s)	29.0	29.0	35.0	35.0	26.0	61.0
Total Split (%)	32.2%	32.2%	38.9%	38.9%	28.9%	67.8%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.7	5.0
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	22.0	22.0	29.0	29.0	21.3	55.0
Actuated g/C Ratio	0.24	0.24	0.32	0.32	0.24	0.61
v/c Ratio	0.95	0.99	0.93	0.88	1.00	0.52
Control Delay (s/veh)	71.5	67.7	45.8	19.7	70.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.2
Total Delay (s/veh)	71.5	67.7	45.8	19.7	70.3	7.7
LOS	E	E	D	B	E	A
Approach Delay (s/veh)		69.4	34.4			24.0
Approach LOS		E	C			C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36.6 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay (s/veh): 37.4	Intersection LOS: D
Intersection Capacity Utilization 109.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	376	6	366	0	0	0	0	978	760	363	1031	0
Future Volume (veh/h)	376	6	366	0	0	0	0	978	760	363	1031	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1700	1800	1800				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	362	53	323				0	1029	574	382	1085	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	396	54	327				0	1102	492	451	2283	0
Arrive On Green	0.24	0.24	0.24				0.00	0.32	0.32	0.56	1.00	0.00
Sat Flow, veh/h	1619	220	1339				0	3510	1525	1619	3510	0
Grp Volume(v), veh/h	362	0	376				0	1029	574	382	1085	0
Grp Sat Flow(s),veh/h/ln	1619	0	1559				0	1710	1525	1619	1710	0
Q Serve(g_s), s	19.6	0.0	21.6				0.0	26.3	29.0	17.8	0.0	0.0
Cycle Q Clear(g_c), s	19.6	0.0	21.6				0.0	26.3	29.0	17.8	0.0	0.0
Prop In Lane	1.00		0.86				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	396	0	381				0	1102	492	451	2283	0
V/C Ratio(X)	0.91	0.00	0.99				0.00	0.93	1.17	0.85	0.48	0.00
Avail Cap(c_a), veh/h	396	0	381				0	1102	492	451	2283	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	0.55	0.55	0.36	0.36	0.00
Uniform Delay (d), s/veh	33.1	0.0	33.9				0.0	29.6	30.5	18.3	0.0	0.0
Incr Delay (d2), s/veh	25.7	0.0	42.5				0.0	9.6	87.6	5.6	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	10.3	0.0	12.4				0.0	11.3	21.7	4.7	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.8	0.0	76.3				0.0	39.2	118.1	23.9	0.3	0.0
LnGrp LOS	E		E					D	F	C	A	
Approach Vol, veh/h		738						1603			1467	
Approach Delay, s/veh		67.7						67.4			6.4	
Approach LOS		E						E			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	31.1	35.0		29.0		66.1
Change Period (Y+Rc), s	6.0	* 6		7.0		6.0
Max Green Setting (Gmax), s	21.3	* 29		22.0		55.0
Max Q Clear Time (g_c+I1), s	19.8	31.0		23.6		2.0
Green Ext Time (p_c), s	0.2	0.0		0.0		14.0

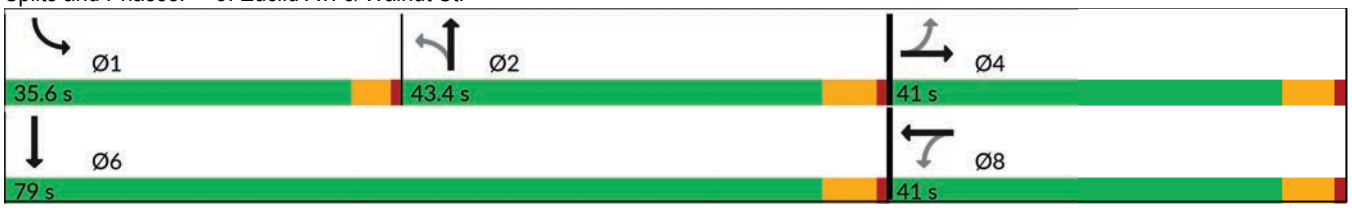
Intersection Summary		
HCM 7th Control Delay, s/veh		44.0
HCM 7th LOS		D

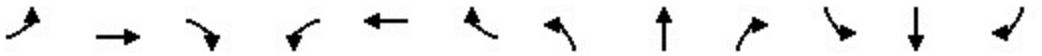
Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	149	253	57	423	117	1207	144	1247
Future Volume (vph)	149	253	57	423	117	1207	144	1247
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	41.0	41.0	41.0	41.0	43.4	43.4	35.6	79.0
Total Split (%)	34.2%	34.2%	34.2%	34.2%	36.2%	36.2%	29.7%	65.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	35.2	35.2	35.2	35.2	37.6	37.6	9.7	52.0
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.38	0.38	0.10	0.53
v/c Ratio	1.02	0.30	0.20	0.59	1.21	0.74	0.55	0.58
Control Delay (s/veh)	112.2	22.1	25.0	25.7	187.7	29.5	49.8	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	112.2	22.1	25.0	25.7	187.7	29.5	49.8	16.8
LOS	F	C	C	C	F	C	D	B
Approach Delay (s/veh)		51.0		25.6		43.1		20.0
Approach LOS		D		C		D		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay (s/veh): 32.5	Intersection LOS: C
Intersection Capacity Utilization 83.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	253	65	57	423	208	117	1207	35	144	1247	81
Future Volume (veh/h)	149	253	65	57	423	208	117	1207	35	144	1247	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	166	281	54	63	470	230	130	1341	18	160	1386	70
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	214	1047	198	371	815	396	185	1952	26	222	2459	124
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.39	0.39	0.39	0.08	0.51	0.51
Sat Flow, veh/h	716	2863	542	1003	2228	1083	350	4997	67	2956	4787	242
Grp Volume(v), veh/h	166	166	169	63	360	340	130	879	480	160	949	507
Grp Sat Flow(s),veh/h/ln	716	1710	1694	1003	1710	1601	350	1638	1788	1478	1638	1753
Q Serve(g_s), s	18.7	6.6	6.8	4.5	16.3	16.5	30.4	21.5	21.5	5.1	19.1	19.1
Cycle Q Clear(g_c), s	35.2	6.6	6.8	11.3	16.3	16.5	37.6	21.5	21.5	5.1	19.1	19.1
Prop In Lane	1.00		0.32	1.00		0.68	1.00		0.04	1.00		0.14
Lane Grp Cap(c), veh/h	214	625	620	371	625	586	185	1280	698	222	1683	900
V/C Ratio(X)	0.78	0.27	0.27	0.17	0.58	0.58	0.70	0.69	0.69	0.72	0.56	0.56
Avail Cap(c_a), veh/h	214	625	620	371	625	586	185	1280	698	952	2492	1333
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	21.4	21.5	25.5	24.5	24.6	35.2	24.4	24.4	43.5	16.0	16.0
Incr Delay (d2), s/veh	16.2	0.2	0.2	0.2	1.3	1.4	11.2	1.6	2.8	1.6	0.3	0.6
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(50%),veh/ln	4.8	2.5	2.6	1.0	6.3	6.0	3.6	7.9	8.9	1.8	6.4	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.4	21.7	21.7	25.7	25.8	26.0	46.4	26.0	27.2	45.2	16.3	16.6
LnGrp LOS	E	C	C	C	C	C	D	C	C	D	B	B
Approach Vol, veh/h		501			763			1489			1616	
Approach Delay, s/veh		33.2			25.9			28.2			19.3	
Approach LOS		C			C			C			B	

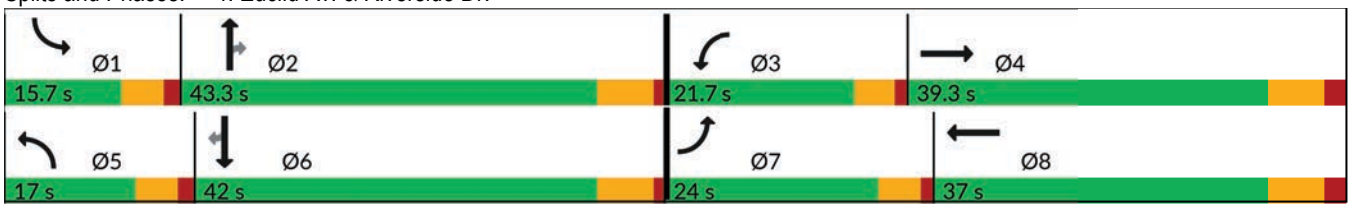
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.8	43.4		41.0		55.2		41.0				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	37.6		35.2		73.2		35.2				
Max Q Clear Time (g_c+I1), s	7.1	39.6		37.2		21.1		18.5				
Green Ext Time (p_c), s	0.2	0.0		0.0		12.8		4.0				

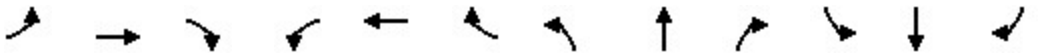
Intersection Summary			
HCM 7th Control Delay, s/veh		25.1	
HCM 7th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	188	293	118	528	79	1016	125	67	1161	144
Future Volume (vph)	188	293	118	528	79	1016	125	67	1161	144
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	33.0	15.2	36.0	36.0
Total Split (s)	24.0	39.3	21.7	37.0	17.0	43.3	43.3	15.7	42.0	42.0
Total Split (%)	20.0%	32.8%	18.1%	30.8%	14.2%	36.1%	36.1%	13.1%	35.0%	35.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	5.0	3.7	5.0	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	6.0	5.2	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.0	29.5	14.1	26.6	11.1	37.7	37.7	10.5	37.0	37.0
Actuated g/C Ratio	0.15	0.27	0.13	0.24	0.10	0.34	0.34	0.09	0.33	0.33
v/c Ratio	0.79	0.73	0.60	0.80	0.51	0.91	0.22	0.46	1.06	0.26
Control Delay (s/veh)	70.4	47.4	61.3	47.7	62.7	49.9	6.8	62.3	82.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	70.4	47.4	61.3	47.7	62.7	49.9	6.8	62.3	82.1	9.3
LOS	E	D	E	D	E	D	A	E	F	A
Approach Delay (s/veh)		55.7		49.8		46.3			73.5	
Approach LOS		E		D		D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 111.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay (s/veh): 58.0	Intersection LOS: E
Intersection Capacity Utilization 91.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	293	37	118	528	92	79	1016	125	67	1161	144
Future Volume (veh/h)	188	293	37	118	528	92	79	1016	125	67	1161	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	196	305	16	123	550	54	82	1058	89	70	1209	84
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	415	22	179	684	67	140	1179	525	134	1166	513
Arrive On Green	0.14	0.25	0.25	0.11	0.22	0.22	0.09	0.34	0.34	0.08	0.34	0.34
Sat Flow, veh/h	1619	1694	89	1619	3142	308	1619	3420	1523	1619	3420	1505
Grp Volume(v), veh/h	196	0	321	123	299	305	82	1058	89	70	1209	84
Grp Sat Flow(s),veh/h/ln	1619	0	1783	1619	1710	1739	1619	1710	1523	1619	1710	1505
Q Serve(g_s), s	12.5	0.0	17.5	7.7	17.5	17.6	5.1	31.0	4.3	4.4	36.0	4.1
Cycle Q Clear(g_c), s	12.5	0.0	17.5	7.7	17.5	17.6	5.1	31.0	4.3	4.4	36.0	4.1
Prop In Lane	1.00		0.05	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	0	437	179	372	378	140	1179	525	134	1166	513
V/C Ratio(X)	0.88	0.00	0.73	0.69	0.80	0.81	0.59	0.90	0.17	0.52	1.04	0.16
Avail Cap(c_a), veh/h	296	0	545	261	486	494	181	1209	538	161	1166	513
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	0.0	36.7	45.2	39.1	39.2	46.4	32.8	24.1	46.4	34.8	24.3
Incr Delay (d2), s/veh	16.6	0.0	4.7	1.7	8.4	8.5	3.9	9.0	0.2	3.2	36.3	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(50%),veh/ln	5.9	0.0	7.8	3.1	7.9	8.1	2.1	13.1	1.5	1.8	19.8	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.1	0.0	41.4	46.9	47.5	47.7	50.3	41.8	24.2	49.6	71.1	24.4
LnGrp LOS	E		D	D	D	D	D	D	C	D	F	C
Approach Vol, veh/h		517			727			1229			1363	
Approach Delay, s/veh		48.9			47.5			41.1			67.1	
Approach LOS		D			D			D			E	

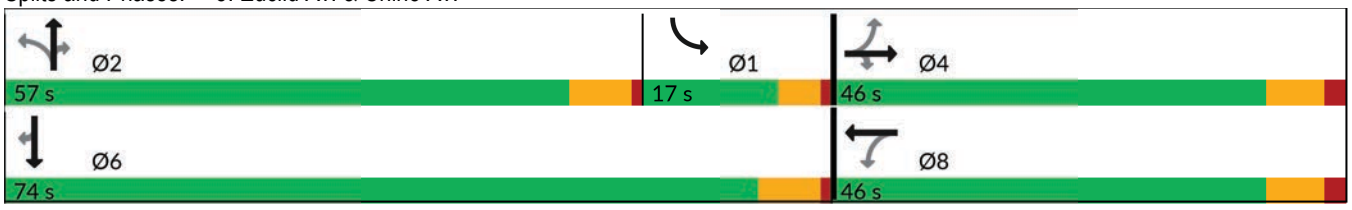
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	42.4	16.4	32.9	14.3	42.0	19.3	30.0
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	10.5	37.3	17.0	32.3	11.8	36.0	19.3	30.0
Max Q Clear Time (g_c+I1), s	6.4	33.0	9.7	19.5	7.1	38.0	14.5	19.6
Green Ext Time (p_c), s	0.0	2.5	0.1	1.9	0.1	0.0	0.1	3.3

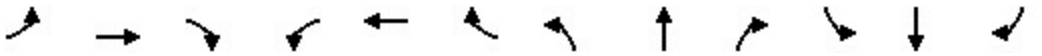
Intersection Summary	
HCM 7th Control Delay, s/veh	52.6
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	84	184	41	56	165	58	1046	86	58	1167	77
Future Volume (vph)	84	184	41	56	165	58	1046	86	58	1167	77
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	46.0	46.0	46.0	46.0	46.0	57.0	57.0	57.0	17.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	47.5%	47.5%	47.5%	14.2%	61.7%	61.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2		7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	22.7	22.7	22.7		22.7	41.4	41.4	41.4	11.5	52.4	52.4
Actuated g/C Ratio	0.25	0.25	0.25		0.25	0.46	0.46	0.46	0.13	0.58	0.58
v/c Ratio	0.45	0.44	0.10		0.77	0.58	0.73	0.12	0.31	0.64	0.09
Control Delay (s/veh)	40.6	35.0	0.7		48.4	47.2	24.7	4.1	49.3	14.3	3.2
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.6	35.0	0.7		48.4	47.2	24.7	4.1	49.3	14.3	3.2
LOS	D	D	A		D	D	C	A	D	B	A
Approach Delay (s/veh)		31.9			48.4		24.3			15.2	
Approach LOS		C			D		C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay (s/veh): 23.3	Intersection LOS: C
Intersection Capacity Utilization 90.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	184	41	56	165	45	58	1046	86	58	1167	77
Future Volume (veh/h)	84	184	41	56	165	45	58	1046	86	58	1167	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	91	200	23	61	179	41	63	1137	77	63	1268	52
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	218	435	369	96	229	48	169	1578	704	138	2102	938
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.46	0.46	0.46	0.09	0.61	0.61
Sat Flow, veh/h	1114	1800	1525	208	947	197	399	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	91	200	23	281	0	0	63	1137	77	63	1268	52
Grp Sat Flow(s),veh/h/ln	1114	1800	1525	1352	0	0	399	1710	1525	1619	1710	1525
Q Serve(g_s), s	0.0	9.0	1.1	10.6	0.0	0.0	13.7	25.6	2.7	3.5	21.7	1.3
Cycle Q Clear(g_c), s	16.1	9.0	1.1	19.7	0.0	0.0	35.4	25.6	2.7	3.5	21.7	1.3
Prop In Lane	1.00		1.00	0.22		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	435	369	373	0	0	169	1578	704	138	2102	938
V/C Ratio(X)	0.42	0.46	0.06	0.75	0.00	0.00	0.37	0.72	0.11	0.46	0.60	0.06
Avail Cap(c_a), veh/h	402	732	620	632	0	0	196	1810	807	209	2420	1079
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	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	30.9	27.9	35.3	0.0	0.0	33.2	20.7	14.6	41.5	11.3	7.3
Incr Delay (d2), s/veh	1.3	0.8	0.1	3.1	0.0	0.0	1.4	1.2	0.1	0.9	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.9	0.4	6.3	0.0	0.0	1.3	9.0	0.8	1.4	6.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.8	31.6	27.9	38.4	0.0	0.0	34.6	21.9	14.6	42.4	11.6	7.4
LnGrp LOS	C	C	C	D			C	C	B	D	B	A
Approach Vol, veh/h		314			281			1277			1383	
Approach Delay, s/veh		32.3			38.4			22.1			12.8	
Approach LOS		C			D			C			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.6	50.5		30.3		65.1		30.3				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	12.3	* 51		38.8		67.5		38.8				
Max Q Clear Time (g_c+I1), s	5.5	37.4		18.1		23.7		21.7				
Green Ext Time (p_c), s	0.0	6.7		1.4		10.7		1.4				

Intersection Summary		
HCM 7th Control Delay, s/veh	20.6	
HCM 7th LOS	C	

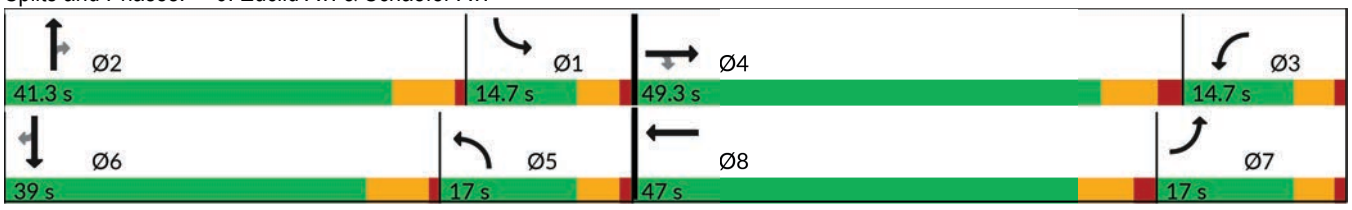
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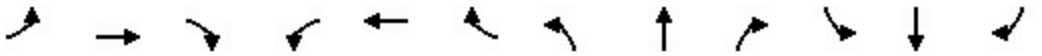
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	108	89	84	59	132	109	862	101	94	1104	102
Future Volume (vph)	108	89	84	59	132	109	862	101	94	1104	102
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	29.5	14.7	37.5	37.5
Total Split (s)	17.0	49.3	49.3	14.7	47.0	17.0	41.3	41.3	14.7	39.0	39.0
Total Split (%)	14.2%	41.1%	41.1%	12.3%	39.2%	14.2%	34.4%	34.4%	12.3%	32.5%	32.5%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.8	24.5	24.5	16.1	24.3	11.4	32.2	32.2	12.1	32.9	32.9
Actuated g/C Ratio	0.12	0.23	0.23	0.15	0.23	0.11	0.31	0.31	0.12	0.31	0.31
v/c Ratio	0.59	0.23	0.20	0.25	0.83	0.66	0.88	0.20	0.54	1.10	0.20
Control Delay (s/veh)	58.7	34.9	3.7	46.5	47.2	66.6	46.3	5.4	60.2	95.8	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.7	34.9	3.7	46.5	47.2	66.6	46.3	5.4	60.2	95.8	5.8
LOS	E	C	A	D	D	E	D	A	E	F	A
Approach Delay (s/veh)		34.8			47.1		44.5			86.1	
Approach LOS		C			D		D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay (s/veh): 61.7	Intersection LOS: E
Intersection Capacity Utilization 88.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	89	84	59	132	201	109	862	101	94	1104	102
Future Volume (veh/h)	108	89	84	59	132	201	109	862	101	94	1104	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	116	96	52	63	142	197	117	927	91	101	1187	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	159	181	153	378	161	224	159	1069	475	192	1139	507
Arrive On Green	0.10	0.10	0.10	0.23	0.24	0.24	0.10	0.31	0.31	0.12	0.33	0.33
Sat Flow, veh/h	1619	1800	1525	1619	683	947	1619	3420	1521	1619	3420	1523
Grp Volume(v), veh/h	116	96	52	63	0	339	117	927	91	101	1187	55
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	0	1630	1619	1710	1521	1619	1710	1523
Q Serve(g_s), s	6.8	4.9	3.1	3.0	0.0	19.6	6.9	24.9	4.3	5.7	32.5	2.4
Cycle Q Clear(g_c), s	6.8	4.9	3.1	3.0	0.0	19.6	6.9	24.9	4.3	5.7	32.5	2.4
Prop In Lane	1.00		1.00	1.00		0.58	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	159	181	153	378	0	385	159	1069	475	192	1139	507
V/C Ratio(X)	0.73	0.53	0.34	0.17	0.00	0.88	0.74	0.87	0.19	0.53	1.04	0.11
Avail Cap(c_a), veh/h	204	780	661	378	0	668	204	1220	542	192	1139	507
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	41.7	40.9	29.8	0.0	36.0	42.8	31.6	24.5	40.4	32.5	22.5
Incr Delay (d2), s/veh	6.0	1.8	1.0	0.1	0.0	5.5	6.4	6.2	0.2	1.3	38.3	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(50%),veh/ln	2.9	2.2	1.2	1.1	0.0	7.9	2.9	10.2	1.5	2.2	18.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.8	43.5	41.8	29.9	0.0	41.4	49.2	37.9	24.7	41.7	70.8	22.6
LnGrp LOS	D	D	D	C		D	D	D	C	D	F	C
Approach Vol, veh/h		264			402			1135			1343	
Approach Delay, s/veh		45.5			39.6			38.0			66.7	
Approach LOS		D			D			D			E	

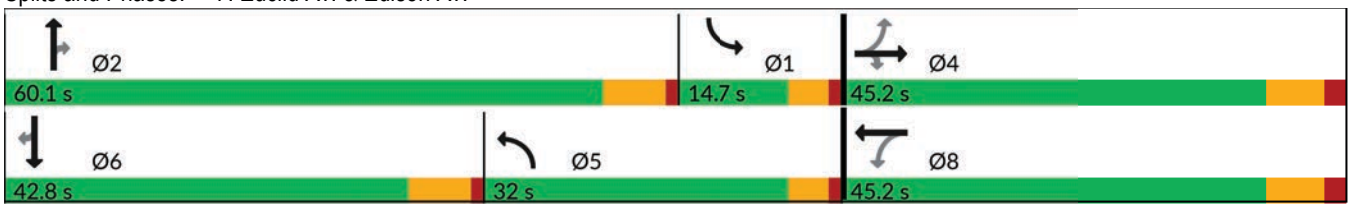
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	37.0	27.5	16.8	14.3	39.0	14.3	30.0
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	10.0	34.8	10.0	42.3	12.3	32.5	12.3	40.0
Max Q Clear Time (g_c+I1), s	7.7	26.9	5.0	6.9	8.9	34.5	8.8	21.6
Green Ext Time (p_c), s	0.0	3.5	0.0	0.5	0.0	0.0	0.0	1.5

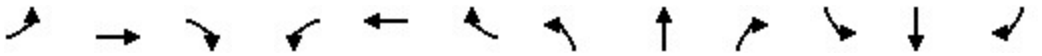
Intersection Summary	
HCM 7th Control Delay, s/veh	51.1
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	172	173	123	39	304	533	918	15	45	989	192
Future Volume (vph)	172	173	123	39	304	533	918	15	45	989	192
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	44.2	44.2	44.2	45.2	45.2	14.7	26.5	26.5	14.7	37.5	37.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	32.0	60.1	60.1	14.7	42.8	42.8
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	26.7%	50.1%	50.1%	12.3%	35.7%	35.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	36.5	36.5	36.5	36.5	36.5	25.0	53.3	53.3	14.3	36.4	36.4
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.21	0.46	0.46	0.12	0.31	0.31
v/c Ratio	0.97	0.33	0.23	0.13	0.64	0.90	0.62	0.02	0.24	0.98	0.35
Control Delay (s/veh)	100.3	32.8	5.8	30.5	40.2	62.5	28.5	0.1	50.2	64.7	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.3	32.8	5.8	30.5	40.2	62.5	28.5	0.1	50.2	64.7	12.5
LOS	F	C	A	C	D	E	C	A	D	E	B
Approach Delay (s/veh)		50.5			39.2		40.6			56.0	
Approach LOS		D			D		D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.4	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay (s/veh): 47.1	Intersection LOS: D
Intersection Capacity Utilization 98.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: Euclid Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	173	123	39	304	31	533	918	15	45	989	192
Future Volume (veh/h)	172	173	123	39	304	31	533	918	15	45	989	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	183	184	91	41	323	23	567	977	5	48	1052	183
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	584	495	324	539	38	617	1144	499	298	1060	473
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.21	0.33	0.33	0.18	0.31	0.31
Sat Flow, veh/h	992	1800	1525	1059	1660	118	2956	3420	1493	1619	3420	1525
Grp Volume(v), veh/h	183	184	91	41	0	346	567	977	5	48	1052	183
Grp Sat Flow(s),veh/h/ln	992	1800	1525	1059	0	1778	1478	1710	1493	1619	1710	1525
Q Serve(g_s), s	18.9	9.0	5.0	3.5	0.0	19.1	22.0	31.2	0.3	2.9	35.9	11.0
Cycle Q Clear(g_c), s	38.0	9.0	5.0	12.6	0.0	19.1	22.0	31.2	0.3	2.9	35.9	11.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	584	495	324	0	577	617	1144	499	298	1060	473
V/C Ratio(X)	0.83	0.32	0.18	0.13	0.00	0.60	0.92	0.85	0.01	0.16	0.99	0.39
Avail Cap(c_a), veh/h	221	584	495	324	0	577	689	1565	683	298	1060	473
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	29.8	28.4	34.5	0.0	33.2	45.4	36.3	26.0	40.2	40.3	31.7
Incr Delay (d2), s/veh	22.0	0.3	0.2	0.2	0.0	1.7	15.7	3.6	0.0	0.1	25.8	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(50%),veh/ln	6.7	3.8	1.8	0.9	0.0	8.2	9.0	12.6	0.1	1.1	17.8	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	72.3	30.1	28.6	34.7	0.0	34.9	61.1	39.9	26.0	40.3	66.1	32.2
LnGrp LOS	E	C	C	C		C	E	D	C	D	E	C
Approach Vol, veh/h		458			387			1549			1283	
Approach Delay, s/veh		46.7			34.9			47.6			60.3	
Approach LOS		D			C			D			E	

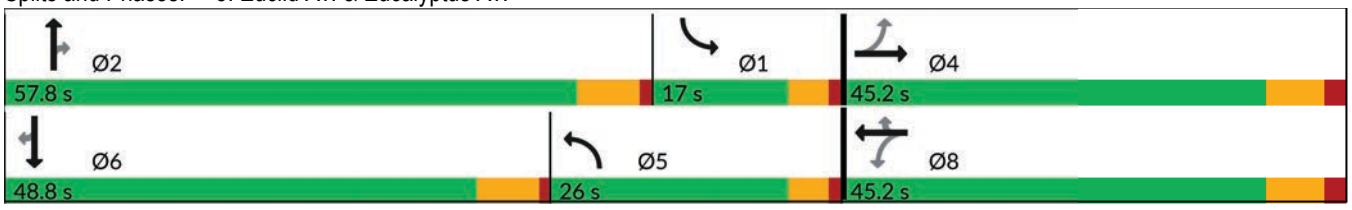
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.3	45.7		45.2	29.1	42.8		45.2				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.0	53.6		38.0	27.3	36.3		38.0				
Max Q Clear Time (g_c+I1), s	4.9	33.2		40.0	24.0	37.9		21.1				
Green Ext Time (p_c), s	0.0	6.0		0.0	0.4	0.0		1.8				

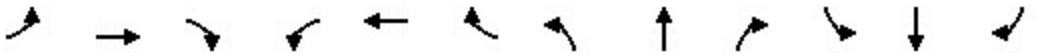
Intersection Summary	
HCM 7th Control Delay, s/veh	50.6
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	40	93	104	202	252	383	1172	127	197	884	31
Future Volume (vph)	40	93	104	202	252	383	1172	127	197	884	31
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	45.2	45.2	44.2	44.2	44.2	14.7	28.5	28.5	14.7	35.5	35.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	26.0	57.8	57.8	17.0	48.8	48.8
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	21.7%	48.2%	48.2%	14.2%	40.7%	40.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.5	18.5	18.5	18.5	18.5	19.5	38.7	38.7	11.6	30.8	30.8
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21	0.22	0.44	0.44	0.13	0.35	0.35
v/c Ratio	0.21	0.39	0.54	0.56	0.52	0.62	0.82	0.19	0.53	0.78	0.05
Control Delay (s/veh)	33.0	12.1	42.8	38.0	8.9	38.6	28.0	8.5	45.6	32.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.0	12.1	42.8	38.0	8.9	38.6	28.0	8.5	45.6	32.0	0.2
LOS	C	B	D	D	A	D	C	A	D	C	A
Approach Delay (s/veh)		14.6		25.8			29.0			33.5	
Approach LOS		B		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay (s/veh): 28.6	Intersection LOS: C
Intersection Capacity Utilization 103.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: Euclid Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	93	193	104	202	252	383	1172	127	197	884	31
Future Volume (veh/h)	40	93	193	104	202	252	383	1172	127	197	884	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	0.99		0.91	0.95		0.97	1.00		1.00	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	42	98	162	109	213	245	403	1234	111	207	931	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	273	553	451	306	582	480	557	1412	627	274	1084	479
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.19	0.41	0.41	0.09	0.32	0.32
Sat Flow, veh/h	885	1710	1395	1019	1800	1484	2956	3420	1518	2956	3420	1511
Grp Volume(v), veh/h	42	98	162	109	213	245	403	1234	111	207	931	22
Grp Sat Flow(s),veh/h/ln	885	1710	1395	1019	1800	1484	1478	1710	1518	1478	1710	1511
Q Serve(g_s), s	4.1	4.4	9.6	9.9	9.8	14.4	13.8	35.7	5.0	7.4	27.5	1.1
Cycle Q Clear(g_c), s	13.9	4.4	9.6	19.4	9.8	14.4	13.8	35.7	5.0	7.4	27.5	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	553	451	306	582	480	557	1412	627	274	1084	479
V/C Ratio(X)	0.15	0.18	0.36	0.36	0.37	0.51	0.72	0.87	0.18	0.76	0.86	0.05
Avail Cap(c_a), veh/h	299	604	493	336	636	524	585	1630	724	338	1344	594
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	26.1	27.9	35.3	27.9	29.5	41.0	29.0	20.0	47.6	34.5	25.5
Incr Delay (d2), s/veh	0.2	0.1	0.4	0.5	0.3	0.6	3.9	5.0	0.1	6.7	4.8	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(50%),veh/ln	0.9	1.7	3.1	2.4	4.0	4.9	5.0	14.0	1.6	2.8	11.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.5	26.2	28.2	35.8	28.2	30.1	44.9	34.1	20.1	54.3	39.3	25.5
LnGrp LOS	C	C	C	D	C	C	D	C	C	D	D	C
Approach Vol, veh/h		302			567			1748			1160	
Approach Delay, s/veh		28.3			30.5			35.7			41.7	
Approach LOS		C			C			D			D	

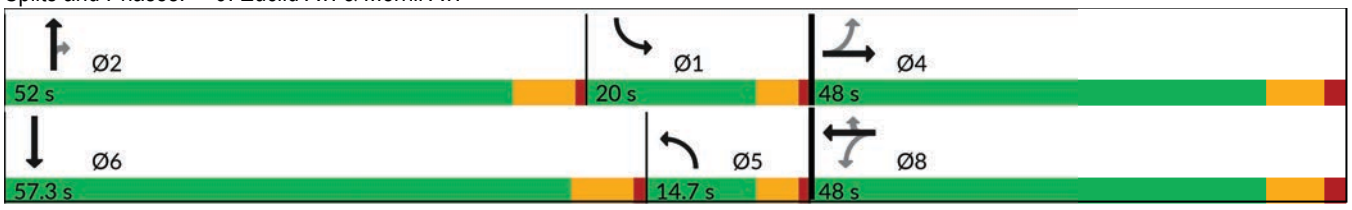
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	50.9		42.0	25.0	40.6		42.0				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	12.3	51.3		38.0	21.3	42.3		38.0				
Max Q Clear Time (g_c+I1), s	9.4	37.7		15.9	15.8	29.5		21.4				
Green Ext Time (p_c), s	0.1	6.8		1.3	0.5	4.6		1.7				

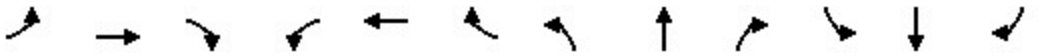
Intersection Summary		
HCM 7th Control Delay, s/veh		36.2
HCM 7th LOS		D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	7	1	172	34	450	36	956	129	247	894
Future Volume (vph)	7	1	172	34	450	36	956	129	247	894
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		4		8		5	2		1	6
Permitted Phases	4		8		8			2		
Detector Phase	4	4	8	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	47.2	47.2	47.2	14.7	28.5	28.5	14.7	28.5
Total Split (s)	48.0	48.0	48.0	48.0	48.0	14.7	52.0	52.0	20.0	57.3
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	12.3%	43.3%	43.3%	16.7%	47.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		26.7	26.7	26.7	26.7	12.1	36.7	36.7	13.6	46.1
Actuated g/C Ratio		0.28	0.28	0.28	0.28	0.13	0.38	0.38	0.14	0.48
v/c Ratio		0.04	0.55	0.08	0.88	0.20	0.83	0.23	0.67	0.65
Control Delay (s/veh)		18.9	37.1	27.3	37.3	48.4	34.5	12.2	51.8	25.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		18.9	37.1	27.3	37.3	48.4	34.5	12.2	51.8	25.2
LOS		B	D	C	D	D	C	B	D	C
Approach Delay (s/veh)		18.9		36.7			32.4			30.7
Approach LOS		B		D			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.4	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay (s/veh): 32.6	Intersection LOS: C
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 9: Euclid Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1	8	172	34	450	36	956	129	247	894	52
Future Volume (veh/h)	7	1	8	172	34	450	36	956	129	247	894	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1800	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	8	1	8	193	38	340	40	1074	123	278	1004	57
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	198	41	154	434	457	382	225	1345	587	367	1243	71
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.14	0.39	0.39	0.12	0.38	0.38
Sat Flow, veh/h	522	162	608	1349	1800	1506	1619	3420	1493	2956	3285	186
Grp Volume(v), veh/h	17	0	0	193	38	340	40	1074	123	278	523	538
Grp Sat Flow(s),veh/h/ln	1292	0	0	1349	1800	1506	1619	1710	1493	1478	1710	1761
Q Serve(g_s), s	0.0	0.0	0.0	9.3	1.3	17.5	1.8	22.3	4.4	7.3	22.0	22.0
Cycle Q Clear(g_c), s	0.6	0.0	0.0	9.9	1.3	17.5	1.8	22.3	4.4	7.3	22.0	22.0
Prop In Lane	0.47		0.47	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	394	0	0	434	457	382	225	1345	587	367	647	666
V/C Ratio(X)	0.04	0.00	0.00	0.44	0.08	0.89	0.18	0.80	0.21	0.76	0.81	0.81
Avail Cap(c_a), veh/h	710	0	0	776	913	764	225	1935	845	562	1080	1113
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	0.0	26.0	22.9	28.9	30.6	21.6	16.1	34.0	22.4	22.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	2.9	0.1	1.6	0.2	1.2	2.5	2.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	2.9	0.5	6.0	0.6	7.8	1.3	2.4	7.9	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.6	0.0	0.0	26.3	22.9	31.8	30.7	23.2	16.3	35.3	24.8	24.8
LnGrp LOS	C			C	C	C	C	C	B	D	C	C
Approach Vol, veh/h		17			571			1237			1339	
Approach Delay, s/veh		22.6			29.3			22.7			27.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	38.1		27.6	15.9	36.9		27.6				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	15.3	45.5		40.8	10.0	50.8		40.8				
Max Q Clear Time (g_c+I1), s	9.3	24.3		2.6	3.8	24.0		19.5				
Green Ext Time (p_c), s	0.3	7.3		0.0	0.0	6.4		0.9				

Intersection Summary		
HCM 7th Control Delay, s/veh	25.7	
HCM 7th LOS	C	

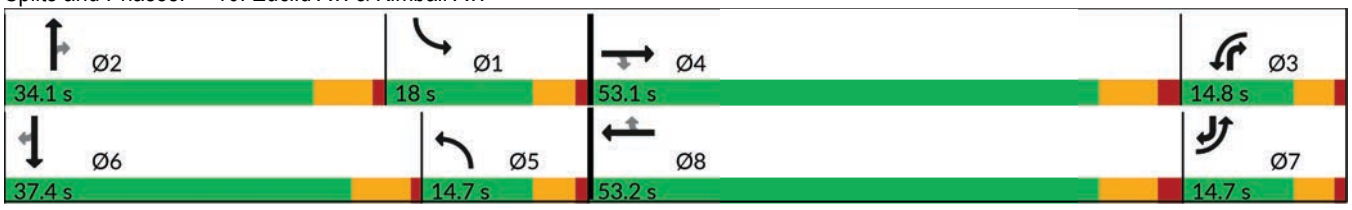
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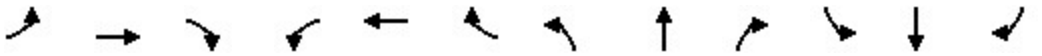
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	375	44	52	1068	370	69	630	52	246	561	244
Future Volume (vph)	155	375	44	52	1068	370	69	630	52	246	561	244
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	14.7	37.4	14.7
Total Split (s)	14.7	53.1	53.1	14.8	53.2	53.2	14.7	34.1	14.8	18.0	37.4	14.7
Total Split (%)	12.3%	44.3%	44.3%	12.3%	44.3%	44.3%	12.3%	28.4%	12.3%	15.0%	31.2%	12.3%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	3.7	5.4	3.7
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	4.7	6.4	4.7
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.1	34.3	34.3	22.6	43.4	43.4	12.1	26.4	54.4	12.8	30.5	42.2
Actuated g/C Ratio	0.09	0.30	0.30	0.20	0.37	0.37	0.10	0.23	0.47	0.11	0.26	0.36
v/c Ratio	0.67	0.41	0.09	0.18	0.93	0.57	0.46	0.90	0.08	0.84	0.69	0.45
Control Delay (s/veh)	66.4	36.5	0.3	43.3	47.8	13.7	60.4	59.7	2.4	74.2	44.8	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.4	36.5	0.3	43.3	47.8	13.7	60.4	59.7	2.4	74.2	44.8	21.7
LOS	E	D	A	D	D	B	E	E	A	E	D	C
Approach Delay (s/veh)		41.8			39.2			55.8			46.3	
Approach LOS		D			D			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay (s/veh): 44.7	Intersection LOS: D
Intersection Capacity Utilization 85.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	375	44	52	1068	370	69	630	52	246	561	244
Future Volume (veh/h)	155	375	44	52	1068	370	69	630	52	246	561	244
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1600	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	172	417	29	58	1187	232	77	700	25	273	623	214
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	258	547	243	490	1284	565	192	775	808	321	744	460
Arrive On Green	0.09	0.16	0.16	0.30	0.38	0.38	0.12	0.23	0.23	0.11	0.22	0.22
Sat Flow, veh/h	2956	3420	1523	1619	3420	1504	1619	3420	1525	2956	3420	1504
Grp Volume(v), veh/h	172	417	29	58	1187	232	77	700	25	273	623	214
Grp Sat Flow(s),veh/h/ln	1478	1710	1523	1619	1710	1504	1619	1710	1525	1478	1710	1504
Q Serve(g_s), s	6.4	13.3	1.9	3.0	37.9	13.0	5.0	22.7	0.0	10.4	19.9	3.1
Cycle Q Clear(g_c), s	6.4	13.3	1.9	3.0	37.9	13.0	5.0	22.7	0.0	10.4	19.9	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	547	243	490	1284	565	192	775	808	321	744	460
V/C Ratio(X)	0.67	0.76	0.12	0.12	0.92	0.41	0.40	0.90	0.03	0.85	0.84	0.47
Avail Cap(c_a), veh/h	259	1373	611	490	1376	605	192	826	830	344	928	541
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	45.9	41.1	28.8	34.1	26.4	46.6	43.0	12.9	50.0	42.8	32.1
Incr Delay (d2), s/veh	5.2	2.2	0.2	0.1	9.9	0.2	0.5	12.7	0.0	15.9	5.6	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.6	0.7	1.1	16.3	4.4	2.0	10.4	0.3	4.4	8.5	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.8	48.2	41.3	28.9	44.1	26.5	47.1	55.7	12.9	66.0	48.4	32.9
LnGrp LOS	E	D	D	C	D	C	D	E	B	E	D	C
Approach Vol, veh/h		618			1477			802			1110	
Approach Delay, s/veh		50.0			40.7			53.5			49.7	
Approach LOS		D			D			D			D	

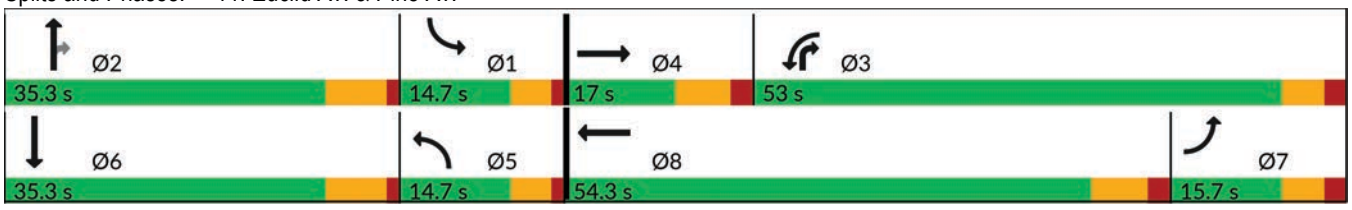
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	32.4	39.3	25.5	18.3	31.3	14.7	50.1
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	13.3	27.6	10.1	45.9	10.0	31.0	10.0	46.0
Max Q Clear Time (g_c+I1), s	12.4	24.7	5.0	15.3	7.0	21.9	8.4	39.9
Green Ext Time (p_c), s	0.1	1.2	0.0	2.6	0.0	3.0	0.0	3.0

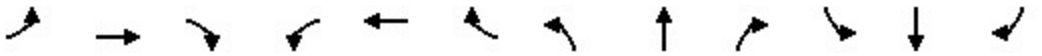
Intersection Summary	
HCM 7th Control Delay, s/veh	47.2
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	8	144	1112	369	62	494	650	47	625
Future Volume (vph)	8	144	1112	369	62	494	650	47	625
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	15.7	17.0	53.0	54.3	14.7	35.3	53.0	14.7	35.3
Total Split (%)	13.1%	14.2%	44.2%	45.3%	12.3%	29.4%	44.2%	12.3%	29.4%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.6	10.1	47.4	59.8	10.1	22.6	76.6	13.1	25.6
Actuated g/C Ratio	0.09	0.09	0.42	0.53	0.09	0.20	0.67	0.12	0.22
v/c Ratio	0.05	1.19	0.95	0.46	0.45	0.76	0.61	0.26	0.88
Control Delay (s/veh)	50.4	172.9	50.5	22.1	63.1	51.8	8.1	53.0	57.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.4	172.9	50.5	22.1	63.1	51.8	8.1	53.0	57.0
LOS	D	F	D	C	E	D	A	D	E
Approach Delay (s/veh)		168.0		42.9		28.9			56.7
Approach LOS		F		D		C			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 113.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay (s/veh): 47.4	Intersection LOS: D
Intersection Capacity Utilization 95.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	144	37	1112	369	39	62	494	650	47	625	17
Future Volume (veh/h)	8	144	37	1112	369	39	62	494	650	47	625	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	8	152	0	1171	388	40	65	520	452	49	658	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	359	159		1211	443	46	124	626	904	176	735	16
Arrive On Green	0.22	0.09	0.00	0.41	0.28	0.28	0.08	0.18	0.18	0.11	0.21	0.21
Sat Flow, veh/h	1619	1800	0	2956	1605	165	1619	3420	1525	1619	3422	73
Grp Volume(v), veh/h	8	152	0	1171	0	428	65	520	452	49	329	343
Grp Sat Flow(s),veh/h/ln	1619	1800	0	1478	0	1770	1619	1710	1525	1619	1710	1785
Q Serve(g_s), s	0.4	9.5	0.0	43.9	0.0	26.2	4.4	16.6	0.0	3.2	21.2	21.2
Cycle Q Clear(g_c), s	0.4	9.5	0.0	43.9	0.0	26.2	4.4	16.6	0.0	3.2	21.2	21.2
Prop In Lane	1.00		0.00	1.00		0.09	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	359	159		1211	0	489	124	626	904	176	367	383
V/C Ratio(X)	0.02	0.96		0.97	0.00	0.88	0.52	0.83	0.50	0.28	0.89	0.90
Avail Cap(c_a), veh/h	359	159		1233	0	738	143	868	1012	176	434	453
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	51.5	0.0	32.7	0.0	39.2	50.4	44.7	13.4	46.5	43.3	43.3
Incr Delay (d2), s/veh	0.0	59.1	0.0	18.0	0.0	9.3	1.3	3.5	0.2	0.3	17.0	16.5
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(50%),veh/ln	0.2	6.8	0.0	17.4	0.0	12.0	1.7	7.0	5.9	1.2	10.2	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.6	110.6	0.0	50.7	0.0	48.5	51.6	48.2	13.5	46.8	60.2	59.8
LnGrp LOS	C	F		D		D	D	D	B	D	E	E
Approach Vol, veh/h		160			1599			1037			721	
Approach Delay, s/veh		106.8			50.1			33.3			59.1	
Approach LOS		F			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	27.2	52.2	17.0	13.4	30.9	30.8	38.3
Change Period (Y+Rc), s	4.7	6.5	5.7	7.0	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.0	28.8	47.3	10.0	10.0	28.8	10.0	47.3
Max Q Clear Time (g_c+I1), s	5.2	18.6	45.9	11.5	6.4	23.2	2.4	28.2
Green Ext Time (p_c), s	0.0	2.1	0.5	0.0	0.0	1.2	0.0	3.2

Intersection Summary	
HCM 7th Control Delay, s/veh	49.6
HCM 7th LOS	D

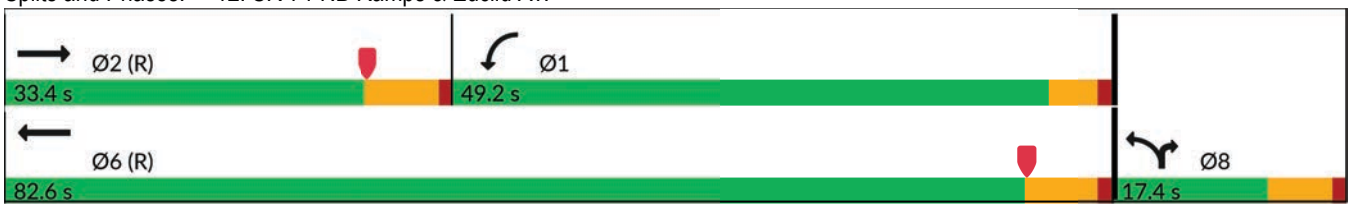
Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	679	745	988	67	649
Future Volume (vph)	679	745	988	67	649
Turn Type	NA	Prot	NA	Prot	Prot
Protected Phases	2	1	6	8	8
Permitted Phases					
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	31.5	12.7	14.5	13.8	13.8
Total Split (s)	33.4	49.2	82.6	17.4	17.4
Total Split (%)	33.4%	49.2%	82.6%	17.4%	17.4%
Yellow Time (s)	5.5	3.7	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.7	6.5	5.8	5.8
Lead/Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	None
Act Effct Green (s)	28.6	44.5	77.8	9.9	9.9
Actuated g/C Ratio	0.29	0.45	0.78	0.10	0.10
v/c Ratio	1.00	1.08	0.39	0.24	0.89
Control Delay (s/veh)	57.6	86.2	4.1	43.1	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	86.2	4.1	43.1	18.8
LOS	E	F	A	D	B
Approach Delay (s/veh)	57.6		39.4	21.1	
Approach LOS	E		D	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay (s/veh): 40.5	Intersection LOS: D
Intersection Capacity Utilization 95.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: SR-71 NB Ramps & Euclid Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	679	253	745	988	67	649
Future Volume (veh/h)	679	253	745	988	67	649
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1700	1800	1600	1800
Adj Flow Rate, veh/h	707	0	776	1029	70	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	782		833	2765	203	
Arrive On Green	0.46	0.00	0.51	0.81	0.07	0.00
Sat Flow, veh/h	3600	0	1619	3510	2956	1525
Grp Volume(v), veh/h	707	0	776	1029	70	0
Grp Sat Flow(s),veh/h/ln	1710	0	1619	1710	1478	1525
Q Serve(g_s), s	19.1	0.0	44.7	8.2	2.3	0.0
Cycle Q Clear(g_c), s	19.1	0.0	44.7	8.2	2.3	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	782		833	2765	203	
V/C Ratio(X)	0.90		0.93	0.37	0.35	
Avail Cap(c_a), veh/h	920		833	2765	343	
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.1	0.0	22.6	2.6	44.4	0.0
Incr Delay (d2), s/veh	10.2	0.0	16.6	0.4	1.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	18.0	1.1	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	36.3	0.0	39.2	3.0	45.4	0.0
LnGrp LOS	D		D	A	D	
Approach Vol, veh/h	707			1805	70	
Approach Delay, s/veh	36.3			18.6	45.4	
Approach LOS	D			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	58.0	29.4				87.3	12.7
Change Period (Y+Rc), s	6.5	* 6.5				6.5	5.8
Max Green Setting (Gmax), s	44.5	* 27				76.1	11.6
Max Q Clear Time (g_c+I1), s	46.7	21.1				10.2	4.3
Green Ext Time (p_c), s	0.0	1.7				6.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	24.2
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

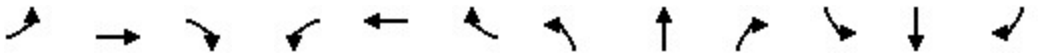
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	557	163	270	44	297	610	57	37
Future Volume (vph)	557	163	270	44	297	610	57	37
Turn Type	NA	Prot	NA	Prot	Prot	Split	NA	Perm
Protected Phases	2	1	6	3	3	4	4	
Permitted Phases								4
Detector Phase	2	1	6	3	3	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	25.2	12.7	27.2	13.5	13.5	34.8	34.8	34.8
Total Split (s)	28.7	18.2	46.9	18.1	18.1	35.0	35.0	35.0
Total Split (%)	28.7%	18.2%	46.9%	18.1%	18.1%	35.0%	35.0%	35.0%
Yellow Time (s)	5.2	3.7	5.2	4.5	4.5	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	4.7	6.2	5.5	5.5	5.8	5.8	5.8
Lead/Lag	Lead	Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	28.2	12.7	45.6	10.6	10.6	26.3	26.3	26.3
Actuated g/C Ratio	0.28	0.13	0.46	0.11	0.11	0.26	0.26	0.26
v/c Ratio	0.65	0.83	0.19	0.27	0.83	0.86	0.82	0.07
Control Delay (s/veh)	36.9	69.9	15.7	44.4	30.2	56.1	50.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.9	69.9	15.7	44.4	30.2	56.1	50.8	0.3
LOS	D	E	B	D	C	E	D	A
Approach Delay (s/veh)	36.9		35.4				50.6	
Approach LOS	D		D				D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 40.4	Intersection LOS: D
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: Euclid Av. & SR-71 SB Off-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	557	40	163	270	16	44	0	297	610	57	37
Future Volume (veh/h)	0	557	40	163	270	16	44	0	297	610	57	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	0	1800	1800	1700	1800	1800	1700	0	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	586	27	172	284	0	46	0	208	685	0	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	663	31	617	2197		0	0	0	770	0	363
Arrive On Green	0.00	0.20	0.20	0.76	1.00	0.00	0.00	0.00	0.00	0.24	0.00	0.24
Sat Flow, veh/h	0	3419	153	1619	3510	0		0		3238	0	1525
Grp Volume(v), veh/h	0	301	312	172	284	0		0.0		685	0	20
Grp Sat Flow(s),veh/h/ln	0	1710	1772	1619	1710	0				1619	0	1525
Q Serve(g_s), s	0.0	17.1	17.1	3.2	0.0	0.0				20.5	0.0	1.0
Cycle Q Clear(g_c), s	0.0	17.1	17.1	3.2	0.0	0.0				20.5	0.0	1.0
Prop In Lane	0.00		0.09	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	340	353	617	2197					770	0	363
V/C Ratio(X)	0.00	0.88	0.88	0.28	0.13					0.89	0.00	0.06
Avail Cap(c_a), veh/h	0	385	399	617	2197					946	0	445
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	38.9	38.9	7.7	0.0	0.0				36.9	0.0	29.4
Incr Delay (d2), s/veh	0.0	26.6	26.1	0.1	0.1	0.0				8.7	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
%ile BackOfQ(50%),veh/ln	0.0	9.3	9.6	1.0	0.0	0.0				8.9	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	65.5	65.0	7.8	0.1	0.0				45.5	0.0	29.5
LnGrp LOS		E	E	A	A					D		C
Approach Vol, veh/h		613			456						705	
Approach Delay, s/veh		65.2			3.0						45.0	
Approach LOS		E			A						D	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	44.3	26.1		29.6		70.4						
Change Period (Y+Rc), s	6.2	* 6.2		5.8		6.2						
Max Green Setting (Gmax), s	13.5	* 23		29.2		40.7						
Max Q Clear Time (g_c+I1), s	5.2	19.1		22.5		2.0						
Green Ext Time (p_c), s	0.1	0.8		1.3		1.1						

Intersection Summary												
HCM 7th Control Delay, s/veh			41.2									
HCM 7th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	206	20	76	373	23	21	4	17	30	20	10
Future Vol, veh/h	8	206	20	76	373	23	21	4	17	30	20	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	224	22	83	405	25	23	4	18	33	22	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	430	0	0	246	0	0	834	848	235	827	846	418
Stage 1	-	-	-	-	-	-	252	252	-	583	583	-
Stage 2	-	-	-	-	-	-	582	596	-	243	263	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1140	-	-	1332	-	-	290	301	809	293	301	639
Stage 1	-	-	-	-	-	-	757	702	-	502	502	-
Stage 2	-	-	-	-	-	-	503	495	-	765	694	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1140	-	-	1332	-	-	241	274	809	257	274	639
Mov Cap-2 Maneuver	-	-	-	-	-	-	241	274	-	257	274	-
Stage 1	-	-	-	-	-	-	750	696	-	461	461	-
Stage 2	-	-	-	-	-	-	432	455	-	736	688	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.28	1.27	17.16	20.83
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	342	60	-	-	287	-	-	292
HCM Lane V/C Ratio	0.134	0.008	-	-	0.062	-	-	0.223
HCM Ctrl Dly (s/v)	17.2	8.2	0	-	7.9	0	-	20.8
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.2	-	-	0.8

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	5	3	1	19
Future Vol, veh/h	3	0	5	3	1	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	0	5	3	1	21

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	30	4	0	0	9	0
Stage 1	7	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	988	1084	-	-	1625	-
Stage 1	1020	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	987	1084	-	-	1625	-
Mov Cap-2 Maneuver	951	-	-	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	1004	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.8	0	0.36
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	951	1625	-
HCM Lane V/C Ratio	-	-	0.003	0.001	-
HCM Ctrl Dly (s/v)	-	-	8.8	7.2	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	375	418	18	7	6
Future Vol, veh/h	11	375	418	18	7	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	408	454	20	8	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	474	0	-	0	896	464
Stage 1	-	-	-	-	464	-
Stage 2	-	-	-	-	432	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1099	-	-	-	313	602
Stage 1	-	-	-	-	637	-
Stage 2	-	-	-	-	659	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1099	-	-	-	309	602
Mov Cap-2 Maneuver	-	-	-	-	504	-
Stage 1	-	-	-	-	628	-
Stage 2	-	-	-	-	659	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.24	0	11.69
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	51	-	-	-	504	602
HCM Lane V/C Ratio	0.011	-	-	-	0.015	0.011
HCM Ctrl Dly (s/v)	8.3	0	-	-	12.2	11
HCM Lane LOS	A	A	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0	0

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	144	24	12	184	22	34	193	13	15	147	33
Future Vol, veh/h	19	144	24	12	184	22	34	193	13	15	147	33
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	23	171	29	14	219	26	40	230	15	18	175	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	12.2	12.9	13.5	12.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	10%	6%	8%
Vol Thru, %	80%	77%	84%	75%
Vol Right, %	5%	13%	10%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	240	187	218	195
LT Vol	34	19	12	15
Through Vol	193	144	184	147
RT Vol	13	24	22	33
Lane Flow Rate	286	223	260	232
Geometry Grp	1	1	1	1
Degree of Util (X)	0.454	0.36	0.415	0.37
Departure Headway (Hd)	5.72	5.819	5.756	5.741
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	612	620	622
Service Time	3.798	3.903	3.836	3.825
HCM Lane V/C Ratio	0.457	0.364	0.419	0.373
HCM Control Delay, s/veh	13.5	12.2	12.9	12.2
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.4	1.6	2	1.7

Intersection	
Intersection Delay, s/veh	17.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	138	39	80	318	18	31	126	36	24	110	37
Future Vol, veh/h	36	138	39	80	318	18	31	126	36	24	110	37
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	40	153	43	89	353	20	34	140	40	27	122	41
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	13	22.9	13.2	12.6
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	17%	19%	14%
Vol Thru, %	65%	65%	76%	64%
Vol Right, %	19%	18%	4%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	193	213	416	171
LT Vol	31	36	80	24
Through Vol	126	138	318	110
RT Vol	36	39	18	37
Lane Flow Rate	214	237	462	190
Geometry Grp	1	1	1	1
Degree of Util (X)	0.376	0.395	0.735	0.336
Departure Headway (Hd)	6.316	6.008	5.721	6.357
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	568	599	638	564
Service Time	4.372	4.06	3.721	4.413
HCM Lane V/C Ratio	0.377	0.396	0.724	0.337
HCM Control Delay, s/veh	13.2	13	22.9	12.6
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	1.7	1.9	6.4	1.5

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	7	1	4	10	8	4	102	6	15	182	2
Future Vol, veh/h	0	7	1	4	10	8	4	102	6	15	182	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	8	1	4	11	9	4	111	7	16	198	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	357	358	199	357	355	114	200	0	0	117	0	0
Stage 1	232	232	-	123	123	-	-	-	-	-	-	-
Stage 2	125	126	-	234	233	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	603	572	847	602	573	944	1384	-	-	1484	-	-
Stage 1	776	717	-	886	798	-	-	-	-	-	-	-
Stage 2	884	796	-	773	716	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	576	563	847	584	564	944	1384	-	-	1484	-	-
Mov Cap-2 Maneuver	576	563	-	584	564	-	-	-	-	-	-	-
Stage 1	766	708	-	883	795	-	-	-	-	-	-	-
Stage 2	861	793	-	755	707	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.22	10.61	0.27	0.56
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	64	-	-	587	666	135	-	-
HCM Lane V/C Ratio	0.003	-	-	0.015	0.036	0.011	-	-
HCM Ctrl Dly (s/v)	7.6	0	-	11.2	10.6	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	10.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	298	15	10	366	160	24	26	12	133	34	75
Future Vol, veh/h	73	298	15	10	366	160	24	26	12	133	34	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	83	339	17	11	416	182	27	30	14	151	39	85

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	598	0	0	356	0	0	971	1134	347	1049	1051	507
Stage 1	-	-	-	-	-	-	513	513	-	530	530	-
Stage 2	-	-	-	-	-	-	458	620	-	519	522	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	989	-	-	1214	-	-	234	204	700	207	229	570
Stage 1	-	-	-	-	-	-	548	539	-	536	530	-
Stage 2	-	-	-	-	-	-	587	483	-	543	535	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	989	-	-	1214	-	-	160	185	700	166	206	570
Mov Cap-2 Maneuver	-	-	-	-	-	-	266	282	-	296	322	-
Stage 1	-	-	-	-	-	-	502	494	-	529	522	-
Stage 2	-	-	-	-	-	-	455	476	-	459	490	-

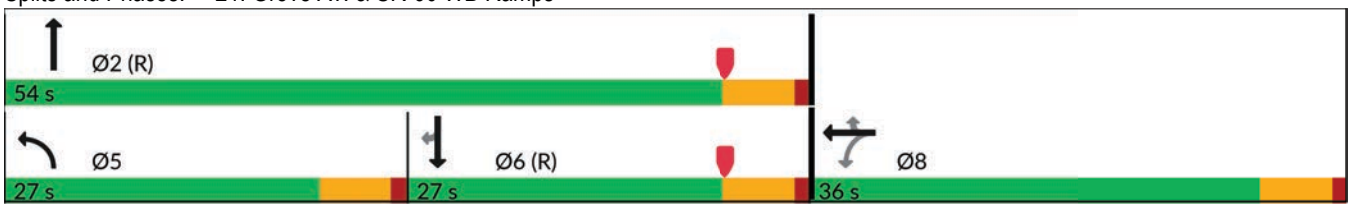
Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.7	0.15	19.96	43.37
HCM LOS			C	E

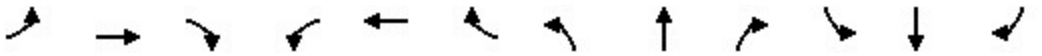
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	311	989	-	-	32	-	-	353
HCM Lane V/C Ratio	0.227	0.084	-	-	0.009	-	-	0.78
HCM Ctrl Dly (s/v)	20	9	-	-	8	0	-	43.4
HCM Lane LOS	C	A	-	-	A	A	-	E
HCM 95th %tile Q(veh)	0.9	0.3	-	-	0	-	-	6.4

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	489	282	1048	568	447
Future Volume (vph)	1	489	282	1048	568	447
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	15.8	24.8	15.8	15.8
Total Split (s)	36.0	36.0	27.0	54.0	27.0	27.0
Total Split (%)	40.0%	40.0%	30.0%	60.0%	30.0%	30.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	28.5	28.5	19.3	49.9	24.8	24.8
Actuated g/C Ratio	0.32	0.32	0.21	0.55	0.28	0.28
v/c Ratio	0.42	0.94	0.87	0.59	0.64	0.63
Control Delay (s/veh)	26.4	50.2	43.3	16.7	33.6	7.2
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay (s/veh)	26.4	50.2	43.3	17.1	33.6	7.2
LOS	C	D	D	B	C	A
Approach Delay (s/veh)	43.0			22.6	22.0	
Approach LOS	D			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay (s/veh): 27.1	Intersection LOS: C
Intersection Capacity Utilization 100.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 21: Grove Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	212	1	489	282	1048	0	0	568	447
Future Volume (veh/h)	0	0	0	212	1	489	282	1048	0	0	568	447
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
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				1700	1800	1800	1700	1800	0	0	1800	1800
Adj Flow Rate, veh/h				226	1	440	300	1115	0	0	604	398
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				530	2	473	324	1918	0	0	1013	449
Arrive On Green				0.31	0.31	0.31	0.40	1.00	0.00	0.00	0.30	0.30
Sat Flow, veh/h				1707	8	1525	1619	3510	0	0	3510	1518
Grp Volume(v), veh/h				227	0	440	300	1115	0	0	604	398
Grp Sat Flow(s),veh/h/ln				1715	0	1525	1619	1710	0	0	1710	1518
Q Serve(g_s), s				9.5	0.0	25.2	15.9	0.0	0.0	0.0	13.6	22.5
Cycle Q Clear(g_c), s				9.5	0.0	25.2	15.9	0.0	0.0	0.0	13.6	22.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				532	0	473	324	1918	0	0	1013	449
V/C Ratio(X)				0.43	0.00	0.93	0.93	0.58	0.00	0.00	0.60	0.89
Avail Cap(c_a), veh/h				575	0	512	381	1918	0	0	1013	449
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	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				24.7	0.0	30.1	26.3	0.0	0.0	0.0	27.1	30.2
Incr Delay (d2), s/veh				0.4	0.0	22.4	3.4	0.1	0.0	0.0	2.6	21.8
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 BackOfQ(50%),veh/ln				3.6	0.0	11.4	4.6	0.0	0.0	0.0	5.5	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				25.1	0.0	52.5	29.7	0.1	0.0	0.0	29.7	52.0
LnGrp LOS				C		D	C	A			C	D
Approach Vol, veh/h					667			1415			1002	
Approach Delay, s/veh					43.2			6.4			38.6	
Approach LOS					D			A			D	

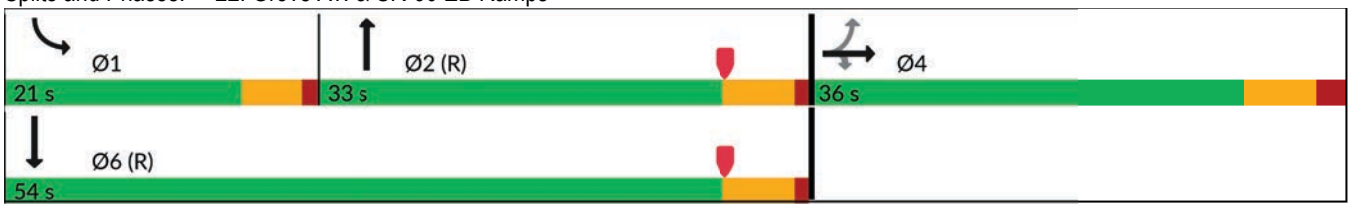
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		56.3			23.8	32.4		33.7				
Change Period (Y+Rc), s		5.8			5.8	5.8		5.8				
Max Green Setting (Gmax), s		48.2			21.2	21.2		30.2				
Max Q Clear Time (g_c+I1), s		2.0			17.9	24.5		27.2				
Green Ext Time (p_c), s		7.3			0.2	0.0		0.8				

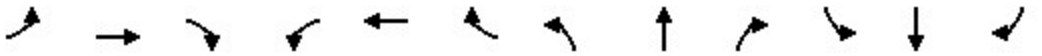
Intersection Summary												
HCM 7th Control Delay, s/veh			24.8									
HCM 7th LOS			C									

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	3	245	758	292	488
Future Volume (vph)	3	245	758	292	488
Turn Type	NA	Perm	NA	Prot	NA
Protected Phases	4		2	1	6
Permitted Phases		4			
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	31.8	15.0	25.8
Total Split (s)	36.0	36.0	33.0	21.0	54.0
Total Split (%)	40.0%	40.0%	36.7%	23.3%	60.0%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	5.8	5.0	5.8
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	29.2	29.2	27.2	16.0	48.2
Actuated g/C Ratio	0.32	0.32	0.30	0.18	0.54
v/c Ratio	1.08	0.38	1.05	1.06	0.26
Control Delay (s/veh)	91.4	4.9	70.6	111.0	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	91.4	4.9	70.6	111.0	12.4
LOS	F	A	E	F	B
Approach Delay (s/veh)	65.6		70.6		49.3
Approach LOS	E		E		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay (s/veh): 62.9	Intersection LOS: E
Intersection Capacity Utilization 100.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	571	3	245	0	0	0	0	758	345	292	488	0
Future Volume (veh/h)	571	3	245	0	0	0	0	758	345	292	488	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1700	1800	1800				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	595	3	171				0	790	241	304	508	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	554	3	495				0	799	244	288	1928	0
Arrive On Green	0.49	0.49	0.49				0.00	0.45	0.45	0.36	1.00	0.00
Sat Flow, veh/h	1706	9	1525				0	2644	806	1619	3600	0
Grp Volume(v), veh/h	598	0	171				0	538	493	304	508	0
Grp Sat Flow(s),veh/h/ln	1715	0	1525				0	1800	1650	1619	1800	0
Q Serve(g_s), s	29.2	0.0	6.2				0.0	26.6	26.7	16.0	0.0	0.0
Cycle Q Clear(g_c), s	29.2	0.0	6.2				0.0	26.6	26.7	16.0	0.0	0.0
Prop In Lane	0.99		1.00				0.00		0.49	1.00		0.00
Lane Grp Cap(c), veh/h	556	0	495				0	544	499	288	1928	0
V/C Ratio(X)	1.07	0.00	0.35				0.00	0.99	0.99	1.06	0.26	0.00
Avail Cap(c_a), veh/h	556	0	495				0	544	499	288	1928	0
HCM Platoon Ratio	1.50	1.50	1.50				1.00	1.50	1.50	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.72	0.72	0.00
Uniform Delay (d), s/veh	23.1	0.0	17.2				0.0	24.4	24.5	29.0	0.0	0.0
Incr Delay (d2), s/veh	59.9	0.0	0.2				0.0	35.9	37.7	60.6	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	17.4	0.0	1.9				0.0	13.5	12.6	9.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	83.0	0.0	17.4				0.0	60.3	62.1	89.6	0.2	0.0
LnGrp LOS	F		B					E	E	F	A	
Approach Vol, veh/h		769						1031			812	
Approach Delay, s/veh		68.4						61.2			33.7	
Approach LOS		E						E			C	

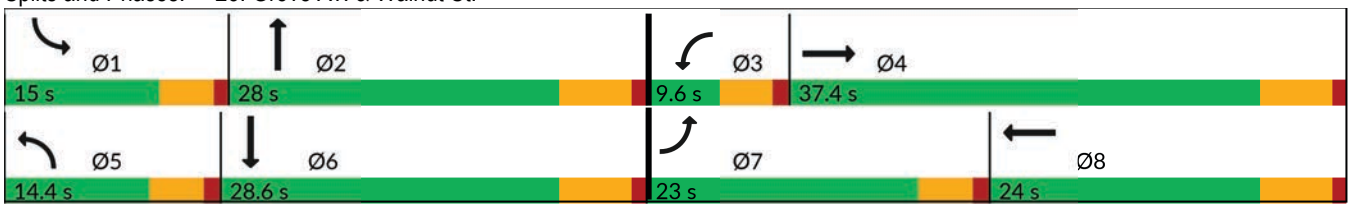
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	21.0	33.0		36.0		54.0
Change Period (Y+Rc), s	5.0	5.8		6.8		5.8
Max Green Setting (Gmax), s	16.0	27.2		29.2		48.2
Max Q Clear Time (g_c+I1), s	18.0	28.7		31.2		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		2.7

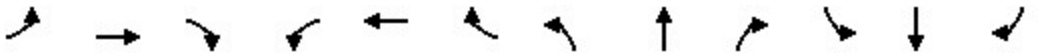
Intersection Summary	
HCM 7th Control Delay, s/veh	54.8
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	196	221	14	304	76	602	87	448
Future Volume (vph)	196	221	14	304	76	602	87	448
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	9.6	23.8
Total Split (s)	23.0	37.4	9.6	24.0	14.4	28.0	15.0	28.6
Total Split (%)	25.6%	41.6%	10.7%	26.7%	16.0%	31.1%	16.7%	31.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.1	32.5	5.3	16.0	8.2	20.9	8.7	21.4
Actuated g/C Ratio	0.19	0.41	0.07	0.20	0.10	0.26	0.11	0.27
v/c Ratio	0.76	0.24	0.16	0.80	0.54	0.84	0.59	0.71
Control Delay (s/veh)	50.0	16.4	44.0	31.3	50.4	39.7	51.6	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.0	16.4	44.0	31.3	50.4	39.7	51.6	31.8
LOS	D	B	D	C	D	D	D	C
Approach Delay (s/veh)		30.5		31.6		40.8		34.6
Approach LOS		C		C		D		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 79.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay (s/veh): 35.0	Intersection LOS: C
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Grove Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	221	51	14	304	228	76	602	31	87	448	95
Future Volume (veh/h)	196	221	51	14	304	228	76	602	31	87	448	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	233	263	57	17	362	240	90	717	31	104	533	93
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	271	1027	219	32	433	282	112	852	37	129	774	135
Arrive On Green	0.17	0.37	0.37	0.02	0.22	0.22	0.07	0.26	0.26	0.08	0.27	0.27
Sat Flow, veh/h	1619	2797	595	1619	1969	1282	1619	3340	144	1619	2913	506
Grp Volume(v), veh/h	233	159	161	17	313	289	90	367	381	104	312	314
Grp Sat Flow(s),veh/h/ln	1619	1710	1682	1619	1710	1541	1619	1710	1774	1619	1710	1709
Q Serve(g_s), s	10.5	4.9	5.0	0.8	13.1	13.5	4.1	15.2	15.3	4.7	12.3	12.4
Cycle Q Clear(g_c), s	10.5	4.9	5.0	0.8	13.1	13.5	4.1	15.2	15.3	4.7	12.3	12.4
Prop In Lane	1.00		0.35	1.00		0.83	1.00		0.08	1.00		0.30
Lane Grp Cap(c), veh/h	271	628	618	32	376	339	112	436	453	129	455	454
V/C Ratio(X)	0.86	0.25	0.26	0.53	0.83	0.85	0.80	0.84	0.84	0.80	0.69	0.69
Avail Cap(c_a), veh/h	398	722	710	108	416	375	212	507	526	225	521	520
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	16.5	16.6	36.4	27.9	28.1	34.3	26.5	26.5	33.9	24.7	24.7
Incr Delay (d2), s/veh	8.5	0.2	0.2	4.9	12.7	15.8	5.0	10.8	10.5	4.3	3.2	3.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	1.7	1.7	0.3	6.2	6.0	1.7	6.9	7.1	1.9	5.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.8	16.7	16.8	41.3	40.6	43.9	39.3	37.2	36.9	38.2	27.8	28.0
LnGrp LOS	D	B	B	D	D	D	D	D	D	D	C	C
Approach Vol, veh/h		553			619			838			730	
Approach Delay, s/veh		26.1			42.2			37.3			29.4	
Approach LOS		C			D			D			C	

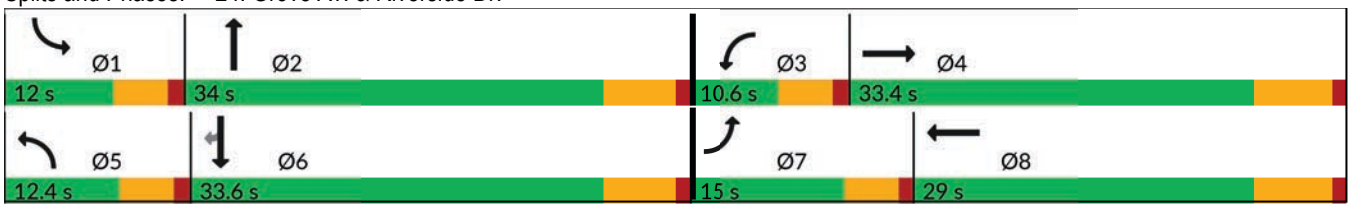
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	24.9	6.1	33.3	9.8	25.7	17.1	22.2
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	10.4	22.2	5.0	31.6	9.8	22.8	18.4	18.2
Max Q Clear Time (g_c+I1), s	6.7	17.3	2.8	7.0	6.1	14.4	12.5	15.5
Green Ext Time (p_c), s	0.0	1.9	0.0	1.6	0.0	2.3	0.2	0.9

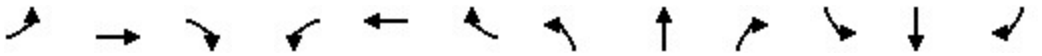
Intersection Summary	
HCM 7th Control Delay, s/veh	34.0
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	91	312	37	618	66	426	53	348	110
Future Volume (vph)	91	312	37	618	66	426	53	348	110
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	15.0	33.4	10.6	29.0	12.4	34.0	12.0	33.6	33.6
Total Split (%)	16.7%	37.1%	11.8%	32.2%	13.8%	37.8%	13.3%	37.3%	37.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.7	26.0	6.1	21.5	7.3	26.5	6.9	26.2	26.2
Actuated g/C Ratio	0.11	0.33	0.08	0.27	0.09	0.33	0.09	0.33	0.33
v/c Ratio	0.55	0.64	0.33	0.83	0.48	0.86	0.41	0.63	0.20
Control Delay (s/veh)	50.4	30.9	47.6	38.6	50.9	44.4	48.4	31.4	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.4	30.9	47.6	38.6	50.9	44.4	48.4	31.4	3.1
LOS	D	C	D	D	D	D	D	C	A
Approach Delay (s/veh)		35.0		39.1		45.2		27.1	
Approach LOS		C		D		D		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 79.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 37.0	Intersection LOS: D
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	312	34	37	618	89	66	426	50	53	348	110
Future Volume (veh/h)	91	312	34	37	618	89	66	426	50	53	348	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	98	335	34	40	665	85	71	458	43	57	374	78
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	122	482	49	62	802	102	88	517	49	77	562	476
Arrive On Green	0.08	0.30	0.30	0.04	0.26	0.26	0.05	0.32	0.32	0.05	0.31	0.31
Sat Flow, veh/h	1619	1604	163	1619	3045	389	1619	1620	152	1619	1800	1525
Grp Volume(v), veh/h	98	0	369	40	373	377	71	0	501	57	374	78
Grp Sat Flow(s),veh/h/ln	1619	0	1767	1619	1710	1724	1619	0	1773	1619	1800	1525
Q Serve(g_s), s	4.3	0.0	13.3	1.7	14.8	14.8	3.1	0.0	19.3	2.5	13.0	2.7
Cycle Q Clear(g_c), s	4.3	0.0	13.3	1.7	14.8	14.8	3.1	0.0	19.3	2.5	13.0	2.7
Prop In Lane	1.00		0.09	1.00		0.23	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	122	0	531	62	450	454	88	0	565	77	562	476
V/C Ratio(X)	0.80	0.00	0.70	0.65	0.83	0.83	0.81	0.00	0.89	0.74	0.67	0.16
Avail Cap(c_a), veh/h	234	0	669	135	543	547	176	0	696	167	697	590
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	0.0	22.2	34.1	24.9	24.9	33.6	0.0	23.2	33.8	21.5	17.9
Incr Delay (d2), s/veh	4.6	0.0	2.3	4.1	8.8	8.9	6.6	0.0	11.4	5.3	1.7	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(50%),veh/ln	1.7	0.0	5.1	0.7	6.3	6.4	1.3	0.0	8.8	1.0	5.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.2	0.0	24.5	38.2	33.8	33.8	40.2	0.0	34.6	39.0	23.2	18.1
LnGrp LOS	D		C	D	C	C	D		C	D	C	B
Approach Vol, veh/h		467			790			572			509	
Approach Delay, s/veh		27.2			34.0			35.3			24.2	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	28.7	7.3	27.8	8.5	28.2	10.0	25.1
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	7.4	28.2	6.0	27.2	7.8	27.8	10.4	22.8
Max Q Clear Time (g_c+I1), s	4.5	21.3	3.7	15.3	5.1	15.0	6.3	16.8
Green Ext Time (p_c), s	0.0	1.6	0.0	1.5	0.0	1.8	0.0	2.1

Intersection Summary	
HCM 7th Control Delay, s/veh	30.8
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	68.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	110	31	3	169	46	62	390	9	22	456	16
Future Vol, veh/h	65	110	31	3	169	46	62	390	9	22	456	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	72	122	34	3	188	51	69	433	10	24	507	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	21.5	21.9	76.3	102.3
HCM LOS	C	C	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	32%	1%	4%
Vol Thru, %	85%	53%	78%	92%
Vol Right, %	2%	15%	21%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	461	206	218	494
LT Vol	62	65	3	22
Through Vol	390	110	169	456
RT Vol	9	31	46	16
Lane Flow Rate	512	229	242	549
Geometry Grp	1	1	1	1
Degree of Util (X)	1.027	0.531	0.552	1.114
Departure Headway (Hd)	7.603	8.858	8.697	7.438
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	481	410	417	494
Service Time	5.603	6.858	6.697	5.438
HCM Lane V/C Ratio	1.064	0.559	0.58	1.111
HCM Control Delay, s/veh	76.3	21.5	21.9	102.3
HCM Lane LOS	F	C	C	F
HCM 95th-tile Q	14.3	3	3.2	18.1

Intersection	
Intersection Delay, s/veh	50.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	112	40	18	163	11	25	401	6	30	446	35
Future Vol, veh/h	39	112	40	18	163	11	25	401	6	30	446	35
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	43	123	44	20	179	12	27	441	7	33	490	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	17.9	18.2	45.8	79
HCM LOS	C	C	E	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	20%	9%	6%
Vol Thru, %	93%	59%	85%	87%
Vol Right, %	1%	21%	6%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	432	191	192	511
LT Vol	25	39	18	30
Through Vol	401	112	163	446
RT Vol	6	40	11	35
Lane Flow Rate	475	210	211	562
Geometry Grp	1	1	1	1
Degree of Util (X)	0.901	0.459	0.464	1.05
Departure Headway (Hd)	7.077	8.184	8.243	6.734
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	517	443	439	533
Service Time	5.077	6.184	6.243	4.829
HCM Lane V/C Ratio	0.919	0.474	0.481	1.054
HCM Control Delay, s/veh	45.8	17.9	18.2	79
HCM Lane LOS	E	C	C	F
HCM 95th-tile Q	10.3	2.4	2.4	16.1

Intersection	
Intersection Delay, s/veh	38.6
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	122	23	12	325	63	14	230	3	41	320	65
Future Vol, veh/h	46	122	23	12	325	63	14	230	3	41	320	65
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	50	133	25	13	353	68	15	250	3	45	348	71
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	18.4	44.5	21.7	51.9
HCM LOS	C	E	C	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	24%	3%	10%
Vol Thru, %	93%	64%	81%	75%
Vol Right, %	1%	12%	16%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	247	191	400	426
LT Vol	14	46	12	41
Through Vol	230	122	325	320
RT Vol	3	23	63	65
Lane Flow Rate	268	208	435	463
Geometry Grp	1	1	1	1
Degree of Util (X)	0.588	0.471	0.885	0.93
Departure Headway (Hd)	7.884	8.166	7.325	7.233
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	456	438	496	500
Service Time	5.97	6.259	5.357	5.268
HCM Lane V/C Ratio	0.588	0.475	0.877	0.926
HCM Control Delay, s/veh	21.7	18.4	44.5	51.9
HCM Lane LOS	C	C	E	F
HCM 95th-tile Q	3.7	2.5	9.7	11.2

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	12	3	4	10	2	14	300	11	10	147	16
Future Vol, veh/h	3	12	3	4	10	2	14	300	11	10	147	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	0	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	13	3	4	11	2	15	326	12	11	160	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	552	559	168	545	555	326	177	0	0	338	0	0
Stage 1	190	190	-	357	357	-	-	-	-	-	-	-
Stage 2	362	368	-	188	199	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	447	441	881	453	442	720	1411	-	-	1232	-	-
Stage 1	816	747	-	665	632	-	-	-	-	-	-	-
Stage 2	661	625	-	818	740	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	428	432	881	431	434	720	1411	-	-	1232	-	-
Mov Cap-2 Maneuver	511	496	-	519	501	-	-	-	-	-	-	-
Stage 1	809	740	-	658	625	-	-	-	-	-	-	-
Stage 2	640	618	-	794	734	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.94	12.09	0.33	0.46
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1411	-	-	538	525	1232	-	-
HCM Lane V/C Ratio	0.011	-	-	0.036	0.033	0.009	-	-
HCM Ctrl Dly (s/v)	7.6	-	-	11.9	12.1	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	42.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	253	24	8	562	311	50	21	16	336	12	66
Future Vol, veh/h	45	253	24	8	562	311	50	21	16	336	12	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	48	269	26	9	598	331	53	22	17	357	13	70

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	929	0	0	295	0	0	999	1323	282	1156	1171	763
Stage 1	-	-	-	-	-	-	378	378	-	780	780	-
Stage 2	-	-	-	-	-	-	621	946	-	376	390	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	745	-	-	1278	-	-	224	158	762	~ 175	194	407
Stage 1	-	-	-	-	-	-	648	619	-	391	409	-
Stage 2	-	-	-	-	-	-	478	343	-	649	611	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	745	-	-	1278	-	-	164	145	762	~ 144	179	407
Mov Cap-2 Maneuver	-	-	-	-	-	-	260	232	-	~ 271	292	-
Stage 1	-	-	-	-	-	-	606	579	-	385	402	-
Stage 2	-	-	-	-	-	-	378	338	-	571	572	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.42	0.07	23.49	168.79
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	286	745	-	-	15	-	-	271	292	394
HCM Lane V/C Ratio	0.324	0.064	-	-	0.007	-	-	1.319	0.022	0.194
HCM Ctrl Dly (s/v)	23.5	10.2	-	-	7.8	0	-	204.2	17.6	16.3
HCM Lane LOS	C	B	-	-	A	A	-	F	C	C
HCM 95th %tile Q(veh)	1.4	0.2	-	-	0	-	-	18.2	0.1	0.7

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

Intersection	
Intersection Delay, s/veh	25.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	65	65	49	55	21	135	294	35	31	198	31
Future Vol, veh/h	36	65	65	49	55	21	135	294	35	31	198	31
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	43	78	78	59	66	25	163	354	42	37	239	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	13.6	12.9	38.5	16
HCM LOS	B	B	E	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	22%	39%	12%
Vol Thru, %	63%	39%	44%	76%
Vol Right, %	8%	39%	17%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	464	166	125	260
LT Vol	135	36	49	31
Through Vol	294	65	55	198
RT Vol	35	65	21	31
Lane Flow Rate	559	200	151	313
Geometry Grp	1	1	1	1
Degree of Util (X)	0.892	0.37	0.292	0.532
Departure Headway (Hd)	5.741	6.658	6.977	6.11
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	632	538	514	589
Service Time	3.788	4.724	5.047	4.167
HCM Lane V/C Ratio	0.884	0.372	0.294	0.531
HCM Control Delay, s/veh	38.5	13.6	12.9	16
HCM Lane LOS	E	B	B	C
HCM 95th-tile Q	10.8	1.7	1.2	3.1

Intersection	
Intersection Delay, s/veh	232
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	144	2	298	341	142	25	232	188	116	182	46
Future Vol, veh/h	17	144	2	298	341	142	25	232	188	116	182	46
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	19	160	2	331	379	158	28	258	209	129	202	51
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	24.7	431.4	94.5	55.2
HCM LOS	C	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	10%	38%	34%
Vol Thru, %	52%	88%	44%	53%
Vol Right, %	42%	1%	18%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	445	163	781	344
LT Vol	25	17	298	116
Through Vol	232	144	341	182
RT Vol	188	2	142	46
Lane Flow Rate	494	181	868	382
Geometry Grp	1	1	1	1
Degree of Util (X)	1.052	0.464	1.897	0.867
Departure Headway (Hd)	10.01	11.868	8.177	10.753
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	366	306	451	340
Service Time	8.01	9.868	6.177	8.753
HCM Lane V/C Ratio	1.35	0.592	1.925	1.124
HCM Control Delay, s/veh	94.5	24.7	431.4	55.2
HCM Lane LOS	F	C	F	F
HCM 95th-tile Q	13.1	2.3	55.1	8

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	4	12	400	497	22
Future Vol, veh/h	20	4	12	400	497	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	4	13	435	540	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1013	552	564	0	-	0
Stage 1	552	-	-	-	-	-
Stage 2	461	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	267	537	1018	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	264	537	1018	-	-	-
Mov Cap-2 Maneuver	464	-	-	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.02	0.25	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1018	-	475	-	-
HCM Lane V/C Ratio	0.013	-	0.055	-	-
HCM Ctrl Dly (s/v)	8.6	-	13	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Intersection Delay, s/veh	135.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	163	251	65	3	347	83	159	179	2	69	77	313
Future Vol, veh/h	163	251	65	3	347	83	159	179	2	69	77	313
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	192	295	76	4	408	98	187	211	2	81	91	368
Number of Lanes	1	1	0	0	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	1	2
HCM Control Delay, s/veh	76.6	264	34.1	150.4
HCM LOS	F	F	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	1%	100%	0%
Vol Thru, %	0%	100%	0%	0%	79%	80%	0%	20%
Vol Right, %	0%	0%	100%	0%	21%	19%	0%	80%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	159	179	2	163	316	433	69	390
LT Vol	159	0	0	163	0	3	69	0
Through Vol	0	179	0	0	251	347	0	77
RT Vol	0	0	2	0	65	83	0	313
Lane Flow Rate	187	211	2	192	372	509	81	459
Geometry Grp	6	6	6	6	6	6	6	6
Degree of Util (X)	0.585	0.63	0.007	0.572	1.043	1.488	0.247	1.264
Departure Headway (Hd)	13.356	12.82	12.069	12.689	12	11.341	12.547	11.398
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	273	284	298	286	305	326	288	321
Service Time	11.056	10.52	9.769	10.389	9.7	9.041	10.247	9.098
HCM Lane V/C Ratio	0.685	0.743	0.007	0.671	1.22	1.561	0.281	1.43
HCM Control Delay, s/veh	33.3	35.1	14.9	31.1	100	264	19.3	173.6
HCM Lane LOS	D	E	B	D	F	F	C	F
HCM 95th-tile Q	3.4	3.9	0	3.3	11.7	26.1	1	18.5

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	68	132	30	748	23	15
Future Volume (vph)	68	132	30	748	23	15
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	2	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.2	24.2	28.6	28.6
Total Split (s)	89.0	89.0	89.0	89.0	31.0	31.0
Total Split (%)	74.2%	74.2%	74.2%	74.2%	25.8%	25.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	27.2	27.2	36.4	36.4	9.3	9.3
Actuated g/C Ratio	0.59	0.59	0.78	0.78	0.20	0.20
v/c Ratio	0.04	0.16	0.04	0.62	0.08	0.06
Control Delay (s/veh)	4.4	1.5	4.6	9.0	24.4	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	4.4	1.5	4.6	9.0	24.4	12.9
LOS	A	A	A	A	C	B
Approach Delay (s/veh)	2.4			8.8	19.8	
Approach LOS	A			A	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 46.4	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay (s/veh): 8.0	Intersection LOS: A
Intersection Capacity Utilization 54.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 34: Hellman Av. & Eucalyptus Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	68	132	30	748	23	15
Future Volume (veh/h)	68	132	30	748	23	15
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1700	1800	1700	1800
Adj Flow Rate, veh/h	80	154	35	880	27	-3
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2191	977	915	1153	48	46
Arrive On Green	0.64	0.64	0.64	0.64	0.03	0.00
Sat Flow, veh/h	3510	1525	1100	1800	1619	1525
Grp Volume(v), veh/h	80	154	35	880	27	-3
Grp Sat Flow(s),veh/h/ln	1710	1525	1100	1800	1619	1525
Q Serve(g_s), s	0.3	1.3	0.4	11.3	0.5	0.0
Cycle Q Clear(g_c), s	0.3	1.3	0.7	11.3	0.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2191	977	915	1153	48	46
V/C Ratio(X)	0.04	0.16	0.04	0.76	0.56	-0.07
Avail Cap(c_a), veh/h	8641	3854	2989	4548	1304	1229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	2.2	2.4	2.3	4.1	15.7	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	1.1	3.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.3	0.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	2.2	2.4	2.3	5.2	19.4	0.0
LnGrp LOS	A	A	A	A	B	
Approach Vol, veh/h	234			915	24	
Approach Delay, s/veh	2.3			5.1	21.8	
Approach LOS	A			A	C	

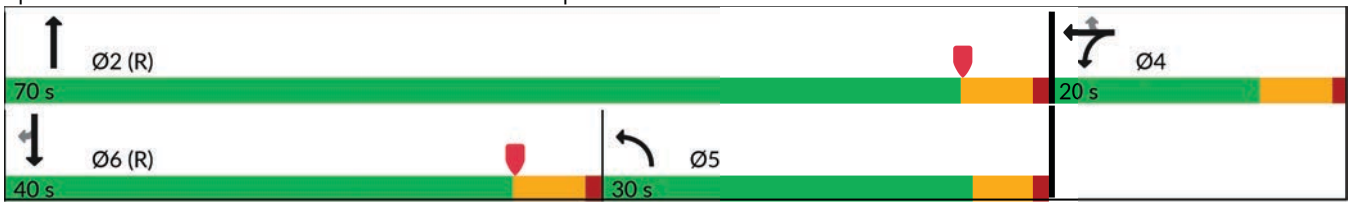
Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	5.6	27.2	27.2
Change Period (Y+Rc), s	4.6	6.2	6.2
Max Green Setting (Gmax), s	26.4	82.8	82.8
Max Q Clear Time (g_c+I1), s	2.5	3.3	13.3
Green Ext Time (p_c), s	0.0	1.0	7.7

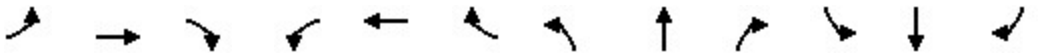
Intersection Summary	
HCM 7th Control Delay, s/veh	4.9
HCM 7th LOS	A

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	329	4	350	792	1289	527	121
Future Volume (vph)	329	4	350	792	1289	527	121
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4	4		5	2	6	
Permitted Phases			4				6
Detector Phase	4	4	4	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	8.0	8.0	8.0
Minimum Split (s)	10.8	10.8	10.8	10.0	43.8	38.8	38.8
Total Split (s)	20.0	20.0	20.0	30.0	70.0	40.0	40.0
Total Split (%)	22.2%	22.2%	22.2%	33.3%	77.8%	44.4%	44.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.0	5.8	5.8	5.8
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	20.8	20.8	20.8	29.1	57.6	23.6	23.6
Actuated g/C Ratio	0.23	0.23	0.23	0.32	0.64	0.26	0.26
v/c Ratio	0.68	0.60	0.53	0.85	0.42	0.33	0.25
Control Delay (s/veh)	44.4	30.6	22.0	34.4	4.3	27.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.4	30.6	22.0	34.4	4.3	27.6	6.0
LOS	D	C	C	C	A	C	A
Approach Delay (s/veh)		32.7			15.8	23.5	
Approach LOS		C			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 35.6 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 20.6	Intersection LOS: C
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 35: Archibald Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	329	4	350	792	1289	0	0	527	121
Future Volume (veh/h)	0	0	0	329	4	350	792	1289	0	0	527	121
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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				1700	1800	1800	1600	1800	0	0	1800	1800
Adj Flow Rate, veh/h				388	0	109	808	1315	0	0	538	93
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				462	0	218	1526	3579	0	0	913	218
Arrive On Green				0.14	0.00	0.14	0.35	0.49	0.00	0.00	0.15	0.15
Sat Flow, veh/h				3238	0	1525	2956	5076	0	0	6444	1475
Grp Volume(v), veh/h				388	0	109	808	1315	0	0	538	93
Grp Sat Flow(s),veh/h/ln				1619	0	1525	1478	1638	0	0	1548	1475
Q Serve(g_s), s				10.5	0.0	5.9	19.7	15.0	0.0	0.0	7.3	5.2
Cycle Q Clear(g_c), s				10.5	0.0	5.9	19.7	15.0	0.0	0.0	7.3	5.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				462	0	218	1526	3579	0	0	913	218
V/C Ratio(X)				0.84	0.00	0.50	0.53	0.37	0.00	0.00	0.59	0.43
Avail Cap(c_a), veh/h				511	0	241	1526	3579	0	0	2353	560
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.78	0.78	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.6	0.0	35.6	20.7	10.1	0.0	0.0	35.8	34.9
Incr Delay (d2), s/veh				11.0	0.0	1.8	0.1	0.2	0.0	0.0	2.8	6.0
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				4.6	0.0	5.2	6.9	5.5	0.0	0.0	2.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				48.6	0.0	37.4	20.8	10.3	0.0	0.0	38.6	40.9
LnGrp LOS				D		D	C	B			D	D
Approach Vol, veh/h					497			2123			631	
Approach Delay, s/veh					46.1			14.3			38.9	
Approach LOS					D			B			D	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	71.3	18.7	52.3	19.1
Change Period (Y+Rc), s	5.8	5.8	5.8	* 5.8
Max Green Setting (Gmax), s	64.2	14.2	25.0	* 34
Max Q Clear Time (g_c+I1), s	17.0	12.5	21.7	9.3
Green Ext Time (p_c), s	11.6	0.3	0.7	3.7

Intersection Summary	
HCM 7th Control Delay, s/veh	24.0
HCM 7th LOS	C

Notes

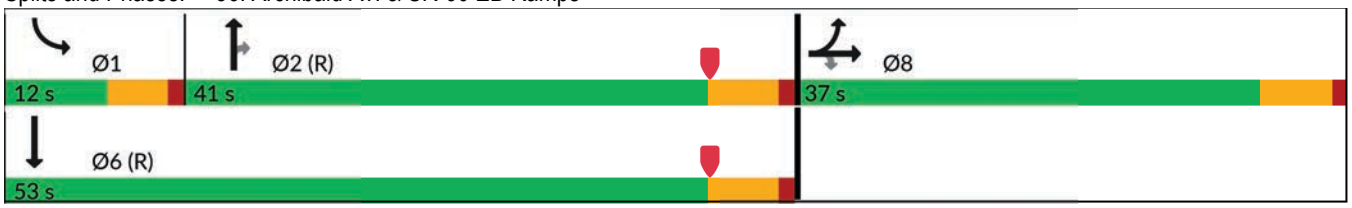
User approved volume balancing among the lanes for turning movement.

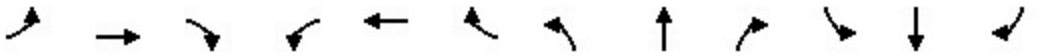
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	429	6	400	1603	359	141	672
Future Volume (vph)	429	6	400	1603	359	141	672
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8	8		2		1	6
Permitted Phases			8		2		
Detector Phase	8	8	8	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	10.8	10.8	10.8	32.8	32.8	10.0	33.8
Total Split (s)	37.0	37.0	37.0	41.0	41.0	12.0	53.0
Total Split (%)	41.1%	41.1%	41.1%	45.6%	45.6%	13.3%	58.9%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.0	5.8
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	23.5	23.5	23.5	42.0	42.0	7.9	54.9
Actuated g/C Ratio	0.26	0.26	0.26	0.47	0.47	0.09	0.61
v/c Ratio	0.73	0.68	0.51	0.57	0.41	0.56	0.23
Control Delay (s/veh)	40.5	31.0	11.0	19.5	3.6	57.6	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.5	31.0	11.0	19.5	3.6	57.6	1.4
LOS	D	C	B	B	A	E	A
Approach Delay (s/veh)		28.0		16.6			11.2
Approach LOS		C		B			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 35.6 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay (s/veh): 18.0	Intersection LOS: B
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 36: Archibald Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	429	6	400	0	0	0	0	1603	359	141	672	0
Future Volume (veh/h)	429	6	400	0	0	0	0	1603	359	141	672	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	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	1700	1800	1800				0	1800	1800	1600	1800	0
Adj Flow Rate, veh/h	521	0	175				0	1636	267	144	686	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	648	0	305				0	3394	818	199	3297	0
Arrive On Green	0.20	0.00	0.20				0.00	0.55	0.55	0.13	1.00	0.00
Sat Flow, veh/h	3238	0	1525				0	6444	1492	2956	5076	0
Grp Volume(v), veh/h	521	0	175				0	1636	267	144	686	0
Grp Sat Flow(s),veh/h/ln	1619	0	1525				0	1548	1492	1478	1638	0
Q Serve(g_s), s	13.8	0.0	9.3				0.0	14.6	8.9	4.2	0.0	0.0
Cycle Q Clear(g_c), s	13.8	0.0	9.3				0.0	14.6	8.9	4.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	648	0	305				0	3394	818	199	3297	0
V/C Ratio(X)	0.80	0.00	0.57				0.00	0.48	0.33	0.72	0.21	0.00
Avail Cap(c_a), veh/h	1123	0	529				0	3394	818	230	3297	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	0.90	0.90	0.00
Uniform Delay (d), s/veh	34.3	0.0	32.5				0.0	12.5	11.2	38.1	0.0	0.0
Incr Delay (d2), s/veh	2.4	0.0	1.7				0.0	0.5	1.1	6.4	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(50%),veh/ln	5.3	0.0	3.4				0.0	4.3	2.7	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.7	0.0	34.2				0.0	13.0	12.3	44.5	0.1	0.0
LnGrp LOS	D		C					B	B	D	A	
Approach Vol, veh/h		696						1903			830	
Approach Delay, s/veh		36.1						12.9			7.8	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	11.1	55.1				66.2		23.8				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	7.0	35.2				47.2		31.2				
Max Q Clear Time (g_c+I1), s	6.2	16.6				2.0		15.8				
Green Ext Time (p_c), s	0.0	11.4				4.7		2.2				

Intersection Summary			
HCM 7th Control Delay, s/veh			16.4
HCM 7th LOS			B

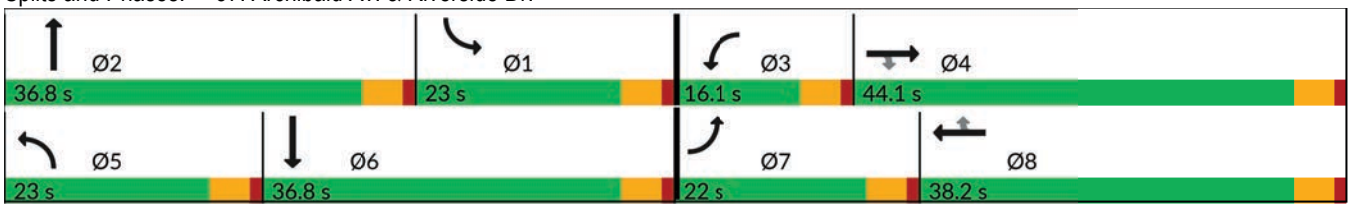
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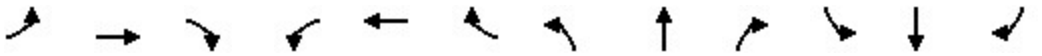
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	187	324	109	86	384	370	166	1020	208	470
Future Volume (vph)	187	324	109	86	384	370	166	1020	208	470
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.2	38.2	9.6	38.2	38.2	9.6	32.2	9.6	33.2
Total Split (s)	22.0	44.1	44.1	16.1	38.2	38.2	23.0	36.8	23.0	36.8
Total Split (%)	18.3%	36.8%	36.8%	13.4%	31.8%	31.8%	19.2%	30.7%	19.2%	30.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.9	29.1	29.1	9.4	19.9	19.9	14.9	29.3	17.3	31.7
Actuated g/C Ratio	0.16	0.29	0.29	0.09	0.20	0.20	0.15	0.29	0.17	0.31
v/c Ratio	0.79	0.35	0.22	0.61	0.61	0.65	0.74	0.79	0.80	0.46
Control Delay (s/veh)	65.6	31.6	4.1	65.1	41.7	9.9	62.8	38.9	64.7	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.6	31.6	4.1	65.1	41.7	9.9	62.8	38.9	64.7	27.0
LOS	E	C	A	E	D	A	E	D	E	C
Approach Delay (s/veh)		37.0			30.1			42.1		36.1
Approach LOS		D			C			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.2	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay (s/veh): 36.9	Intersection LOS: D
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 37: Archibald Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	324	109	86	384	370	166	1020	37	208	470	181
Future Volume (veh/h)	187	324	109	86	384	370	166	1020	37	208	470	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	199	345	70	91	409	300	177	1085	33	221	500	146
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	232	939	411	113	688	301	210	1406	43	254	1197	339
Arrive On Green	0.14	0.27	0.27	0.07	0.20	0.20	0.13	0.29	0.29	0.16	0.31	0.31
Sat Flow, veh/h	1619	3420	1498	1619	3420	1497	1619	4897	149	1619	3803	1078
Grp Volume(v), veh/h	199	345	70	91	409	300	177	726	392	221	429	217
Grp Sat Flow(s),veh/h/ln	1619	1710	1498	1619	1710	1497	1619	1638	1770	1619	1638	1605
Q Serve(g_s), s	10.5	7.1	3.1	4.8	9.4	11.7	9.3	17.7	17.7	11.6	9.0	9.3
Cycle Q Clear(g_c), s	10.5	7.1	3.1	4.8	9.4	11.7	9.3	17.7	17.7	11.6	9.0	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		0.67
Lane Grp Cap(c), veh/h	232	939	411	113	688	301	210	941	508	254	1031	505
V/C Ratio(X)	0.86	0.37	0.17	0.80	0.59	1.00	0.84	0.77	0.77	0.87	0.42	0.43
Avail Cap(c_a), veh/h	324	1552	680	214	1320	578	342	1212	655	342	1212	594
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	25.5	24.0	39.9	31.5	15.6	37.0	28.4	28.4	35.8	23.5	23.6
Incr Delay (d2), s/veh	11.6	0.2	0.2	4.9	0.8	24.6	4.9	2.3	4.3	13.4	0.3	0.6
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(50%),veh/ln	4.6	2.7	1.0	2.0	3.7	5.5	3.7	6.6	7.4	5.2	3.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.0	25.7	24.2	44.8	32.4	40.3	41.9	30.7	32.7	49.2	23.8	24.2
LnGrp LOS	D	C	C	D	C	D	D	C	C	D	C	C
Approach Vol, veh/h		614			800			1295			867	
Approach Delay, s/veh		32.8			36.7			32.9			30.4	
Approach LOS		C			D			C			C	

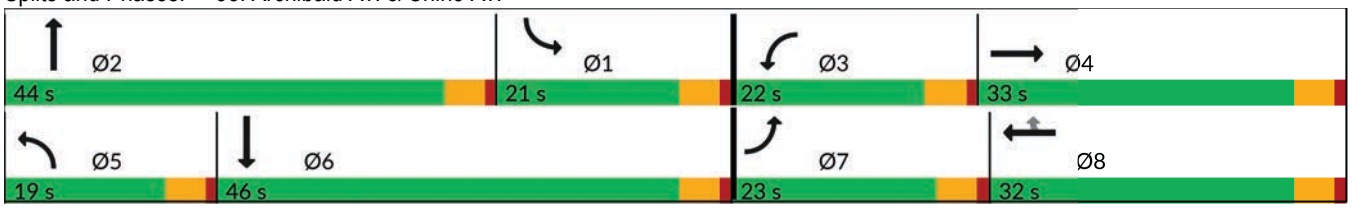
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	29.6	10.7	28.5	15.9	32.0	17.1	22.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	32.2	11.5	39.5	18.4	32.2	17.4	33.6
Max Q Clear Time (g_c+I1), s	13.6	19.7	6.8	9.1	11.3	11.3	12.5	13.7
Green Ext Time (p_c), s	0.1	5.3	0.0	2.2	0.1	3.6	0.1	3.3

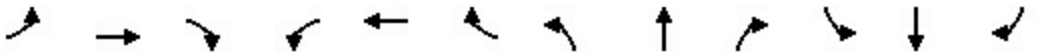
Intersection Summary	
HCM 7th Control Delay, s/veh	33.1
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	88	33	96	30	215	34	859	80	478
Future Volume (vph)	88	33	96	30	215	34	859	80	478
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	23.0	33.0	22.0	32.0	32.0	19.0	44.0	21.0	46.0
Total Split (%)	19.2%	27.5%	18.3%	26.7%	26.7%	15.8%	36.7%	17.5%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.5	9.2	10.7	9.4	9.4	8.2	20.4	10.1	26.8
Actuated g/C Ratio	0.17	0.15	0.17	0.15	0.15	0.13	0.33	0.16	0.43
v/c Ratio	0.34	0.27	0.36	0.11	0.54	0.17	0.54	0.32	0.34
Control Delay (s/veh)	33.4	19.8	33.4	30.1	10.2	34.7	21.0	33.7	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.4	19.8	33.4	30.1	10.2	34.7	21.0	33.7	15.5
LOS	C	B	C	C	B	C	C	C	B
Approach Delay (s/veh)		27.4		18.5			21.5		17.9
Approach LOS		C		B			C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 62.4	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay (s/veh): 20.4	Intersection LOS: C
Intersection Capacity Utilization 49.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 38: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	33	37	96	30	215	34	859	56	80	478	29
Future Volume (veh/h)	88	33	37	96	30	215	34	859	56	80	478	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	92	34	27	100	31	118	35	895	54	83	498	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	125	86	68	131	173	145	64	1655	100	118	1241	52
Arrive On Green	0.08	0.09	0.09	0.08	0.10	0.10	0.04	0.33	0.33	0.07	0.36	0.36
Sat Flow, veh/h	1619	927	736	1619	1800	1504	1619	5034	303	1619	3430	144
Grp Volume(v), veh/h	92	0	61	100	31	118	35	639	310	83	261	258
Grp Sat Flow(s),veh/h/ln	1619	0	1663	1619	1800	1504	1619	1800	1737	1619	1800	1774
Q Serve(g_s), s	2.4	0.0	1.5	2.6	0.7	2.3	0.9	6.3	6.3	2.2	4.7	4.7
Cycle Q Clear(g_c), s	2.4	0.0	1.5	2.6	0.7	2.3	0.9	6.3	6.3	2.2	4.7	4.7
Prop In Lane	1.00		0.44	1.00		1.00	1.00		0.17	1.00		0.08
Lane Grp Cap(c), veh/h	125	0	154	131	173	145	64	1183	571	118	652	642
V/C Ratio(X)	0.74	0.00	0.40	0.76	0.18	0.82	0.54	0.54	0.54	0.70	0.40	0.40
Avail Cap(c_a), veh/h	688	0	1091	651	1139	952	538	3275	1580	613	1721	1696
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	18.5	19.5	18.0	9.0	20.4	11.9	11.9	19.6	10.3	10.3
Incr Delay (d2), s/veh	8.1	0.0	1.6	8.9	0.5	10.5	7.0	0.4	0.8	7.4	0.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.5	1.1	0.3	1.4	0.4	1.6	1.7	0.9	1.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.6	0.0	20.1	28.4	18.5	19.5	27.4	12.3	12.7	27.0	10.7	10.7
LnGrp LOS	C		C	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		153			249			984			602	
Approach Delay, s/veh		24.6			23.0			12.9			13.0	
Approach LOS		C			C			B			B	

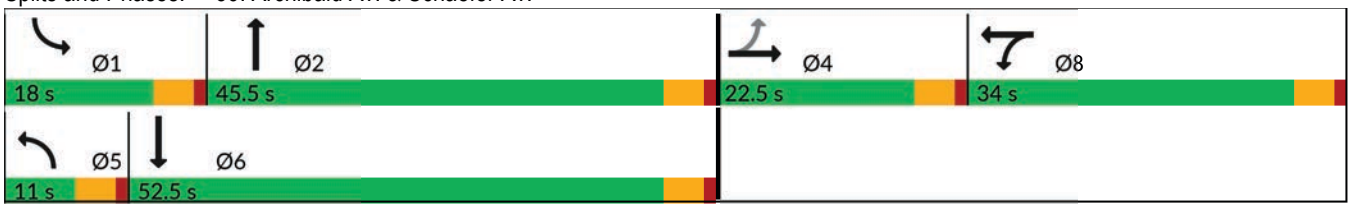
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	18.8	8.1	8.6	6.3	20.3	7.9	8.8
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	16.4	39.4	17.4	28.4	14.4	41.4	18.4	27.4
Max Q Clear Time (g_c+I1), s	4.2	8.3	4.6	3.5	2.9	6.7	4.4	4.3
Green Ext Time (p_c), s	0.1	5.9	0.2	0.2	0.0	2.8	0.2	0.5

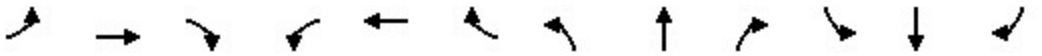
Intersection Summary	
HCM 7th Control Delay, s/veh	15.1
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	116	37	49	25	38	813	52	583
Future Volume (vph)	116	37	49	25	38	813	52	583
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	22.5	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	22.5	22.5	34.0	34.0	11.0	45.5	18.0	52.5
Total Split (%)	18.8%	18.8%	28.3%	28.3%	9.2%	37.9%	15.0%	43.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		20.1	10.5	10.5	6.9	19.8	7.6	20.9
Actuated g/C Ratio		0.29	0.15	0.15	0.10	0.29	0.11	0.30
v/c Ratio		1.89	0.21	0.27	0.25	0.61	0.31	0.65
Control Delay (s/veh)		466.8	31.4	16.6	42.3	25.2	40.4	25.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		466.8	31.4	16.6	42.3	25.2	40.4	25.4
LOS		F	C	B	D	C	D	C
Approach Delay (s/veh)		466.8		22.5		25.9		26.5
Approach LOS		F		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 68.9	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.89	
Intersection Signal Delay (s/veh): 65.0	Intersection LOS: E
Intersection Capacity Utilization 50.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	37	10	49	25	49	38	813	13	52	583	55
Future Volume (veh/h)	116	37	10	49	25	49	38	813	13	52	583	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	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	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	121	39	10	51	26	39	40	847	14	54	607	57
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	164	53	14	139	56	84	71	1541	25	89	1014	95
Arrive On Green	0.13	0.13	0.13	0.09	0.09	0.09	0.04	0.31	0.31	0.05	0.32	0.32
Sat Flow, veh/h	1225	395	101	1619	650	975	1619	4976	82	1619	3160	296
Grp Volume(v), veh/h	170	0	0	51	0	65	40	557	304	54	328	336
Grp Sat Flow(s),veh/h/ln	1721	0	0	1619	0	1625	1619	1638	1782	1619	1710	1747
Q Serve(g_s), s	4.2	0.0	0.0	1.3	0.0	1.7	1.1	6.3	6.3	1.4	7.1	7.2
Cycle Q Clear(g_c), s	4.2	0.0	0.0	1.3	0.0	1.7	1.1	6.3	6.3	1.4	7.1	7.2
Prop In Lane	0.71		0.06	1.00		0.60	1.00		0.05	1.00		0.17
Lane Grp Cap(c), veh/h	231	0	0	139	0	139	71	1015	552	89	548	560
V/C Ratio(X)	0.74	0.00	0.00	0.37	0.00	0.47	0.56	0.55	0.55	0.61	0.60	0.60
Avail Cap(c_a), veh/h	695	0	0	1075	0	1078	234	3026	1646	490	1850	1889
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	18.4	0.0	0.0	19.1	0.0	19.3	20.8	12.7	12.7	20.5	12.6	12.7
Incr Delay (d2), s/veh	4.5	0.0	0.0	1.6	0.0	2.4	6.8	0.5	0.9	2.5	1.0	1.0
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(50%),veh/ln	1.6	0.0	0.0	0.5	0.0	0.6	0.5	1.6	1.8	0.5	1.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.0	0.0	0.0	20.7	0.0	21.7	27.6	13.2	13.6	23.0	13.7	13.7
LnGrp LOS	C			C		C	C	B	B	C	B	B
Approach Vol, veh/h		170			116			901			718	
Approach Delay, s/veh		23.0			21.3			14.0			14.4	
Approach LOS		C			C			B			B	

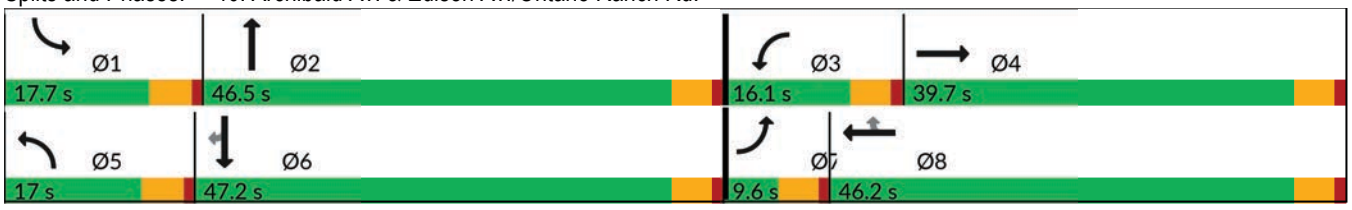
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	18.3		10.5	6.5	18.8		8.4				
Change Period (Y+Rc), s	4.6	4.6		4.6	4.6	4.6		4.6				
Max Green Setting (Gmax), s	13.4	40.9		17.9	6.4	47.9		29.4				
Max Q Clear Time (g_c+I1), s	3.4	8.3		6.2	3.1	9.2		3.7				
Green Ext Time (p_c), s	0.0	5.2		0.6	0.0	3.7		0.4				

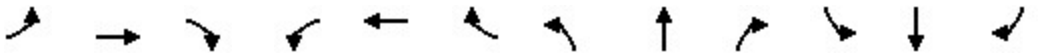
Intersection Summary		
HCM 7th Control Delay, s/veh		15.4
HCM 7th LOS		B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	529	113	280	673	73	128	632	323	66	500	112
Future Volume (vph)	50	529	113	280	673	73	128	632	323	66	500	112
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.7		16.1	46.2	46.2	17.0	46.5		17.7	47.2	47.2
Total Split (%)	8.0%	33.1%		13.4%	38.5%	38.5%	14.2%	38.8%		14.8%	39.3%	39.3%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.1	33.3	98.8	11.7	42.4	42.4	11.6	28.8	98.8	8.7	23.5	23.5
Actuated g/C Ratio	0.05	0.34	1.00	0.12	0.43	0.43	0.12	0.29	1.00	0.09	0.24	0.24
v/c Ratio	0.36	0.34	0.08	0.86	0.94	0.11	0.73	0.68	0.23	0.50	0.66	0.26
Control Delay (s/veh)	56.7	26.5	0.1	69.3	51.2	3.6	67.7	36.1	0.4	58.3	38.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.7	26.5	0.1	69.3	51.2	3.6	67.7	36.1	0.4	58.3	38.0	4.7
LOS	E	C	A	E	D	A	E	D	A	E	D	A
Approach Delay (s/veh)		24.3			52.8			29.2			34.5	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay (s/veh): 36.2	Intersection LOS: D
Intersection Capacity Utilization 79.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 40: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	529	113	280	673	73	128	632	323	66	500	112
Future Volume (veh/h)	50	529	113	280	673	73	128	632	323	66	500	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	54	569	0	301	724	66	138	680	0	71	538	61
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	124	1730		364	780	653	167	882		89	716	319
Arrive On Green	0.04	0.35	0.00	0.12	0.43	0.43	0.10	0.26	0.00	0.05	0.21	0.21
Sat Flow, veh/h	2956	4914	1525	2956	1800	1506	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	54	569	0	301	724	66	138	680	0	71	538	61
Grp Sat Flow(s),veh/h/ln	1478	1638	1525	1478	1800	1506	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	1.5	7.4	0.0	8.6	33.1	2.3	7.2	16.0	0.0	3.8	12.8	2.9
Cycle Q Clear(g_c), s	1.5	7.4	0.0	8.6	33.1	2.3	7.2	16.0	0.0	3.8	12.8	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	1730		364	780	653	167	882		89	716	319
V/C Ratio(X)	0.44	0.33		0.83	0.93	0.10	0.83	0.77		0.80	0.75	0.19
Avail Cap(c_a), veh/h	170	1989		392	863	722	231	1652		245	1680	749
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	20.6	0.0	37.1	23.3	14.6	38.1	29.8	0.0	40.5	32.2	28.2
Incr Delay (d2), s/veh	0.9	0.1	0.0	11.8	15.2	0.1	11.4	1.5	0.0	6.2	1.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.5	0.0	3.5	15.2	0.7	3.2	6.1	0.0	1.5	5.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.4	20.7	0.0	48.9	38.5	14.6	49.5	31.3	0.0	46.7	33.8	28.5
LnGrp LOS	D	C		D	D	B	D	C		D	C	C
Approach Vol, veh/h		623			1091			818			670	
Approach Delay, s/veh		22.5			39.9			34.3			34.7	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	27.0	15.3	35.1	13.6	22.8	8.2	42.2
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	13.1	41.9	11.5	35.1	12.4	42.6	5.0	41.6
Max Q Clear Time (g_c+I1), s	5.8	18.0	10.6	9.4	9.2	14.8	3.5	35.1
Green Ext Time (p_c), s	0.0	4.0	0.1	3.5	0.0	3.4	0.0	2.5

Intersection Summary	
HCM 7th Control Delay, s/veh	34.0
HCM 7th LOS	C

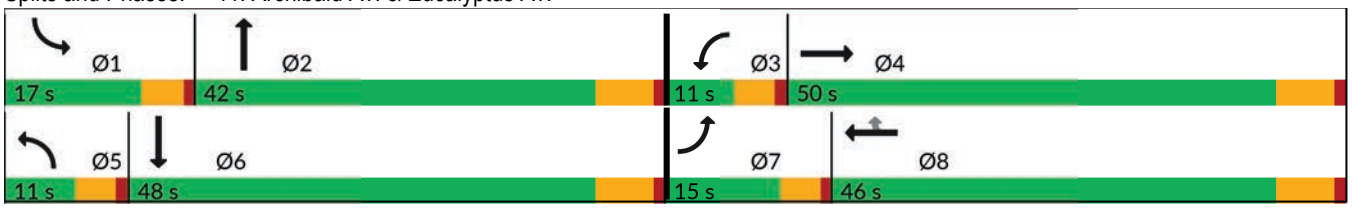
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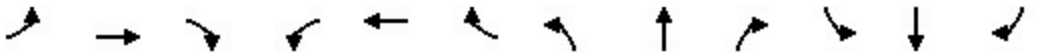
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	104	43	30	98	183	64	775	106	588
Future Volume (vph)	104	43	30	98	183	64	775	106	588
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	42.2	9.6	42.2	42.2	9.6	32.2	9.6	32.2
Total Split (s)	15.0	50.0	11.0	46.0	46.0	11.0	42.0	17.0	48.0
Total Split (%)	12.5%	41.7%	9.2%	38.3%	38.3%	9.2%	35.0%	14.2%	40.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.7	20.3	5.8	14.2	14.2	6.3	19.4	7.9	24.0
Actuated g/C Ratio	0.11	0.29	0.08	0.20	0.20	0.09	0.28	0.11	0.35
v/c Ratio	0.37	0.10	0.14	0.16	0.45	0.28	0.54	0.37	0.59
Control Delay (s/veh)	37.5	12.5	38.6	25.4	8.1	39.0	24.1	36.9	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.5	12.5	38.6	25.4	8.1	39.0	24.1	36.9	20.8
LOS	D	B	D	C	A	D	C	D	C
Approach Delay (s/veh)		26.3		16.5			25.2		22.6
Approach LOS		C		B			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 69.5	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay (s/veh): 23.0	Intersection LOS: C
Intersection Capacity Utilization 47.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 41: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	43	41	30	98	183	64	775	26	106	588	259
Future Volume (veh/h)	104	43	41	30	98	183	64	775	26	106	588	259
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.99
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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	121	50	28	35	114	111	74	901	21	123	684	248
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	222	455	234	111	587	258	180	1851	43	224	1103	393
Arrive On Green	0.08	0.21	0.21	0.04	0.17	0.17	0.06	0.30	0.30	0.08	0.31	0.31
Sat Flow, veh/h	2956	2172	1117	2956	3420	1501	2956	6269	146	2956	3558	1269
Grp Volume(v), veh/h	121	38	40	35	114	111	74	667	255	123	629	303
Grp Sat Flow(s),veh/h/ln	1478	1710	1580	1478	1710	1501	1478	1548	1771	1478	1638	1551
Q Serve(g_s), s	2.2	1.0	1.1	0.7	1.6	3.7	1.4	6.7	6.7	2.3	9.3	9.5
Cycle Q Clear(g_c), s	2.2	1.0	1.1	0.7	1.6	3.7	1.4	6.7	6.7	2.3	9.3	9.5
Prop In Lane	1.00		0.71	1.00		1.00	1.00		0.08	1.00		0.82
Lane Grp Cap(c), veh/h	222	358	331	111	587	258	180	1371	523	224	1016	481
V/C Ratio(X)	0.54	0.11	0.12	0.32	0.19	0.43	0.41	0.49	0.49	0.55	0.62	0.63
Avail Cap(c_a), veh/h	544	1325	1224	335	2408	1057	335	2942	1122	649	2423	1147
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	18.1	18.1	26.5	20.1	20.9	25.6	16.4	16.4	25.2	16.6	16.7
Incr Delay (d2), s/veh	0.8	0.1	0.2	0.6	0.2	1.1	0.6	0.3	0.7	0.8	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.4	0.4	0.2	0.6	1.2	0.4	1.9	2.2	0.7	2.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.0	18.2	18.3	27.1	20.2	22.1	26.1	16.7	17.1	26.0	17.3	18.1
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		199			260			996			1055	
Approach Delay, s/veh		22.9			21.9			17.5			18.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	22.9	6.7	18.0	8.0	23.7	8.9	15.9
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	12.4	35.8	6.4	43.8	6.4	41.8	10.4	39.8
Max Q Clear Time (g_c+I1), s	4.3	8.7	2.7	3.1	3.4	11.5	4.2	5.7
Green Ext Time (p_c), s	0.1	5.6	0.0	0.4	0.0	6.0	0.1	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	18.8
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	93	141	204	145	336	368	672	42	465	122
Future Volume (vph)	93	141	204	145	336	368	672	42	465	122
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			Free							6
Detector Phase	7	4		3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	44.8		9.6	45.8	9.6	32.5	9.6	31.5	31.5
Total Split (s)	13.8	44.8		23.0	54.0	19.0	42.1	10.1	33.2	33.2
Total Split (%)	11.5%	37.3%		19.2%	45.0%	15.8%	35.1%	8.4%	27.7%	27.7%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	None	None
Act Effct Green (s)	8.1	14.5	79.4	13.0	22.1	15.1	31.7	5.8	17.4	17.4
Actuated g/C Ratio	0.10	0.18	1.00	0.16	0.28	0.19	0.40	0.07	0.22	0.22
v/c Ratio	0.33	0.23	0.15	0.60	0.45	0.69	0.32	0.21	0.64	0.28
Control Delay (s/veh)	41.2	28.9	0.2	44.3	24.2	40.5	18.3	43.9	33.4	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.2	28.9	0.2	44.3	24.2	40.5	18.3	43.9	33.4	3.2
LOS	D	C	A	D	C	D	B	D	C	A
Approach Delay (s/veh)		18.1			29.4		25.1		28.3	
Approach LOS		B			C		C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 79.4	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay (s/veh): 25.6	Intersection LOS: C
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 42: Archibald Av. & Merrill Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	141	204	145	336	77	368	672	156	42	465	122
Future Volume (veh/h)	93	141	204	145	336	77	368	672	156	42	465	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	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	1600	1800	1800	1700	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	101	153	0	158	365	45	400	730	111	46	505	122
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	214	579		200	673	82	524	2106	311	139	784	332
Arrive On Green	0.07	0.16	0.00	0.12	0.21	0.21	0.17	0.34	0.34	0.05	0.22	0.22
Sat Flow, veh/h	3048	3600	1525	1619	3141	384	3048	6119	904	3048	3600	1525
Grp Volume(v), veh/h	101	153	0	158	208	202	400	642	199	46	505	122
Grp Sat Flow(s),veh/h/ln	1524	1800	1525	1619	1800	1725	1524	1800	1623	1524	1800	1525
Q Serve(g_s), s	1.8	2.1	0.0	5.4	5.8	5.9	7.1	5.0	5.2	0.8	7.2	3.8
Cycle Q Clear(g_c), s	1.8	2.1	0.0	5.4	5.8	5.9	7.1	5.0	5.2	0.8	7.2	3.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	214	579		200	386	370	524	1859	559	139	784	332
V/C Ratio(X)	0.47	0.26		0.79	0.54	0.55	0.76	0.35	0.36	0.33	0.64	0.37
Avail Cap(c_a), veh/h	496	2561		527	1573	1508	777	3583	1077	297	1822	772
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	20.8	0.0	24.0	19.7	19.8	22.3	13.8	13.9	26.1	20.1	18.8
Incr Delay (d2), s/veh	1.6	0.2	0.0	6.8	1.2	1.3	2.6	0.1	0.4	1.4	0.9	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.8	0.0	2.2	2.2	2.1	2.2	1.5	1.5	0.3	2.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.9	21.0	0.0	30.8	20.9	21.0	24.9	13.9	14.2	27.5	21.0	19.5
LnGrp LOS	C	C		C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		254			568			1241			673	
Approach Delay, s/veh		23.3			23.7			17.5			21.2	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	24.1	11.6	13.7	14.3	16.9	8.6	16.7
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	5.5	37.5	18.4	40.2	14.4	28.6	9.2	49.4
Max Q Clear Time (g_c+I1), s	2.8	7.2	7.4	4.1	9.1	9.2	3.8	7.9
Green Ext Time (p_c), s	0.0	5.3	0.3	0.9	0.7	3.1	0.1	2.3

Intersection Summary	
HCM 7th Control Delay, s/veh	20.2
HCM 7th LOS	C

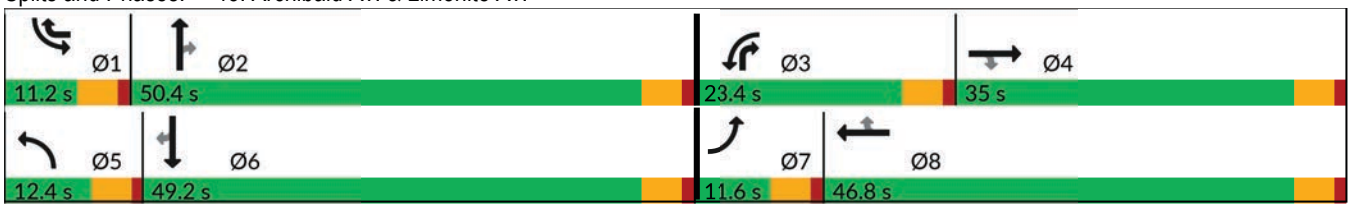
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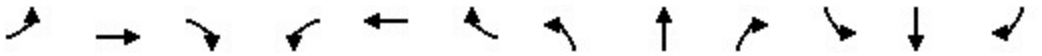
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	389	31	290	582	406	80	629	316	200	425	155
Future Volume (vph)	147	389	31	290	582	406	80	629	316	200	425	155
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.5	22.5	9.6	46.8	9.6	9.6	49.5	9.6	9.6	39.5	39.5
Total Split (s)	11.6	35.0	35.0	23.4	46.8	11.2	12.4	50.4	23.4	11.2	49.2	49.2
Total Split (%)	9.7%	29.2%	29.2%	19.5%	39.0%	9.3%	10.3%	42.0%	19.5%	9.3%	41.0%	41.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.4	17.2	17.2	13.3	23.1	30.1	6.8	24.1	42.1	6.9	26.7	26.7
Actuated g/C Ratio	0.09	0.21	0.21	0.16	0.29	0.37	0.08	0.30	0.52	0.09	0.33	0.33
v/c Ratio	0.60	0.58	0.08	0.65	0.65	0.40	0.35	0.67	0.41	0.86	0.28	0.27
Control Delay (s/veh)	50.3	33.4	0.4	41.0	28.8	11.3	44.5	28.7	9.6	71.4	22.2	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.3	33.4	0.4	41.0	28.8	11.3	44.5	28.7	9.6	71.4	22.2	5.3
LOS	D	C	A	D	C	B	D	C	A	E	C	A
Approach Delay (s/veh)		36.0			26.0			24.1			31.5	
Approach LOS		D			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 80.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 28.2	Intersection LOS: C
Intersection Capacity Utilization 63.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 43: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	389	31	290	582	406	80	629	316	200	425	155
Future Volume (veh/h)	147	389	31	290	582	406	80	629	316	200	425	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	160	423	27	315	633	373	87	684	222	217	462	88
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	231	766	342	405	967	1002	172	963	638	279	1560	484
Arrive On Green	0.08	0.22	0.22	0.14	0.28	0.28	0.06	0.28	0.28	0.09	0.32	0.32
Sat Flow, veh/h	2956	3420	1525	2956	3420	2645	2956	3420	1525	2956	4914	1524
Grp Volume(v), veh/h	160	423	27	315	633	373	87	684	222	217	462	88
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1710	1322	1478	1710	1525	1478	1638	1524
Q Serve(g_s), s	3.7	7.7	1.0	7.2	11.4	7.2	2.0	12.6	6.9	5.0	5.0	2.9
Cycle Q Clear(g_c), s	3.7	7.7	1.0	7.2	11.4	7.2	2.0	12.6	6.9	5.0	5.0	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	766	342	405	967	1002	172	963	638	279	1560	484
V/C Ratio(X)	0.69	0.55	0.08	0.78	0.65	0.37	0.50	0.71	0.35	0.78	0.30	0.18
Avail Cap(c_a), veh/h	296	1487	663	795	2064	1849	330	2240	1208	279	3134	972
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	24.0	21.4	29.1	22.1	15.8	31.9	22.6	13.8	30.9	18.0	17.3
Incr Delay (d2), s/veh	2.7	0.6	0.1	1.2	0.8	0.2	0.9	1.0	0.3	11.9	0.1	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(50%),veh/ln	1.3	2.8	0.3	2.4	4.1	1.9	0.7	4.4	2.1	2.1	1.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.1	24.7	21.5	30.4	22.8	16.0	32.8	23.6	14.2	42.9	18.1	17.5
LnGrp LOS	C	C	C	C	C	B	C	C	B	D	B	B
Approach Vol, veh/h		610			1321			993			767	
Approach Delay, s/veh		27.0			22.7			22.3			25.0	
Approach LOS		C			C			C			C	

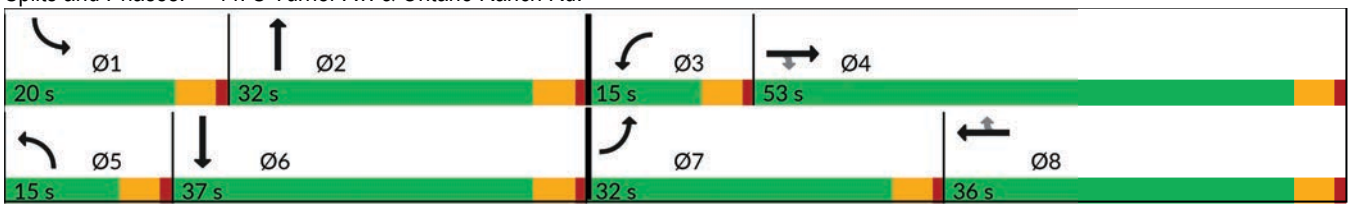
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	24.3	14.2	20.3	8.7	26.8	10.1	24.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	6.6	45.8	18.8	30.4	7.8	44.6	7.0	42.2
Max Q Clear Time (g_c+I1), s	7.0	14.6	9.2	9.7	4.0	7.0	5.7	13.4
Green Ext Time (p_c), s	0.0	5.1	0.4	2.5	0.0	3.1	0.0	6.0

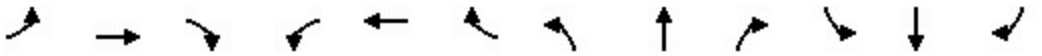
Intersection Summary	
HCM 7th Control Delay, s/veh	23.8
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	143	885	32	38	1035	48	47	110	65	52
Future Volume (vph)	143	885	32	38	1035	48	47	110	65	52
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.8	23.8	9.6	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	32.0	53.0	53.0	15.0	36.0	36.0	15.0	32.0	20.0	37.0
Total Split (%)	26.7%	44.2%	44.2%	12.5%	30.0%	30.0%	12.5%	26.7%	16.7%	30.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.9	45.3	45.3	7.3	33.6	33.6	7.6	15.3	8.8	15.7
Actuated g/C Ratio	0.16	0.51	0.51	0.08	0.38	0.38	0.09	0.17	0.10	0.18
v/c Ratio	0.66	0.56	0.05	0.34	0.89	0.08	0.40	0.66	0.47	0.37
Control Delay (s/veh)	50.3	20.2	0.1	50.9	38.5	0.2	52.2	42.6	51.7	26.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.3	20.2	0.1	50.9	38.5	0.2	52.2	42.6	51.7	26.4
LOS	D	C	A	D	D	A	D	D	D	C
Approach Delay (s/veh)		23.7			37.3			44.6		36.1
Approach LOS		C			D			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 32.2	Intersection LOS: C
Intersection Capacity Utilization 69.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	885	32	38	1035	48	47	110	64	65	52	51
Future Volume (veh/h)	143	885	32	38	1035	48	47	110	64	65	52	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	168	1041	30	45	1218	48	55	129	46	76	61	40
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	207	1772	750	68	1465	607	77	172	61	94	150	98
Arrive On Green	0.13	0.49	0.49	0.04	0.41	0.41	0.05	0.14	0.14	0.06	0.15	0.15
Sat Flow, veh/h	1619	3600	1524	1619	3600	1492	1619	1257	448	1619	1015	665
Grp Volume(v), veh/h	168	1041	30	45	1218	48	55	0	175	76	0	101
Grp Sat Flow(s),veh/h/ln	1619	1800	1524	1619	1800	1492	1619	0	1705	1619	0	1680
Q Serve(g_s), s	6.9	14.0	0.7	1.9	20.6	1.3	2.3	0.0	6.7	3.2	0.0	3.7
Cycle Q Clear(g_c), s	6.9	14.0	0.7	1.9	20.6	1.3	2.3	0.0	6.7	3.2	0.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		0.40
Lane Grp Cap(c), veh/h	207	1772	750	68	1465	607	77	0	233	94	0	248
V/C Ratio(X)	0.81	0.59	0.04	0.66	0.83	0.08	0.72	0.00	0.75	0.81	0.00	0.41
Avail Cap(c_a), veh/h	652	2561	1084	248	1662	689	248	0	687	367	0	800
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.9	12.3	8.9	32.1	18.1	12.4	31.9	0.0	28.2	31.7	0.0	26.3
Incr Delay (d2), s/veh	2.9	0.3	0.0	4.0	3.4	0.1	4.6	0.0	4.8	5.9	0.0	1.1
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(50%),veh/ln	2.6	4.5	0.2	0.7	7.7	0.4	0.9	0.0	2.8	1.3	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.8	12.6	9.0	36.1	21.5	12.4	36.5	0.0	33.0	37.6	0.0	27.4
LnGrp LOS	C	B	A	D	C	B	D		C	D		C
Approach Vol, veh/h		1239			1311			230			177	
Approach Delay, s/veh		15.2			21.6			33.9			31.8	
Approach LOS		B			C			C			C	

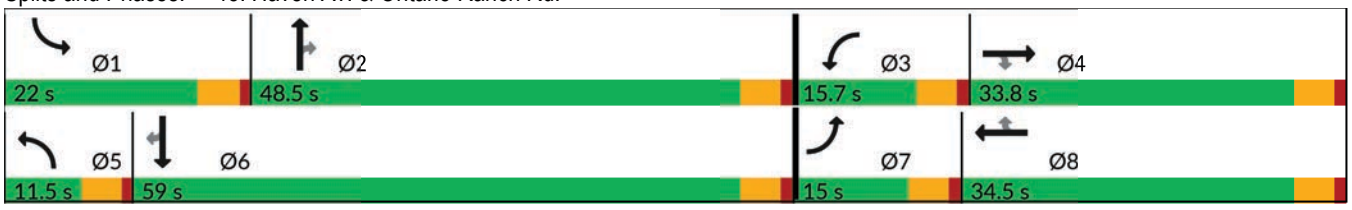
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	13.9	7.5	38.1	7.8	14.6	13.3	32.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	27.4	10.4	48.4	10.4	32.4	27.4	31.4
Max Q Clear Time (g_c+I1), s	5.2	8.7	3.9	16.0	4.3	5.7	8.9	22.6
Green Ext Time (p_c), s	0.0	0.8	0.0	8.1	0.0	0.5	0.2	5.0

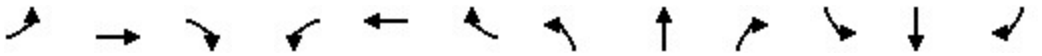
Intersection Summary	
HCM 7th Control Delay, s/veh	20.5
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	806	44	148	898	194	45	396	134	194	308	60
Future Volume (vph)	106	806	44	148	898	194	45	396	134	194	308	60
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	34.5	34.5	9.6	47.8	47.8	9.6	45.8	45.8
Total Split (s)	15.0	33.8	33.8	15.7	34.5	34.5	11.5	48.5	48.5	22.0	59.0	59.0
Total Split (%)	12.5%	28.2%	28.2%	13.1%	28.8%	28.8%	9.6%	40.4%	40.4%	18.3%	49.2%	49.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.0	24.8	24.8	9.4	24.2	24.2	6.4	29.8	29.8	16.5	42.5	42.5
Actuated g/C Ratio	0.10	0.25	0.25	0.09	0.24	0.24	0.06	0.30	0.30	0.17	0.43	0.43
v/c Ratio	0.71	0.71	0.10	0.58	0.65	0.40	0.47	0.80	0.26	0.79	0.44	0.09
Control Delay (s/veh)	71.5	39.1	0.4	55.4	37.0	7.3	65.8	44.5	5.6	64.3	23.6	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.5	39.1	0.4	55.4	37.0	7.3	65.8	44.5	5.6	64.3	23.6	1.7
LOS	E	D	A	E	D	A	E	D	A	E	C	A
Approach Delay (s/veh)		40.9			34.5			37.1			35.3	
Approach LOS		D			C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay (s/veh): 36.9	Intersection LOS: D
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 45: Haven Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	806	44	148	898	194	45	396	134	194	308	60
Future Volume (veh/h)	106	806	44	148	898	194	45	396	134	194	308	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	115	876	25	161	976	99	49	430	81	211	335	54
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	142	1234	377	229	1491	366	67	518	438	247	717	606
Arrive On Green	0.09	0.25	0.25	0.08	0.24	0.24	0.04	0.29	0.29	0.15	0.40	0.40
Sat Flow, veh/h	1619	4914	1500	2956	6192	1522	1619	1800	1522	1619	1800	1520
Grp Volume(v), veh/h	115	876	25	161	976	99	49	430	81	211	335	54
Grp Sat Flow(s),veh/h/ln	1619	1638	1500	1478	1548	1522	1619	1800	1522	1619	1800	1520
Q Serve(g_s), s	5.5	12.9	1.0	4.2	11.3	4.2	2.4	17.8	3.2	10.1	10.9	1.8
Cycle Q Clear(g_c), s	5.5	12.9	1.0	4.2	11.3	4.2	2.4	17.8	3.2	10.1	10.9	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	1234	377	229	1491	366	67	518	438	247	717	606
V/C Ratio(X)	0.81	0.71	0.07	0.70	0.65	0.27	0.73	0.83	0.18	0.86	0.47	0.09
Avail Cap(c_a), veh/h	212	1805	551	413	2329	573	141	994	841	354	1232	1040
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	27.1	22.7	35.8	27.2	24.5	37.7	26.5	21.3	32.8	17.7	14.9
Incr Delay (d2), s/veh	7.8	0.8	0.1	1.5	0.5	0.4	5.5	3.5	0.2	9.6	0.5	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(50%),veh/ln	2.3	4.6	0.3	1.4	3.8	1.4	1.0	7.4	1.0	4.3	4.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.4	27.9	22.7	37.3	27.7	24.9	43.1	30.0	21.5	42.4	18.1	15.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		1016			1236			560			600	
Approach Delay, s/veh		29.5			28.7			29.9			26.4	
Approach LOS		C			C			C			C	

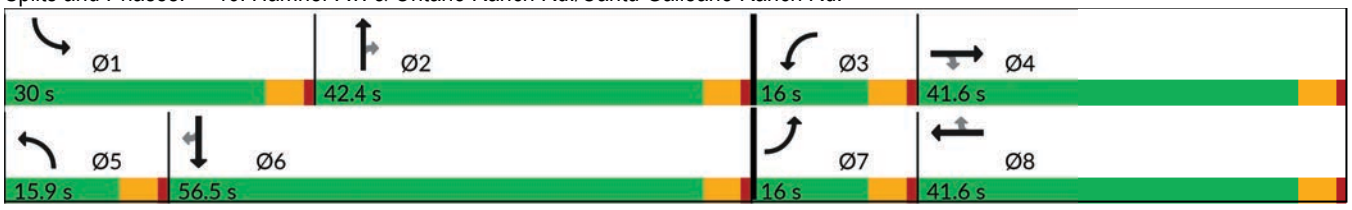
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	27.5	10.7	24.6	7.9	36.3	11.6	23.7
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	17.4	43.9	11.1	29.2	6.9	54.4	10.4	29.9
Max Q Clear Time (g_c+I1), s	12.1	19.8	6.2	14.9	4.4	12.9	7.5	13.3
Green Ext Time (p_c), s	0.1	2.7	0.1	4.7	0.0	2.1	0.0	5.7

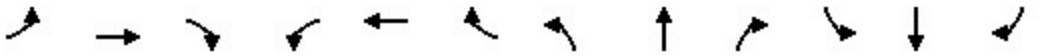
Intersection Summary	
HCM 7th Control Delay, s/veh	28.8
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	1232	104	239	672	166	132	647	389	548	346	180
Future Volume (vph)	233	1232	104	239	672	166	132	647	389	548	346	180
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6
Total Split (s)	16.0	41.6	41.6	16.0	41.6	41.6	15.9	42.4	42.4	30.0	56.5	56.5
Total Split (%)	12.3%	32.0%	32.0%	12.3%	32.0%	32.0%	12.2%	32.6%	32.6%	23.1%	43.5%	43.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.5	35.0	35.0	11.5	35.1	35.1	9.3	26.4	26.4	25.2	42.3	42.3
Actuated g/C Ratio	0.10	0.30	0.30	0.10	0.30	0.30	0.08	0.23	0.23	0.22	0.36	0.36
v/c Ratio	0.83	0.86	0.19	0.85	0.47	0.30	0.58	0.60	0.82	0.89	0.20	0.28
Control Delay (s/veh)	77.0	46.4	4.4	79.1	35.4	6.4	63.8	42.5	36.5	62.7	26.0	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.0	46.4	4.4	79.1	35.4	6.4	63.8	42.5	36.5	62.7	26.0	4.6
LOS	E	D	A	E	D	A	E	D	D	E	C	A
Approach Delay (s/veh)		48.1			40.6			42.9			41.1	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 116.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 43.7	Intersection LOS: D
Intersection Capacity Utilization 80.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 46: Hamner Av. & Ontario Ranch Rd./Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	1232	104	239	672	166	132	647	389	548	346	180
Future Volume (veh/h)	233	1232	104	239	672	166	132	647	389	548	346	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	240	1270	35	246	693	105	136	667	311	565	357	161
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	286	1446	449	286	1447	449	183	1210	375	610	1918	588
Arrive On Green	0.10	0.29	0.29	0.10	0.29	0.29	0.06	0.25	0.25	0.21	0.39	0.39
Sat Flow, veh/h	2956	4914	1525	2956	4914	1525	2956	4914	1525	2956	4914	1506
Grp Volume(v), veh/h	240	1270	35	246	693	105	136	667	311	565	357	161
Grp Sat Flow(s),veh/h/ln	1478	1638	1525	1478	1638	1525	1478	1638	1525	1478	1638	1506
Q Serve(g_s), s	9.4	28.9	2.0	9.6	13.6	6.1	5.3	13.9	22.7	22.1	5.6	8.6
Cycle Q Clear(g_c), s	9.4	28.9	2.0	9.6	13.6	6.1	5.3	13.9	22.7	22.1	5.6	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	286	1446	449	286	1447	449	183	1210	375	610	1918	588
V/C Ratio(X)	0.84	0.88	0.08	0.86	0.48	0.23	0.74	0.55	0.83	0.93	0.19	0.27
Avail Cap(c_a), veh/h	286	1545	480	286	1545	480	284	1578	490	638	2167	664
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	39.5	30.0	52.4	34.1	31.5	54.3	38.7	42.0	45.8	23.6	24.5
Incr Delay (d2), s/veh	18.4	5.8	0.1	21.3	0.2	0.3	2.2	0.4	8.9	18.7	0.0	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(50%),veh/ln	4.1	11.7	0.7	4.3	5.2	2.2	2.0	5.4	9.0	9.3	2.1	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	70.6	45.4	30.1	73.6	34.4	31.7	56.5	39.1	50.9	64.6	23.6	24.7
LnGrp LOS	E	D	C	E	C	C	E	D	D	E	C	C
Approach Vol, veh/h		1545			1044			1114			1083	
Approach Delay, s/veh		48.9			43.3			44.5			45.2	
Approach LOS		D			D			D			D	

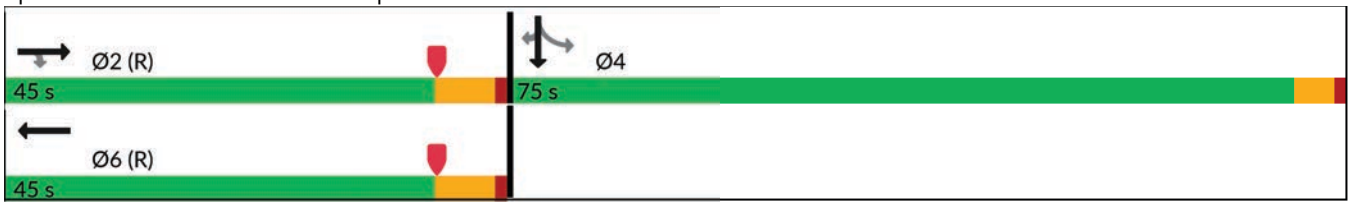
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.9	33.6	16.0	39.2	11.9	50.5	16.0	39.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	25.4	37.8	11.4	37.0	11.3	51.9	11.4	37.0
Max Q Clear Time (g_c+I1), s	24.1	24.7	11.6	30.9	7.3	10.6	11.4	15.6
Green Ext Time (p_c), s	0.2	4.3	0.0	3.7	0.1	2.8	0.0	4.4

Intersection Summary	
HCM 7th Control Delay, s/veh	45.8
HCM 7th LOS	D

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1105	579	625	225	276	0	1156
Future Volume (vph)	1105	579	625	225	276	0	1156
Turn Type	NA	Perm	NA	Free	Perm	NA	Perm
Protected Phases	2		6			4	
Permitted Phases		2		Free	4		4
Detector Phase	2	2	6		4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	45.0	45.0	45.0		75.0	75.0	75.0
Total Split (%)	37.5%	37.5%	37.5%		62.5%	62.5%	62.5%
Yellow Time (s)	5.5	5.5	5.5		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5		4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Min	C-Min	C-Min		Min	Min	Min
Act Effct Green (s)	52.2	52.2	52.2	120.0	56.7	56.7	56.7
Actuated g/C Ratio	0.44	0.44	0.44	1.00	0.47	0.47	0.47
v/c Ratio	0.48	0.60	0.41	0.15	0.33	0.79	0.79
Control Delay (s/veh)	27.0	5.3	38.0	0.2	19.6	29.9	29.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.0	5.3	38.0	0.2	19.6	29.9	29.9
LOS	C	A	D	A	B	C	C
Approach Delay (s/veh)	19.5		28.0			28.1	
Approach LOS	B		C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 37.5 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay (s/veh): 24.4	Intersection LOS: C
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 47: I-15 SB Ramps & Cantu Galleano Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	1105	579	0	625	225	0	0	0	276	0	1156
Future Volume (veh/h)	0	1105	579	0	625	225	0	0	0	276	0	1156
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
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	0	1800	1800	0	1800	1800				1700	1800	1800
Adj Flow Rate, veh/h	0	1128	0	0	638	0				188	0	1058
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2799		0	1866					630	0	1188
Arrive On Green	0.00	0.52	0.00	0.00	0.69	0.00				0.39	0.00	0.39
Sat Flow, veh/h	0	5400	1525	0	3600	1525				1619	0	3051
Grp Volume(v), veh/h	0	1128	0	0	638	0				188	0	1058
Grp Sat Flow(s),veh/h/ln	0	1800	1525	0	1800	1525				1619	0	1525
Q Serve(g_s), s	0.0	15.3	0.0	0.0	8.6	0.0				9.6	0.0	38.9
Cycle Q Clear(g_c), s	0.0	15.3	0.0	0.0	8.6	0.0				9.6	0.0	38.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2799		0	1866					630	0	1188
V/C Ratio(X)	0.00	0.40		0.00	0.34					0.30	0.00	0.89
Avail Cap(c_a), veh/h	0	2799		0	1866					950	0	1790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.39	0.00	0.00	0.87	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.6	0.0	0.0	10.3	0.0				25.3	0.0	34.3
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.4	0.0				0.3	0.0	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 BackOfQ(50%),veh/ln	0.0	5.8	0.0	0.0	2.9	0.0				3.6	0.0	14.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	17.8	0.0	0.0	10.8	0.0				25.6	0.0	38.4
LnGrp LOS		B			B					C		D
Approach Vol, veh/h		1128			638						1246	
Approach Delay, s/veh		17.8			10.8						36.4	
Approach LOS		B			B						D	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	68.7	51.3	68.7
Change Period (Y+Rc), s	6.5	4.6	6.5
Max Green Setting (Gmax), s	38.5	70.4	38.5
Max Q Clear Time (g_c+I1), s	17.3	40.9	10.6
Green Ext Time (p_c), s	7.1	5.8	3.9

Intersection Summary	
HCM 7th Control Delay, s/veh	24.0
HCM 7th LOS	C

Notes

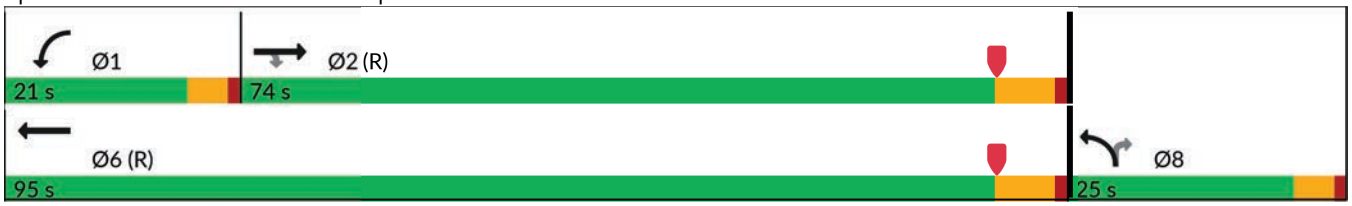
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	484	893	293	376	415	243
Future Volume (vph)	484	893	293	376	415	243
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	61.3	61.3	11.0	22.5	22.5	22.5
Total Split (s)	74.0	74.0	21.0	95.0	25.0	25.0
Total Split (%)	61.7%	61.7%	17.5%	79.2%	20.8%	20.8%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.6	4.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	67.3	67.3	15.6	87.5	21.4	21.4
Actuated g/C Ratio	0.56	0.56	0.13	0.73	0.18	0.18
v/c Ratio	0.16	0.82	0.76	0.10	0.81	0.47
Control Delay (s/veh)	8.0	28.3	63.7	5.0	58.3	9.4
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.0	28.7	63.7	5.0	58.3	9.4
LOS	A	C	E	A	E	A
Approach Delay (s/veh)	21.4			30.7	43.1	
Approach LOS	C			C	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 44.8 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay (s/veh): 29.0	Intersection LOS: C
Intersection Capacity Utilization 84.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 48: I-15 NB Ramps & Cantu Galleano Ranch Rd.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	484	893	293	376	415	243
Future Volume (veh/h)	484	893	293	376	415	243
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		0.98	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	1800	1800	1600	1800	1700	1800
Adj Flow Rate, veh/h	499	776	302	388	428	175
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	3247	897	354	4082	491	231
Arrive On Green	1.00	1.00	0.12	0.76	0.15	0.15
Sat Flow, veh/h	5400	1492	3048	5400	3238	1525
Grp Volume(v), veh/h	499	776	302	388	428	175
Grp Sat Flow(s),veh/h/ln	1800	1492	1524	1800	1619	1525
Q Serve(g_s), s	0.0	0.0	11.7	2.3	15.5	13.2
Cycle Q Clear(g_c), s	0.0	0.0	11.7	2.3	15.5	13.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3247	897	354	4082	491	231
V/C Ratio(X)	0.15	0.87	0.85	0.10	0.87	0.76
Avail Cap(c_a), veh/h	3247	897	417	4082	550	259
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	52.0	3.9	49.8	48.8
Incr Delay (d2), s/veh	0.1	9.8	13.9	0.0	13.2	10.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.5	4.9	0.6	7.0	5.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.1	9.8	65.9	3.9	62.9	59.6
LnGrp LOS	A	A	E	A	E	E
Approach Vol, veh/h	1275			690	603	
Approach Delay, s/veh	6.0			31.0	62.0	
Approach LOS	A			C	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	18.5	78.7				97.2	22.8
Change Period (Y+Rc), s	4.6	6.5				6.5	4.6
Max Green Setting (Gmax), s	16.4	67.5				88.5	20.4
Max Q Clear Time (g_c+I1), s	13.7	2.0				4.3	17.5
Green Ext Time (p_c), s	0.3	7.5				2.4	0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	25.9
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	8	3	2	20
Future Vol, veh/h	1	0	8	3	2	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	9	3	2	22

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	36	6	0	0	12	0
Stage 1	10	-	-	-	-	-
Stage 2	26	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	979	1081	-	-	1620	-
Stage 1	1017	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	978	1081	-	-	1620	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	1000	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.81	0	0.66
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	946	1620	-
HCM Lane V/C Ratio	-	-	0.001	0.001	-
HCM Ctrl Dly (s/v)	-	-	8.8	7.2	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	1	10	10	4	17
Future Vol, veh/h	5	1	10	10	4	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	1	11	11	4	18

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	43	11	0	0	22	0
Stage 1	16	-	-	-	-	-
Stage 2	27	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	970	1074	-	-	1607	-
Stage 1	1010	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	967	1074	-	-	1607	-
Mov Cap-2 Maneuver	940	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.77	0	1.38
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	960	1607	-
HCM Lane V/C Ratio	-	-	0.007	0.003	-
HCM Ctrl Dly (s/v)	-	-	8.8	7.2	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	3	17	11	11	11
Future Vol, veh/h	3	3	17	11	11	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	3	18	12	12	12

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	60	15	0	0	30	0
Stage 1	24	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	948	1067	-	-	1595	-
Stage 1	1001	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	941	1067	-	-	1595	-
Mov Cap-2 Maneuver	925	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	984	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.66	0	3.64
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	991	1595	-
HCM Lane V/C Ratio	-	-	0.007	0.007	-
HCM Ctrl Dly (s/v)	-	-	8.7	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	5.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	3	8	1	2	5
Future Vol, veh/h	2	3	8	1	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	3	9	1	2	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	5	0	22	4
Stage 1	-	-	-	-	4	-
Stage 2	-	-	-	-	18	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1629	-	999	1086
Stage 1	-	-	-	-	1025	-
Stage 2	-	-	-	-	1009	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1629	-	994	1086
Mov Cap-2 Maneuver	-	-	-	-	994	-
Stage 1	-	-	-	-	1025	-
Stage 2	-	-	-	-	1004	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	6.42	8.43
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1058	-	-	1600	-
HCM Lane V/C Ratio	0.007	-	-	0.005	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	375	443	34	12	2
Future Vol, veh/h	8	375	443	34	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	408	482	37	13	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	518	0	-	0	925	500
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	425	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1058	-	-	-	301	575
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	664	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1058	-	-	-	299	575
Mov Cap-2 Maneuver	-	-	-	-	495	-
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	664	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.18	0	12.35
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1058	-	-	-	505
HCM Lane V/C Ratio	0.008	-	-	-	0.03
HCM Ctrl Dly (s/v)	8.4	-	-	-	12.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	2	8	8	1	4
Future Vol, veh/h	5	2	8	8	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	2	9	9	1	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	8	0	33	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	26	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1626	-	986	1082
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1002	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1626	-	981	1082
Mov Cap-2 Maneuver	-	-	-	-	981	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.61	8.41
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1060	-	-	900	-
HCM Lane V/C Ratio	0.005	-	-	0.005	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	96	0	17	3	94	134	30	157	1
Future Vol, veh/h	0	0	1	96	0	17	3	94	134	30	157	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	1	104	0	18	3	102	146	33	171	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	345	491	171	417	418	175	172	0	0	248	0	0
Stage 1	236	236	-	182	182	-	-	-	-	-	-	-
Stage 2	109	254	-	236	237	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	613	481	878	549	529	874	1418	-	-	1330	-	-
Stage 1	771	713	-	825	753	-	-	-	-	-	-	-
Stage 2	902	700	-	772	713	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	582	467	878	532	513	874	1418	-	-	1330	-	-
Mov Cap-2 Maneuver	582	467	-	532	513	-	-	-	-	-	-	-
Stage 1	750	694	-	823	751	-	-	-	-	-	-	-
Stage 2	880	699	-	750	693	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.11	13.12	0.1	1.24
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	21	-	-	878	566	287	-	-
HCM Lane V/C Ratio	0.002	-	-	0.001	0.217	0.025	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	9.1	13.1	7.8	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.8	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	6	4	0	1	11	229	6	3	244	6
Future Vol, veh/h	2	0	6	4	0	1	11	229	6	3	244	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	0	7	4	0	1	12	249	7	3	265	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	548	554	268	548	554	252	272	0	0	255	0	0
Stage 1	275	275	-	276	276	-	-	-	-	-	-	-
Stage 2	273	279	-	272	278	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	450	443	775	450	443	791	1303	-	-	1321	-	-
Stage 1	736	686	-	735	685	-	-	-	-	-	-	-
Stage 2	738	683	-	739	684	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	444	437	775	440	437	791	1303	-	-	1321	-	-
Mov Cap-2 Maneuver	444	437	-	440	437	-	-	-	-	-	-	-
Stage 1	733	684	-	727	678	-	-	-	-	-	-	-
Stage 2	729	676	-	730	682	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	10.59	12.53	0.35	0.09
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	80	-	-	653	483	21	-	-
HCM Lane V/C Ratio	0.009	-	-	0.013	0.011	0.002	-	-
HCM Ctrl Dly (s/v)	7.8	0	-	10.6	12.5	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	3	1	0	1	10	244	5	5	239	9
Future Vol, veh/h	2	0	3	1	0	1	10	244	5	5	239	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	0	3	1	0	1	11	265	5	5	260	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	563	568	265	560	570	268	270	0	0	271	0	0
Stage 1	276	276	-	290	290	-	-	-	-	-	-	-
Stage 2	287	292	-	271	280	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	440	435	779	442	434	776	1306	-	-	1304	-	-
Stage 1	735	686	-	722	676	-	-	-	-	-	-	-
Stage 2	725	674	-	740	682	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	433	429	779	434	428	776	1306	-	-	1304	-	-
Mov Cap-2 Maneuver	433	429	-	434	428	-	-	-	-	-	-	-
Stage 1	731	682	-	715	670	-	-	-	-	-	-	-
Stage 2	717	668	-	733	679	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.15	11.5	0.3	0.15
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	69	-	-	590	556	35	-	-
HCM Lane V/C Ratio	0.008	-	-	0.009	0.004	0.004	-	-
HCM Ctrl Dly (s/v)	7.8	0	-	11.2	11.5	7.8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	17	8	12	9	6
Future Vol, veh/h	12	17	8	12	9	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	18	9	13	10	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	32	0	53	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	30	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1594	-	961	1061
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1594	-	955	1061
Mov Cap-2 Maneuver	-	-	-	-	955	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	2.91	8.68
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	995	-	-	720	-
HCM Lane V/C Ratio	0.016	-	-	0.005	-
HCM Ctrl Dly (s/v)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	340	634	19	3	4
Future Vol, veh/h	7	340	634	19	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	370	689	21	3	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	710	0	-	0	1084	699
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	385	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	899	-	-	-	242	443
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	692	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	899	-	-	-	240	443
Mov Cap-2 Maneuver	-	-	-	-	427	-
Stage 1	-	-	-	-	492	-
Stage 2	-	-	-	-	692	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.18	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	899	-	-	-	436
HCM Lane V/C Ratio	0.008	-	-	-	0.017
HCM Ctrl Dly (s/v)	9	-	-	-	13.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	16	2	8	19	1	3
Future Vol, veh/h	16	2	8	19	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	2	9	21	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	57	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1610	-	956	1066
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	990	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1610	-	951	1066
Mov Cap-2 Maneuver	-	-	-	-	951	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	984	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	2.15	8.49
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1034	-	-	533	-
HCM Lane V/C Ratio	0.004	-	-	0.005	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	328	647	16	6	6
Future Vol, veh/h	16	328	647	16	6	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	357	703	17	7	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	721	0	-	0	1103	712
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	391	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	890	-	-	-	236	436
Stage 1	-	-	-	-	490	-
Stage 2	-	-	-	-	688	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	890	-	-	-	231	436
Mov Cap-2 Maneuver	-	-	-	-	418	-
Stage 1	-	-	-	-	480	-
Stage 2	-	-	-	-	688	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.42	0	13.71
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	890	-	-	-	427
HCM Lane V/C Ratio	0.02	-	-	-	0.031
HCM Ctrl Dly (s/v)	9.1	-	-	-	13.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	16	2	9	26	3	4
Future Vol, veh/h	16	2	9	26	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	2	10	28	3	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	66	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	48	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1610	-	944	1066
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1610	-	938	1066
Mov Cap-2 Maneuver	-	-	-	-	938	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	974	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.86	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1007	-	-	463	-
HCM Lane V/C Ratio	0.008	-	-	0.006	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	321	657	32	6	7
Future Vol, veh/h	12	321	657	32	6	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	349	714	35	7	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	749	0	-	0	1107	732
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	375	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	869	-	-	-	235	425
Stage 1	-	-	-	-	480	-
Stage 2	-	-	-	-	699	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	869	-	-	-	231	425
Mov Cap-2 Maneuver	-	-	-	-	414	-
Stage 1	-	-	-	-	473	-
Stage 2	-	-	-	-	699	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.33	0	13.87
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	869	-	-	-	420
HCM Lane V/C Ratio	0.015	-	-	-	0.034
HCM Ctrl Dly (s/v)	9.2	-	-	-	13.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	1	5	33	1	1
Future Vol, veh/h	18	1	5	33	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	20	1	5	36	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	67	20
Stage 1	-	-	-	-	20	-
Stage 2	-	-	-	-	47	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1608	-	943	1064
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1608	-	940	1064
Mov Cap-2 Maneuver	-	-	-	-	940	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	977	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.95	8.62
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	998	-	-	237	-
HCM Lane V/C Ratio	0.002	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	17	2	1	37	1	1
Future Vol, veh/h	17	2	1	37	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	18	2	1	40	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	62	20
Stage 1	-	-	-	-	20	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1608	-	949	1064
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1608	-	949	1064
Mov Cap-2 Maneuver	-	-	-	-	949	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	985	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.19	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1003	-	-	47	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	0	3	38	0	0
Future Vol, veh/h	18	0	3	38	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	20	0	3	41	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	67	20
Stage 1	-	-	-	-	20	-
Stage 2	-	-	-	-	48	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1610	-	943	1064
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1610	-	941	1064
Mov Cap-2 Maneuver	-	-	-	-	941	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	978	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.53	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	132	-
HCM Lane V/C Ratio	-	-	-	0.002	-
HCM Ctrl Dly (s/v)	0	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	0	0	2	28	369	0	0	448	0
Future Vol, veh/h	0	0	2	0	0	2	28	369	0	0	448	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	2	0	0	2	30	401	0	0	487	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	748	949	243	705	949	201	487	0	0	401	0	0
Stage 1	487	487	-	462	462	-	-	-	-	-	-	-
Stage 2	261	462	-	243	487	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	304	263	763	327	263	813	1087	-	-	1169	-	-
Stage 1	536	554	-	554	568	-	-	-	-	-	-	-
Stage 2	727	568	-	744	554	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	295	255	763	317	255	813	1087	-	-	1169	-	-
Mov Cap-2 Maneuver	408	369	-	419	362	-	-	-	-	-	-	-
Stage 1	536	554	-	539	552	-	-	-	-	-	-	-
Stage 2	704	552	-	742	554	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.73	9.44	0.59	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1087	-	-	763	813	1169	-	-
HCM Lane V/C Ratio	0.028	-	-	0.003	0.003	-	-	-
HCM Ctrl Dly (s/v)	8.4	-	-	9.7	9.4	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	0	0	2	0	369	0	0	448	0
Future Vol, veh/h	0	0	2	0	0	2	0	369	0	0	448	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	2	0	0	2	0	401	0	0	487	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	243	-	-	201	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	763	0	0	813	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	763	-	-	813	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.73	9.44	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	763	813	-	-
HCM Lane V/C Ratio	-	-	0.003	0.003	-	-
HCM Ctrl Dly (s/v)	-	-	9.7	9.4	-	-
HCM Lane LOS	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	26	5	0	15	1	0
Future Vol, veh/h	26	5	0	15	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	28	5	0	16	1	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	34	0	47	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1591	-	968	1049
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	1012	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1591	-	968	1049
Mov Cap-2 Maneuver	-	-	-	-	968	-
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	1012	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	8.72
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	968	-	-	1591	-
HCM Lane V/C Ratio	0.001	-	-	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	25	1	4	15	0	3
Future Vol, veh/h	25	1	4	15	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	27	1	4	16	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	28	0	53	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	25	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1598	-	961	1053
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	1003	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1598	-	958	1053
Mov Cap-2 Maneuver	-	-	-	-	958	-
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	1000	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.53	8.43
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1053	-	-	379	-
HCM Lane V/C Ratio	0.003	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	496	773	22	4	10
Future Vol, veh/h	29	496	773	22	4	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	539	840	24	4	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	864	0	-	0	1454	852
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	602	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	787	-	-	-	145	362
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	551	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	787	-	-	-	139	362
Mov Cap-2 Maneuver	-	-	-	-	333	-
Stage 1	-	-	-	-	404	-
Stage 2	-	-	-	-	551	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.54	0	15.64
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	787	-	-	-	353
HCM Lane V/C Ratio	0.04	-	-	-	0.043
HCM Ctrl Dly (s/v)	9.8	-	-	-	15.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	23	6	5	16	3	3
Future Vol, veh/h	23	6	5	16	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	7	5	17	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	32	0	57	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	28	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1594	-	956	1053
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1594	-	953	1053
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.73	8.62
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	429	-
HCM Lane V/C Ratio	0.007	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	19	5	6	20	2	3
Future Vol, veh/h	19	5	6	20	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	21	5	7	22	2	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	26	0	58	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	35	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1601	-	954	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	993	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1601	-	950	1059
Mov Cap-2 Maneuver	-	-	-	-	950	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	989	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.67	8.57
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1013	-	-	415	-
HCM Lane V/C Ratio	0.005	-	-	0.004	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	485	789	22	8	5
Future Vol, veh/h	15	485	789	22	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	527	858	24	9	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	882	0	-	0	1429	870
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	560	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	776	-	-	-	150	354
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	576	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	776	-	-	-	147	354
Mov Cap-2 Maneuver	-	-	-	-	339	-
Stage 1	-	-	-	-	405	-
Stage 2	-	-	-	-	576	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.29	0	15.89
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	776	-	-	-	345
HCM Lane V/C Ratio	0.021	-	-	-	0.041
HCM Ctrl Dly (s/v)	9.7	-	-	-	15.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	19	3	9	25	2	5
Future Vol, veh/h	19	3	9	25	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	21	3	10	27	2	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	24	0	69	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	47	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1604	-	941	1061
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1604	-	935	1061
Mov Cap-2 Maneuver	-	-	-	-	935	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	975	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.92	8.55
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1021	-	-	476	-
HCM Lane V/C Ratio	0.007	-	-	0.006	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	477	806	13	2	5
Future Vol, veh/h	16	477	806	13	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	518	876	14	2	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	890	0	-	0	1436	883
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	553	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	770	-	-	-	148	348
Stage 1	-	-	-	-	407	-
Stage 2	-	-	-	-	580	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	770	-	-	-	145	348
Mov Cap-2 Maneuver	-	-	-	-	336	-
Stage 1	-	-	-	-	398	-
Stage 2	-	-	-	-	580	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.32	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	770	-	-	-	344
HCM Lane V/C Ratio	0.023	-	-	-	0.022
HCM Ctrl Dly (s/v)	9.8	-	-	-	15.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	3	418	449	2
Future Vol, veh/h	0	1	3	418	449	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	3	454	488	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	950	489	490	0	-	0
Stage 1	489	-	-	-	-	-
Stage 2	461	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	291	583	1084	-	-	-
Stage 1	621	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	290	583	1084	-	-	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.19	0.06	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1084	-	583	-	-
HCM Lane V/C Ratio	0.003	-	0.002	-	-
HCM Ctrl Dly (s/v)	8.3	-	11.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	1	4	417	440	10
Future Vol, veh/h	5	1	4	417	440	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	1	4	453	478	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	946	484	489	0	-	0
Stage 1	484	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	293	587	1085	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	292	587	1085	-	-	-
Mov Cap-2 Maneuver	491	-	-	-	-	-
Stage 1	622	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.23	0.08	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1085	-	505	-	-
HCM Lane V/C Ratio	0.004	-	0.013	-	-
HCM Ctrl Dly (s/v)	8.3	-	12.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	5	420	438	3
Future Vol, veh/h	1	1	5	420	438	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	1	5	457	476	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	945	478	479	0	-	0
Stage 1	478	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	293	592	1094	-	-	-
Stage 1	628	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	292	592	1094	-	-	-
Mov Cap-2 Maneuver	491	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	635	-	-	-	-	-

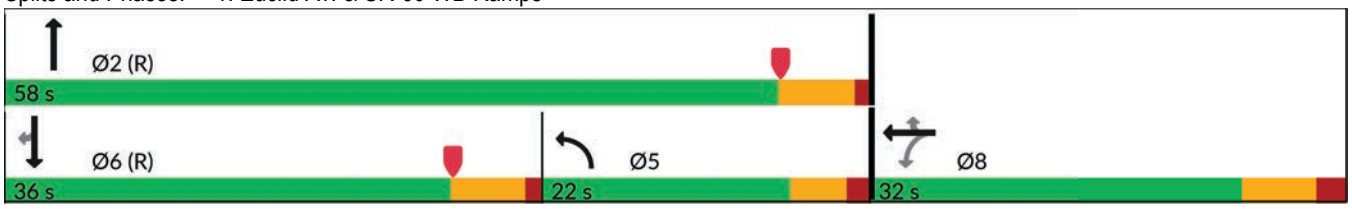
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.74	0.1	0
HCM LOS	B		

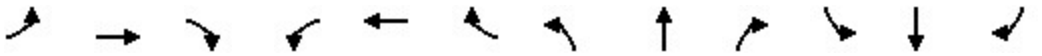
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1094	-	537	-	-
HCM Lane V/C Ratio	0.005	-	0.004	-	-
HCM Ctrl Dly (s/v)	8.3	-	11.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	684	0	437	329	935	914	502
Future Volume (vph)	684	0	437	329	935	914	502
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.0	17.0	17.0	15.2	28.0	27.0	27.0
Total Split (s)	32.0	32.0	32.0	22.0	58.0	36.0	36.0
Total Split (%)	35.6%	35.6%	35.6%	24.4%	64.4%	40.0%	40.0%
Yellow Time (s)	5.0	5.0	5.0	3.7	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	1.5	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	5.2	6.0	6.0	6.0
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	25.0	25.0	25.0	16.8	52.0	30.0	30.0
Actuated g/C Ratio	0.28	0.28	0.28	0.19	0.58	0.33	0.33
v/c Ratio	0.97	0.81	0.78	1.16	0.50	0.85	0.63
Control Delay (s/veh)	71.9	36.6	33.7	129.5	19.4	36.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Total Delay (s/veh)	71.9	36.6	33.7	129.5	20.0	36.9	5.9
LOS	E	D	C	F	C	D	A
Approach Delay (s/veh)		48.0			48.5	25.9	
Approach LOS		D			D	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 30.8 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay (s/veh): 39.9	Intersection LOS: D
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: Euclid Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	684	0	437	329	935	0	0	914	502
Future Volume (veh/h)	0	0	0	684	0	437	329	935	0	0	914	502
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		0.97
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				1700	1800	1800	1700	1800	0	0	1800	1800
Adj Flow Rate, veh/h				831	0	221	350	995	0	0	972	270
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				893	0	415	309	1983	0	0	1101	478
Arrive On Green				0.28	0.00	0.28	0.06	0.19	0.00	0.00	0.32	0.32
Sat Flow, veh/h				3238	0	1506	1619	3510	0	0	3510	1484
Grp Volume(v), veh/h				831	0	221	350	995	0	0	972	270
Grp Sat Flow(s),veh/h/ln				1619	0	1506	1619	1710	0	0	1710	1484
Q Serve(g_s), s				22.5	0.0	11.2	17.2	23.4	0.0	0.0	24.2	13.6
Cycle Q Clear(g_c), s				22.5	0.0	11.2	17.2	23.4	0.0	0.0	24.2	13.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				893	0	415	309	1983	0	0	1101	478
V/C Ratio(X)				0.93	0.00	0.53	1.13	0.50	0.00	0.00	0.88	0.57
Avail Cap(c_a), veh/h				899	0	418	309	1983	0	0	1140	495
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	0.00	1.00	0.31	0.31	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.8	0.0	27.7	42.2	24.8	0.0	0.0	28.9	25.3
Incr Delay (d2), s/veh				16.0	0.0	1.7	71.8	0.3	0.0	0.0	10.3	4.8
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 BackOfQ(50%),veh/ln				10.5	0.0	4.1	13.5	10.6	0.0	0.0	10.7	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				47.7	0.0	29.4	113.9	25.0	0.0	0.0	39.2	30.1
LnGrp LOS				D		C	F	C			D	C
Approach Vol, veh/h					1052			1345			1242	
Approach Delay, s/veh					43.9			48.2			37.2	
Approach LOS					D			D			D	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	58.2		23.2	35.0		31.8						
Change Period (Y+Rc), s	6.0		6.0	* 6		7.0						
Max Green Setting (Gmax), s	52.0		16.8	* 30		25.0						
Max Q Clear Time (g_c+I1), s	25.4		19.2	26.2		24.5						
Green Ext Time (p_c), s	10.1		0.0	2.7		0.3						

Intersection Summary	
HCM 7th Control Delay, s/veh	43.2
HCM 7th LOS	D

Notes

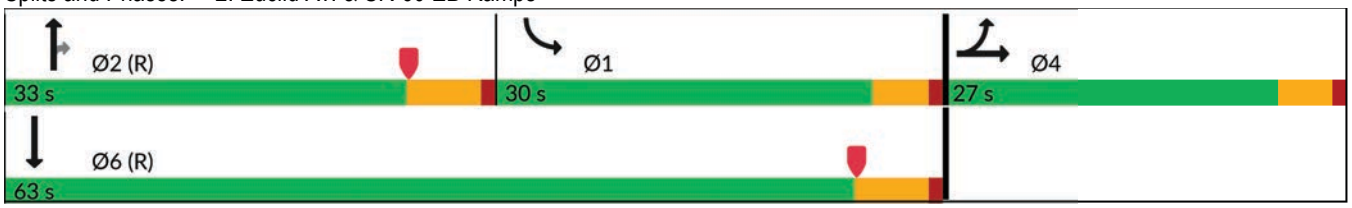
User approved volume balancing among the lanes for turning movement.

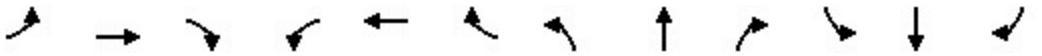
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	303	1	964	564	327	1269
Future Volume (vph)	303	1	964	564	327	1269
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	29.0	29.0	14.7	27.0
Total Split (s)	27.0	27.0	33.0	33.0	30.0	63.0
Total Split (%)	30.0%	30.0%	36.7%	36.7%	33.3%	70.0%
Yellow Time (s)	3.6	3.6	5.0	5.0	3.7	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	24.7	24.7	27.4	27.4	22.5	54.7
Actuated g/C Ratio	0.27	0.27	0.30	0.30	0.25	0.61
v/c Ratio	0.67	0.93	0.96	0.68	0.84	0.64
Control Delay (s/veh)	39.6	58.5	52.6	6.9	30.0	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	39.6	58.5	52.6	6.9	30.0	6.1
LOS	D	E	D	A	C	A
Approach Delay (s/veh)		50.8	35.7			11.0
Approach LOS		D	D			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 28.0	Intersection LOS: C
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	303	1	368	0	0	0	0	964	564	327	1269	0
Future Volume (veh/h)	303	1	368	0	0	0	0	964	564	327	1269	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99				1.00		0.97	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	1700	1800	1800				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	316	1	325				0	1004	431	341	1322	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	386	1	358				0	1026	445	448	2201	0
Arrive On Green	0.24	0.24	0.24				0.00	0.30	0.30	0.28	0.64	0.00
Sat Flow, veh/h	1619	5	1500				0	3510	1485	1619	3510	0
Grp Volume(v), veh/h	316	0	326				0	1004	431	341	1322	0
Grp Sat Flow(s),veh/h/ln	1619	0	1505				0	1710	1485	1619	1710	0
Q Serve(g_s), s	16.6	0.0	19.0				0.0	26.2	25.8	17.4	20.2	0.0
Cycle Q Clear(g_c), s	16.6	0.0	19.0				0.0	26.2	25.8	17.4	20.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	386	0	359				0	1026	445	448	2201	0
V/C Ratio(X)	0.82	0.00	0.91				0.00	0.98	0.97	0.76	0.60	0.00
Avail Cap(c_a), veh/h	403	0	374				0	1026	445	455	2201	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	1.00				0.00	0.81	0.81	0.33	0.33	0.00
Uniform Delay (d), s/veh	32.4	0.0	33.3				0.0	31.2	31.1	29.8	9.3	0.0
Incr Delay (d2), s/veh	12.1	0.0	24.7				0.0	20.7	31.1	2.5	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	7.6	0.0	9.2				0.0	12.8	12.3	6.6	5.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.5	0.0	58.0				0.0	51.9	62.2	32.3	9.7	0.0
LnGrp LOS	D		E					D	E	C	A	
Approach Vol, veh/h		642						1435			1663	
Approach Delay, s/veh		51.4						55.0			14.4	
Approach LOS		D						D			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	30.9	33.0		26.1		63.9
Change Period (Y+Rc), s	6.0	* 6		4.6		6.0
Max Green Setting (Gmax), s	25.3	* 27		22.4		57.0
Max Q Clear Time (g_c+I1), s	19.4	28.2		21.0		22.2
Green Ext Time (p_c), s	0.5	0.0		0.5		16.4

Intersection Summary	
HCM 7th Control Delay, s/veh	36.3
HCM 7th LOS	D

Notes

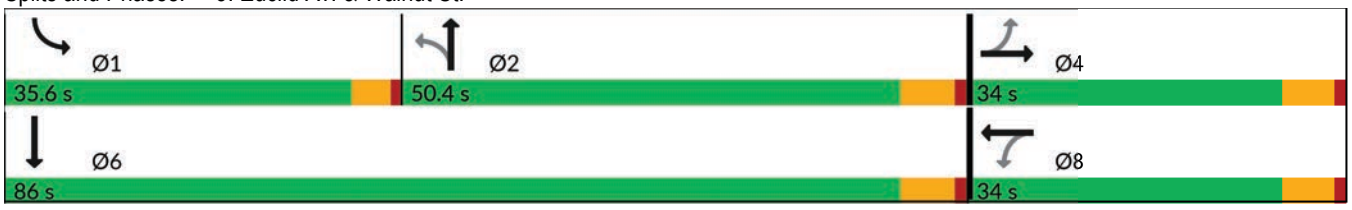
User approved volume balancing among the lanes for turning movement.

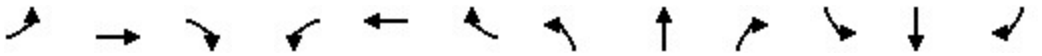
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	137	493	52	272	127	1101	257	1245
Future Volume (vph)	137	493	52	272	127	1101	257	1245
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	34.0	34.0	34.0	34.0	50.4	50.4	35.6	86.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	42.0%	42.0%	29.7%	71.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	26.2	26.2	26.2	26.2	44.8	44.8	13.2	62.6
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.45	0.45	0.13	0.62
v/c Ratio	0.74	0.76	0.58	0.46	0.96	0.54	0.68	0.46
Control Delay (s/veh)	59.0	39.1	60.2	28.4	100.4	22.1	51.0	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.0	39.1	60.2	28.4	100.4	22.1	51.0	10.6
LOS	E	D	E	C	F	C	D	B
Approach Delay (s/veh)		42.5		32.0		29.9		17.0
Approach LOS		D		C		C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 27.5	Intersection LOS: C
Intersection Capacity Utilization 84.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	493	167	52	272	128	127	1101	49	257	1245	126
Future Volume (veh/h)	137	493	167	52	272	128	127	1101	49	257	1245	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	140	503	149	53	278	129	130	1123	23	262	1270	102
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	255	746	220	167	657	297	239	2066	42	335	2698	217
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.42	0.42	0.42	0.11	0.58	0.58
Sat Flow, veh/h	937	2595	764	748	2287	1033	380	4956	101	2956	4636	372
Grp Volume(v), veh/h	140	330	322	53	206	201	130	742	404	262	897	475
Grp Sat Flow(s),veh/h/ln	937	1710	1649	748	1710	1609	380	1638	1781	1478	1638	1733
Q Serve(g_s), s	12.7	15.2	15.3	6.0	8.7	9.0	27.0	15.2	15.2	7.7	14.0	14.0
Cycle Q Clear(g_c), s	21.8	15.2	15.3	21.3	8.7	9.0	27.0	15.2	15.2	7.7	14.0	14.0
Prop In Lane	1.00		0.46	1.00		0.64	1.00		0.06	1.00		0.21
Lane Grp Cap(c), veh/h	255	492	474	167	492	463	239	1366	743	335	1907	1008
V/C Ratio(X)	0.55	0.67	0.68	0.32	0.42	0.43	0.54	0.54	0.54	0.78	0.47	0.47
Avail Cap(c_a), veh/h	283	543	523	189	543	510	271	1644	894	1031	2956	1563
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	28.0	28.0	37.5	25.7	25.8	23.0	19.5	19.5	38.3	10.7	10.7
Incr Delay (d2), s/veh	1.8	2.8	3.1	1.1	0.6	0.6	1.9	0.3	0.6	1.5	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	6.1	6.0	1.1	3.4	3.3	2.3	5.3	5.8	2.7	4.2	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.5	30.8	31.1	38.5	26.2	26.4	24.9	19.9	20.2	39.9	10.9	11.0
LnGrp LOS	D	C	C	D	C	C	C	B	C	D	B	B
Approach Vol, veh/h		792			460			1276			1634	
Approach Delay, s/veh		31.9			27.7			20.5			15.6	
Approach LOS		C			C			C			B	

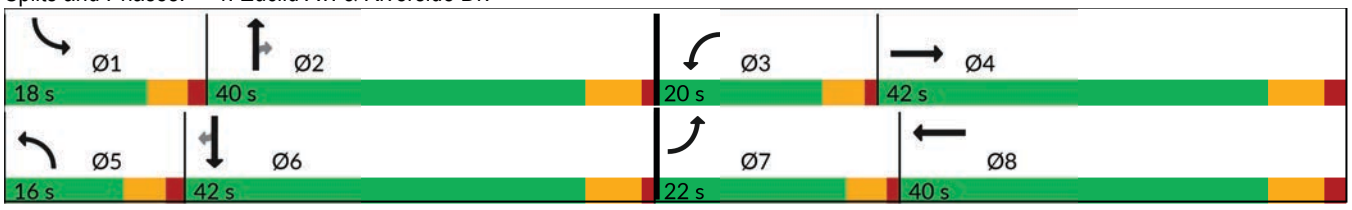
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.7	42.9		31.4		57.5		31.4				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	44.6		28.2		80.2		28.2				
Max Q Clear Time (g_c+I1), s	9.7	29.0		23.8		16.0		23.3				
Green Ext Time (p_c), s	0.4	8.1		1.8		11.9		1.1				

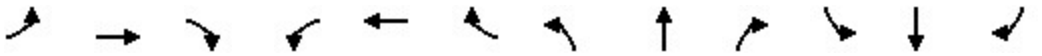
Intersection Summary			
HCM 7th Control Delay, s/veh		21.5	
HCM 7th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	126	347	117	363	73	989	186	117	1048	195
Future Volume (vph)	126	347	117	363	73	989	186	117	1048	195
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	33.0	15.2	36.0	36.0
Total Split (s)	22.0	42.0	20.0	40.0	16.0	40.0	40.0	18.0	42.0	42.0
Total Split (%)	18.3%	35.0%	16.7%	33.3%	13.3%	33.3%	33.3%	15.0%	35.0%	35.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	5.0	3.7	5.0	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	6.0	5.2	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.2	30.6	13.5	29.9	10.5	34.2	34.2	12.0	39.1	39.1
Actuated g/C Ratio	0.13	0.27	0.12	0.26	0.09	0.30	0.30	0.11	0.35	0.35
v/c Ratio	0.65	0.87	0.64	0.51	0.51	1.00	0.36	0.71	0.93	0.32
Control Delay (s/veh)	63.5	58.4	64.5	36.3	63.6	68.5	14.6	73.3	51.6	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.5	58.4	64.5	36.3	63.6	68.5	14.6	73.3	51.6	9.3
LOS	E	E	E	D	E	E	B	E	D	A
Approach Delay (s/veh)		59.6		42.2		60.2			47.4	
Approach LOS		E		D		E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 113.3	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay (s/veh): 52.7	Intersection LOS: D
Intersection Capacity Utilization 90.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	347	55	117	363	76	73	989	186	117	1048	195
Future Volume (veh/h)	126	347	55	117	363	76	73	989	186	117	1048	195
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	131	361	35	122	378	40	76	1030	107	122	1092	112
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	179	410	40	178	789	83	136	1125	491	148	1150	505
Arrive On Green	0.11	0.25	0.25	0.11	0.25	0.25	0.08	0.33	0.33	0.09	0.34	0.34
Sat Flow, veh/h	1619	1613	156	1619	3116	328	1619	3420	1493	1619	3420	1503
Grp Volume(v), veh/h	131	0	396	122	206	212	76	1030	107	122	1092	112
Grp Sat Flow(s),veh/h/ln	1619	0	1769	1619	1710	1734	1619	1710	1493	1619	1710	1503
Q Serve(g_s), s	8.3	0.0	22.8	7.7	10.9	11.0	4.8	30.7	5.5	7.9	33.1	5.7
Cycle Q Clear(g_c), s	8.3	0.0	22.8	7.7	10.9	11.0	4.8	30.7	5.5	7.9	33.1	5.7
Prop In Lane	1.00		0.09	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	0	449	178	433	439	136	1125	491	148	1150	505
V/C Ratio(X)	0.73	0.00	0.88	0.69	0.48	0.48	0.56	0.92	0.22	0.82	0.95	0.22
Avail Cap(c_a), veh/h	264	0	583	233	531	539	165	1125	491	195	1159	509
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	0.0	38.1	45.5	33.7	33.7	46.7	34.2	25.8	47.4	34.4	25.3
Incr Delay (d2), s/veh	2.2	0.0	13.3	2.7	1.2	1.2	3.5	11.6	0.2	18.8	15.8	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(50%),veh/ln	3.3	0.0	11.1	3.1	4.5	4.6	2.0	13.4	1.9	3.8	15.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.9	0.0	51.3	48.1	34.8	34.9	50.3	45.8	26.0	66.2	50.1	25.5
LnGrp LOS	D		D	D	C	C	D	D	C	E	D	C
Approach Vol, veh/h		527			540			1213			1326	
Approach Delay, s/veh		50.5			37.9			44.3			49.5	
Approach LOS		D			D			D			D	

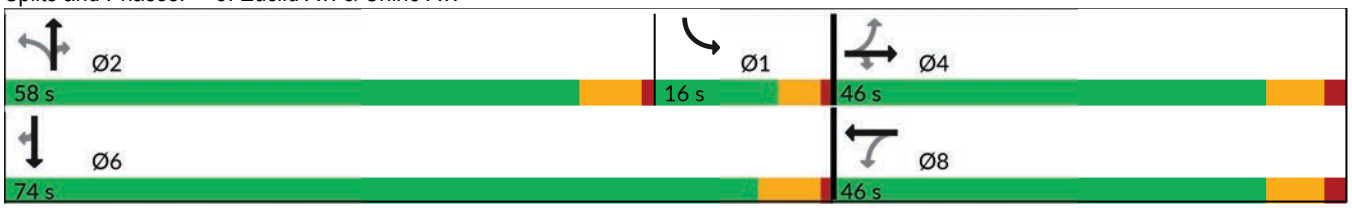
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	40.9	16.4	34.0	14.1	41.7	16.4	33.9
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	12.8	34.0	15.3	35.0	10.8	36.0	17.3	33.0
Max Q Clear Time (g_c+I1), s	9.9	32.7	9.7	24.8	6.8	35.1	10.3	13.0
Green Ext Time (p_c), s	0.1	0.8	0.1	2.1	0.0	0.7	0.1	3.0

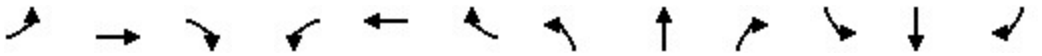
Intersection Summary	
HCM 7th Control Delay, s/veh	46.2
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	94	323	36	79	96	42	1099	199	69	1099	65
Future Volume (vph)	94	323	36	79	96	42	1099	199	69	1099	65
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	46.0	46.0	46.0	46.0	46.0	58.0	58.0	58.0	16.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	48.3%	48.3%	48.3%	13.3%	61.7%	61.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2		7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	28.5	28.5	28.5		28.5	40.2	40.2	40.2	11.6	51.2	51.2
Actuated g/C Ratio	0.30	0.30	0.30		0.30	0.42	0.42	0.42	0.12	0.54	0.54
v/c Ratio	0.33	0.62	0.07		0.81	0.39	0.79	0.29	0.37	0.62	0.08
Control Delay (s/veh)	33.2	36.9	0.3		54.3	35.4	30.3	12.6	53.8	16.8	3.3
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.2	36.9	0.3		54.3	35.4	30.3	12.6	53.8	16.8	3.3
LOS	C	D	A		D	D	C	B	D	B	A
Approach Delay (s/veh)		33.1			54.3		27.8			18.2	
Approach LOS		C			D		C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 26.7	Intersection LOS: C
Intersection Capacity Utilization 94.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	323	36	79	96	49	42	1099	199	69	1099	65
Future Volume (veh/h)	94	323	36	79	96	49	42	1099	199	69	1099	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1700	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	98	336	26	82	100	45	44	1145	155	72	1145	42
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	280	546	463	120	136	51	157	1399	624	140	1916	834
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.41	0.41	0.41	0.09	0.56	0.56
Sat Flow, veh/h	1193	1800	1525	236	450	170	453	3420	1525	1619	3420	1489
Grp Volume(v), veh/h	98	336	26	227	0	0	44	1145	155	72	1145	42
Grp Sat Flow(s),veh/h/ln	1193	1800	1525	855	0	0	453	1710	1525	1619	1710	1489
Q Serve(g_s), s	0.0	16.0	1.2	11.6	0.0	0.0	8.8	29.8	6.7	4.3	22.2	1.3
Cycle Q Clear(g_c), s	12.8	16.0	1.2	27.6	0.0	0.0	31.0	29.8	6.7	4.3	22.2	1.3
Prop In Lane	1.00		1.00	0.36		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	546	463	308	0	0	157	1399	624	140	1916	834
V/C Ratio(X)	0.35	0.62	0.06	0.74	0.00	0.00	0.28	0.82	0.25	0.52	0.60	0.05
Avail Cap(c_a), veh/h	379	696	590	423	0	0	204	1755	783	182	2300	1001
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	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	29.9	24.8	36.4	0.0	0.0	36.7	26.3	19.5	43.8	14.6	10.0
Incr Delay (d2), s/veh	0.7	1.1	0.1	4.3	0.0	0.0	1.0	2.6	0.2	1.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	6.8	0.4	5.6	0.0	0.0	1.0	11.2	2.2	1.7	7.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.6	31.1	24.8	40.7	0.0	0.0	37.6	28.9	19.7	44.9	14.9	10.0
LnGrp LOS	C	C	C	D			D	C	B	D	B	B
Approach Vol, veh/h		460			227			1344			1259	
Approach Delay, s/veh		30.4			40.7			28.1			16.4	
Approach LOS		C			D			C			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.2	47.6		37.6		62.7		37.6				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	11.3	* 52		38.8		67.5		38.8				
Max Q Clear Time (g_c+I1), s	6.3	33.0		18.0		24.2		29.6				
Green Ext Time (p_c), s	0.0	8.1		2.2		9.1		0.8				

Intersection Summary	
HCM 7th Control Delay, s/veh	24.8
HCM 7th LOS	C

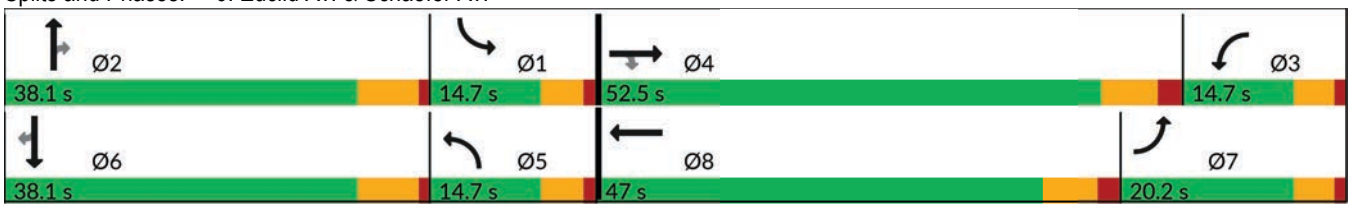
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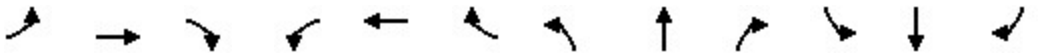
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	203	294	132	56	67	83	1077	106	88	1015	103
Future Volume (vph)	203	294	132	56	67	83	1077	106	88	1015	103
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	29.5	14.7	37.5	37.5
Total Split (s)	20.2	52.5	52.5	14.7	47.0	14.7	38.1	38.1	14.7	38.1	38.1
Total Split (%)	16.8%	43.8%	43.8%	12.3%	39.2%	12.3%	31.8%	31.8%	12.3%	31.8%	31.8%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	18.8	26.6	26.6	11.3	15.9	10.1	31.9	31.9	10.1	31.9	31.9
Actuated g/C Ratio	0.19	0.27	0.27	0.11	0.16	0.10	0.32	0.32	0.10	0.32	0.32
v/c Ratio	0.73	0.67	0.29	0.34	0.47	0.56	1.08	0.21	0.60	1.02	0.20
Control Delay (s/veh)	55.2	41.7	6.5	48.3	30.9	59.6	86.6	6.2	61.6	67.4	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.2	41.7	6.5	48.3	30.9	59.6	86.6	6.2	61.6	67.4	6.0
LOS	E	D	A	D	C	E	F	A	E	E	A
Approach Delay (s/veh)		38.7			36.2		78.1			61.8	
Approach LOS		D			D		E			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay (s/veh): 62.2	Intersection LOS: E
Intersection Capacity Utilization 84.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	294	132	56	67	61	83	1077	106	88	1015	103
Future Volume (veh/h)	203	294	132	56	67	61	83	1077	106	88	1015	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	223	323	81	62	74	55	91	1184	113	97	1115	68
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	309	385	326	141	105	78	167	1188	519	163	1179	512
Arrive On Green	0.19	0.21	0.21	0.09	0.11	0.11	0.10	0.35	0.35	0.10	0.34	0.34
Sat Flow, veh/h	1619	1800	1523	1619	958	712	1619	3420	1493	1619	3420	1486
Grp Volume(v), veh/h	223	323	81	62	0	129	91	1184	113	97	1115	68
Grp Sat Flow(s),veh/h/ln	1619	1800	1523	1619	0	1670	1619	1710	1493	1619	1710	1486
Q Serve(g_s), s	11.8	15.6	4.0	3.3	0.0	6.8	4.9	31.5	4.9	5.2	28.8	2.9
Cycle Q Clear(g_c), s	11.8	15.6	4.0	3.3	0.0	6.8	4.9	31.5	4.9	5.2	28.8	2.9
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	385	326	141	0	184	167	1188	519	163	1179	512
V/C Ratio(X)	0.72	0.84	0.25	0.44	0.00	0.70	0.55	1.00	0.22	0.60	0.95	0.13
Avail Cap(c_a), veh/h	309	900	762	178	0	734	178	1188	519	178	1188	516
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	34.3	29.7	39.4	0.0	39.1	38.8	29.7	21.0	39.2	29.0	20.5
Incr Delay (d2), s/veh	7.0	3.7	0.3	0.8	0.0	3.6	1.3	25.3	0.2	2.6	15.0	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(50%),veh/ln	5.0	6.8	1.4	1.3	0.0	2.8	1.9	15.5	1.6	2.1	12.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.6	38.0	30.0	40.2	0.0	42.7	40.1	55.0	21.2	41.8	44.0	20.6
LnGrp LOS	D	D	C	D		D	D	D	C	D	D	C
Approach Vol, veh/h		627			191			1388			1280	
Approach Delay, s/veh		38.2			41.9			51.3			42.6	
Approach LOS		D			D			D			D	

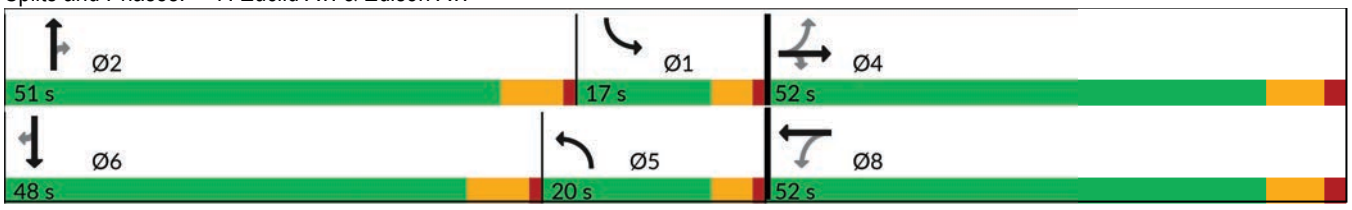
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	38.1	12.6	26.4	14.1	37.9	22.1	17.0
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	10.0	31.6	10.0	45.5	10.0	31.6	15.5	40.0
Max Q Clear Time (g_c+I1), s	7.2	33.5	5.3	17.6	6.9	30.8	13.8	8.8
Green Ext Time (p_c), s	0.0	0.0	0.0	1.6	0.0	0.5	0.1	0.5

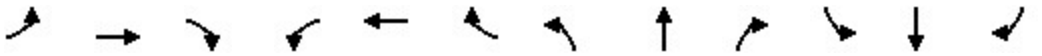
Intersection Summary	
HCM 7th Control Delay, s/veh	45.2
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	214	450	249	33	234	233	1092	43	61	891	194
Future Volume (vph)	214	450	249	33	234	233	1092	43	61	891	194
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	44.2	44.2	44.2	45.2	45.2	14.7	26.5	26.5	14.7	37.5	37.5
Total Split (s)	52.0	52.0	52.0	52.0	52.0	20.0	51.0	51.0	17.0	48.0	48.0
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	16.7%	42.5%	42.5%	14.2%	40.0%	40.0%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	34.1	34.1	34.1	34.1	34.1	15.0	42.3	42.3	11.2	34.2	34.2
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33	0.15	0.41	0.41	0.11	0.33	0.33
v/c Ratio	0.81	0.78	0.38	0.24	0.48	0.56	0.81	0.07	0.36	0.81	0.33
Control Delay (s/veh)	55.0	41.6	4.8	31.4	30.0	49.7	34.9	1.4	54.8	38.9	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.0	41.6	4.8	31.4	30.0	49.7	34.9	1.4	54.8	38.9	8.1
LOS	E	D	A	C	C	D	C	A	D	D	A
Approach Delay (s/veh)		34.7			30.1		36.3			34.6	
Approach LOS		C			C		D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.5	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 34.9	Intersection LOS: C
Intersection Capacity Utilization 94.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: Euclid Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	450	249	33	234	36	233	1092	43	61	891	194
Future Volume (veh/h)	214	450	249	33	234	36	233	1092	43	61	891	194
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	223	469	191	34	244	33	243	1138	30	64	928	175
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	332	661	560	176	569	77	404	1288	563	130	1096	480
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.14	0.38	0.38	0.08	0.32	0.32
Sat Flow, veh/h	1056	1800	1525	743	1549	210	2956	3420	1493	1619	3420	1497
Grp Volume(v), veh/h	223	469	191	34	0	277	243	1138	30	64	928	175
Grp Sat Flow(s),veh/h/ln	1056	1800	1525	743	0	1759	1478	1710	1493	1619	1710	1497
Q Serve(g_s), s	21.1	23.4	9.5	4.3	0.0	12.4	8.1	32.6	1.3	4.0	26.5	9.4
Cycle Q Clear(g_c), s	33.5	23.4	9.5	27.7	0.0	12.4	8.1	32.6	1.3	4.0	26.5	9.4
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	661	560	176	0	646	404	1288	563	130	1096	480
V/C Ratio(X)	0.67	0.71	0.34	0.19	0.00	0.43	0.60	0.88	0.05	0.49	0.85	0.36
Avail Cap(c_a), veh/h	395	769	652	220	0	751	431	1451	634	190	1353	592
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	28.4	24.0	40.2	0.0	24.9	42.6	30.5	20.8	46.2	33.2	27.4
Incr Delay (d2), s/veh	3.5	2.5	0.4	0.5	0.0	0.5	1.3	6.3	0.0	1.1	4.3	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(50%),veh/ln	5.5	9.9	3.3	0.8	0.0	5.0	2.9	13.2	0.4	1.6	10.7	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.9	30.9	24.4	40.8	0.0	25.4	43.9	36.8	20.8	47.2	37.5	27.9
LnGrp LOS	D	C	C	D		C	D	D	C	D	D	C
Approach Vol, veh/h		883			311			1411			1167	
Approach Delay, s/veh		32.0			27.1			37.7			36.6	
Approach LOS		C			C			D			D	

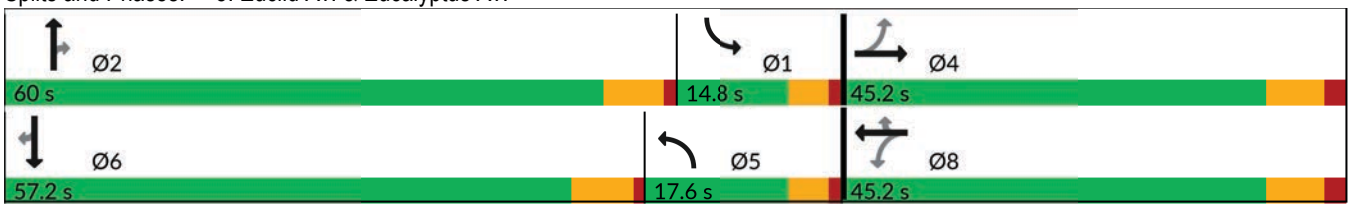
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.2	46.0		45.7	19.0	40.1		45.7				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	12.3	44.5		44.8	15.3	41.5		44.8				
Max Q Clear Time (g_c+I1), s	6.0	34.6		35.5	10.1	28.5		29.7				
Green Ext Time (p_c), s	0.0	4.9		3.0	0.2	5.1		1.4				

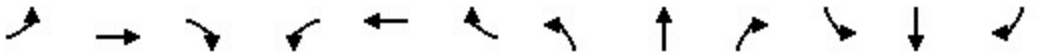
Intersection Summary	
HCM 7th Control Delay, s/veh	35.1
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	48	230	100	44	170	266	1306	68	206	1247	63
Future Volume (vph)	48	230	100	44	170	266	1306	68	206	1247	63
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	45.2	45.2	44.2	44.2	44.2	14.7	28.5	28.5	14.7	35.5	35.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	17.6	60.0	60.0	14.8	57.2	57.2
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	14.7%	50.0%	50.0%	12.3%	47.7%	47.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	37.8	37.8	37.8	37.8	37.8	12.9	52.3	52.3	10.2	49.6	49.6
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.11	0.44	0.44	0.09	0.42	0.42
v/c Ratio	0.13	0.68	0.96	0.08	0.30	0.90	0.94	0.10	0.89	0.95	0.10
Control Delay (s/veh)	30.5	29.7	116.7	29.4	5.6	83.4	45.2	4.0	87.9	48.1	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.5	29.7	116.7	29.4	5.6	83.4	45.2	4.0	87.9	48.1	3.7
LOS	C	C	F	C	A	F	D	A	F	D	A
Approach Delay (s/veh)		29.7		44.4			49.7			51.7	
Approach LOS		C		D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.7	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 46.5	Intersection LOS: D
Intersection Capacity Utilization 98.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 8: Euclid Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	230	468	100	44	170	266	1306	68	206	1247	63
Future Volume (veh/h)	48	230	468	100	44	170	266	1306	68	206	1247	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1700	1800	1800	1700	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	52	250	336	109	48	173	289	1420	71	224	1355	50
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	395	546	487	161	574	487	320	1504	671	256	1430	638
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.11	0.44	0.44	0.09	0.42	0.42
Sat Flow, veh/h	1113	1710	1525	796	1800	1525	2956	3420	1525	2956	3420	1525
Grp Volume(v), veh/h	52	250	336	109	48	173	289	1420	71	224	1355	50
Grp Sat Flow(s),veh/h/ln	1113	1710	1525	796	1800	1525	1478	1710	1525	1478	1710	1525
Q Serve(g_s), s	4.1	13.9	22.9	15.1	2.2	10.4	11.5	47.4	3.3	8.9	45.5	2.3
Cycle Q Clear(g_c), s	6.3	13.9	22.9	38.0	2.2	10.4	11.5	47.4	3.3	8.9	45.5	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	546	487	161	574	487	320	1504	671	256	1430	638
V/C Ratio(X)	0.13	0.46	0.69	0.68	0.08	0.36	0.90	0.94	0.11	0.87	0.95	0.08
Avail Cap(c_a), veh/h	395	546	487	161	574	487	320	1537	685	256	1456	649
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	32.3	35.4	52.6	28.4	31.1	52.5	32.0	19.6	53.7	33.4	20.8
Incr Delay (d2), s/veh	0.1	0.4	3.8	9.9	0.0	0.3	26.9	12.1	0.1	26.3	13.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.6	8.7	3.6	0.9	3.7	5.3	20.2	1.1	4.1	19.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.7	32.8	39.2	62.5	28.4	31.5	79.4	44.0	19.7	80.0	46.5	20.9
LnGrp LOS	C	C	D	E	C	C	E	D	B	E	D	C
Approach Vol, veh/h		638			330			1780			1629	
Approach Delay, s/veh		36.0			41.3			48.8			50.3	
Approach LOS		D			D			D			D	

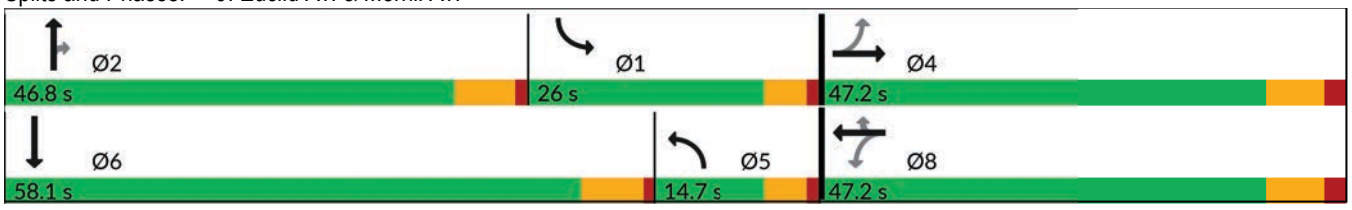
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	58.9		45.2	17.6	56.3		45.2				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.1	53.5		38.0	12.9	50.7		38.0				
Max Q Clear Time (g_c+I1), s	10.9	49.4		24.9	13.5	47.5		40.0				
Green Ext Time (p_c), s	0.0	3.0		2.5	0.0	2.3		0.0				

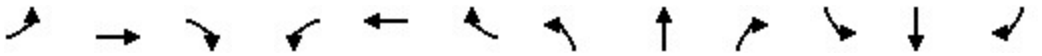
Intersection Summary		
HCM 7th Control Delay, s/veh		46.9
HCM 7th LOS		D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	6	14	142	1	196	3	975	166	442	1150
Future Volume (vph)	6	14	142	1	196	3	975	166	442	1150
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		4		8		5	2		1	6
Permitted Phases	4		8		8			2		
Detector Phase	4	4	8	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	47.2	47.2	47.2	14.7	28.5	28.5	14.7	28.5
Total Split (s)	47.2	47.2	47.2	47.2	47.2	14.7	46.8	46.8	26.0	58.1
Total Split (%)	39.3%	39.3%	39.3%	39.3%	39.3%	12.3%	39.0%	39.0%	21.7%	48.4%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		18.2	18.2	18.2	18.2	10.4	33.8	33.8	18.8	55.4
Actuated g/C Ratio		0.20	0.20	0.20	0.20	0.12	0.38	0.38	0.21	0.61
v/c Ratio		0.09	0.58	0.00	0.43	0.02	0.79	0.27	0.75	0.57
Control Delay (s/veh)		23.5	43.2	29.0	7.4	45.7	31.9	7.7	44.3	14.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		23.5	43.2	29.0	7.4	45.7	31.9	7.7	44.3	14.8
LOS		C	D	C	A	D	C	A	D	B
Approach Delay (s/veh)		23.5		22.5			28.4			23.0
Approach LOS		C		C			C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay (s/veh): 24.9	Intersection LOS: C
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Euclid Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	14	9	142	1	196	3	975	166	442	1150	3
Future Volume (veh/h)	6	14	9	142	1	196	3	975	166	442	1150	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
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	1800	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	6	15	6	148	1	152	3	1016	165	460	1198	3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	91	165	55	308	267	226	228	1335	583	557	1533	4
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.39	0.39	0.19	0.44	0.44
Sat Flow, veh/h	175	1113	368	1334	1800	1525	1619	3420	1493	2956	3499	9
Grp Volume(v), veh/h	27	0	0	148	1	152	3	1016	165	460	585	616
Grp Sat Flow(s),veh/h/ln	1657	0	0	1334	1800	1525	1619	1710	1493	1478	1710	1798
Q Serve(g_s), s	0.0	0.0	0.0	6.0	0.0	6.4	0.1	17.4	5.1	10.1	19.7	19.7
Cycle Q Clear(g_c), s	0.9	0.0	0.0	6.9	0.0	6.4	0.1	17.4	5.1	10.1	19.7	19.7
Prop In Lane	0.22		0.22	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	311	0	0	308	267	226	228	1335	583	557	749	788
V/C Ratio(X)	0.09	0.00	0.00	0.48	0.00	0.67	0.01	0.76	0.28	0.83	0.78	0.78
Avail Cap(c_a), veh/h	1016	0	0	903	1069	906	240	2045	893	934	1309	1377
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	0.0	27.3	24.5	27.2	24.9	17.8	14.1	26.3	16.2	16.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	1.3	0.0	0.9	0.3	1.2	1.8	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	2.1	0.0	2.1	0.0	5.5	1.4	3.1	6.2	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.9	0.0	0.0	27.8	24.5	28.5	24.9	18.7	14.3	27.5	18.0	17.9
LnGrp LOS	C			C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		27			301			1184			1661	
Approach Delay, s/veh		24.9			28.1			18.1			20.6	
Approach LOS		C			C			B			C	

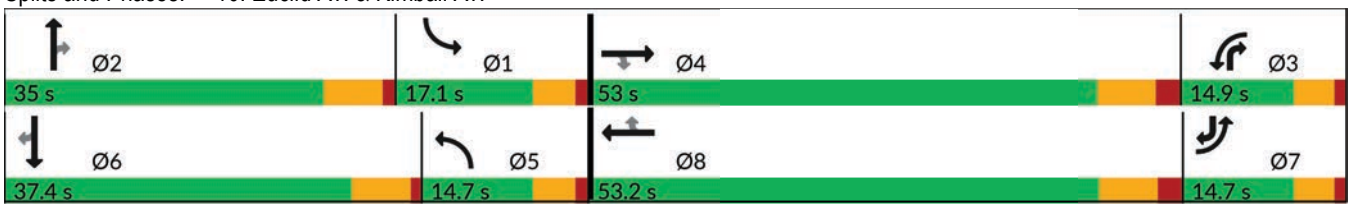
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.4	32.8		17.2	14.2	36.0		17.2				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	21.3	40.3		40.0	10.0	51.6		40.0				
Max Q Clear Time (g_c+I1), s	12.1	19.4		2.9	2.1	21.7		8.9				
Green Ext Time (p_c), s	0.6	7.0		0.1	0.0	7.8		0.4				

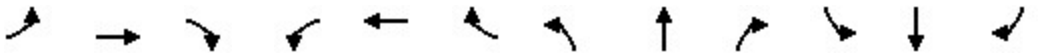
Intersection Summary		
HCM 7th Control Delay, s/veh	20.4	
HCM 7th LOS	C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	239	935	56	54	558	197	98	593	73	508	544	184
Future Volume (vph)	239	935	56	54	558	197	98	593	73	508	544	184
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	14.7	37.4	14.7
Total Split (s)	14.7	53.0	53.0	14.9	53.2	53.2	14.7	35.0	14.9	17.1	37.4	14.7
Total Split (%)	12.3%	44.2%	44.2%	12.4%	44.3%	44.3%	12.3%	29.2%	12.4%	14.3%	31.2%	12.3%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	3.7	5.4	3.7
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	4.7	6.4	4.7
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.1	36.6	36.6	10.4	24.8	24.8	13.6	22.8	37.9	12.8	22.1	41.9
Actuated g/C Ratio	0.18	0.36	0.36	0.10	0.24	0.24	0.13	0.22	0.37	0.13	0.22	0.41
v/c Ratio	0.47	0.76	0.10	0.35	0.67	0.39	0.48	0.78	0.12	1.41	0.74	0.27
Control Delay (s/veh)	44.1	34.6	0.3	55.3	39.1	6.2	55.2	45.9	5.6	234.3	44.6	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.1	34.6	0.3	55.3	39.1	6.2	55.2	45.9	5.6	234.3	44.6	6.2
LOS	D	C	A	E	D	A	E	D	A	F	D	A
Approach Delay (s/veh)		34.9			32.2			43.3			116.8	
Approach LOS		C			C			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.41	
Intersection Signal Delay (s/veh): 61.0	Intersection LOS: E
Intersection Capacity Utilization 89.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	935	56	54	558	197	98	593	73	508	544	184
Future Volume (veh/h)	239	935	56	54	558	197	98	593	73	508	544	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
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	1600	1800	1800	1700	1800	1800	1700	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	252	984	27	57	587	114	103	624	46	535	573	167
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	641	1176	492	134	715	303	226	763	449	403	741	629
Arrive On Green	0.32	0.49	0.49	0.12	0.30	0.30	0.21	0.32	0.32	0.20	0.31	0.31
Sat Flow, veh/h	3048	3600	1506	1619	3600	1525	1619	3600	1525	3048	3600	1499
Grp Volume(v), veh/h	252	984	27	57	587	114	103	624	46	535	573	167
Grp Sat Flow(s),veh/h/ln	1524	1800	1506	1619	1800	1525	1619	1800	1525	1524	1800	1499
Q Serve(g_s), s	6.1	22.1	0.9	3.1	14.2	5.5	5.2	15.0	0.0	12.4	13.5	0.0
Cycle Q Clear(g_c), s	6.1	22.1	0.9	3.1	14.2	5.5	5.2	15.0	0.0	12.4	13.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	641	1176	492	134	715	303	226	763	449	403	741	629
V/C Ratio(X)	0.39	0.84	0.05	0.43	0.82	0.38	0.46	0.82	0.10	1.33	0.77	0.27
Avail Cap(c_a), veh/h	641	1760	736	176	1768	749	226	1095	590	403	1191	817
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	21.7	16.3	39.0	31.3	28.3	33.9	30.3	20.7	37.5	30.4	15.4
Incr Delay (d2), s/veh	0.1	2.4	0.0	2.1	0.9	0.3	0.5	3.3	0.1	163.2	1.8	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(50%),veh/ln	2.0	6.8	0.3	1.2	5.2	1.8	1.9	5.6	0.6	13.1	5.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.5	24.1	16.4	41.1	32.2	28.6	34.4	33.6	20.8	200.7	32.2	15.6
LnGrp LOS	C	C	B	D	C	C	C	C	C	F	C	B
Approach Vol, veh/h		1263			758			773			1275	
Approach Delay, s/veh		24.6			32.4			32.9			100.7	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	26.4	12.4	37.8	17.8	25.7	24.4	25.8
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	12.4	28.5	10.2	45.8	10.0	31.0	10.0	46.0
Max Q Clear Time (g_c+I1), s	14.4	17.0	5.1	24.1	7.2	15.5	8.1	16.2
Green Ext Time (p_c), s	0.0	2.9	0.0	6.5	0.0	3.4	0.1	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	51.5
HCM 7th LOS	D

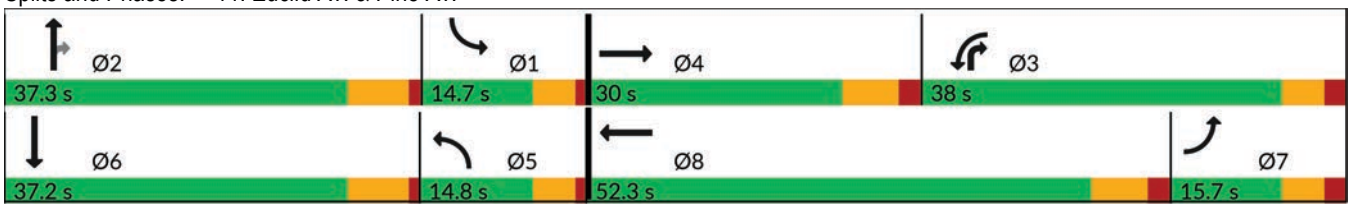
Notes

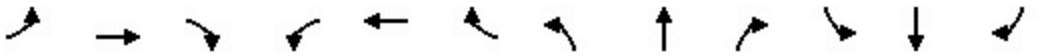
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	18	368	635	168	29	569	1135	81	534
Future Volume (vph)	18	368	635	168	29	569	1135	81	534
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	15.7	30.0	38.0	52.3	14.8	37.3	38.0	14.7	37.2
Total Split (%)	13.1%	25.0%	31.7%	43.6%	12.3%	31.1%	31.7%	12.3%	31.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.3	23.2	32.6	58.5	10.5	21.4	54.8	10.1	23.9
Actuated g/C Ratio	0.10	0.22	0.30	0.54	0.10	0.20	0.51	0.09	0.22
v/c Ratio	0.12	1.20	0.70	0.22	0.18	0.81	1.36	0.54	0.69
Control Delay (s/veh)	49.8	149.3	39.8	16.5	51.0	51.0	190.8	64.0	44.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.8	149.3	39.8	16.5	51.0	51.0	190.8	64.0	44.3
LOS	D	F	D	B	D	D	F	E	D
Approach Delay (s/veh)		145.5		34.1		142.5			46.8
Approach LOS		F		C		F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.36	
Intersection Signal Delay (s/veh): 101.8	Intersection LOS: F
Intersection Capacity Utilization 122.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	368	83	635	168	36	29	569	1135	81	534	11
Future Volume (veh/h)	18	368	83	635	168	36	29	569	1135	81	534	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	18	372	0	641	170	31	29	575	698	82	539	11
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	490	388		698	210	38	248	884	716	138	626	13
Arrive On Green	0.45	0.32	0.00	0.34	0.21	0.21	0.23	0.37	0.37	0.13	0.27	0.27
Sat Flow, veh/h	1619	1800	0	3048	1478	269	1619	3600	1493	1619	3514	72
Grp Volume(v), veh/h	18	372	0	641	0	201	29	575	698	82	276	274
Grp Sat Flow(s),veh/h/ln	1619	1800	0	1524	0	1747	1619	1800	1493	1619	1800	1785
Q Serve(g_s), s	0.7	21.6	0.0	21.5	0.0	11.7	1.5	14.1	21.9	5.1	15.6	15.6
Cycle Q Clear(g_c), s	0.7	21.6	0.0	21.5	0.0	11.7	1.5	14.1	21.9	5.1	15.6	15.6
Prop In Lane	1.00		0.00	1.00		0.15	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	490	388		698	0	248	248	884	716	138	320	318
V/C Ratio(X)	0.04	0.96		0.92	0.00	0.81	0.12	0.65	0.97	0.59	0.86	0.86
Avail Cap(c_a), veh/h	490	388		923	0	742	248	1040	780	152	518	514
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	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	20.5	35.6	0.0	34.0	0.0	40.6	35.4	29.9	20.7	44.7	37.8	37.8
Incr Delay (d2), s/veh	0.0	35.0	0.0	10.0	0.0	8.7	0.1	0.7	24.6	2.9	4.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	11.7	0.0	7.4	0.0	5.1	0.6	5.2	16.0	2.0	6.2	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.5	70.6	0.0	44.0	0.0	49.3	35.4	30.5	45.4	47.6	42.4	42.5
LnGrp LOS	C	E		D		D	D	C	D	D	D	D
Approach Vol, veh/h		390			842			1302			632	
Approach Delay, s/veh		68.3			45.3			38.6			43.1	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	32.7	30.1	30.0	21.0	25.5	38.0	22.1
Change Period (Y+Rc), s	4.7	6.5	5.7	7.0	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.0	30.8	32.3	23.0	10.1	30.7	10.0	45.3
Max Q Clear Time (g_c+I1), s	7.1	23.9	23.5	23.6	3.5	17.6	2.7	13.7
Green Ext Time (p_c), s	0.0	2.3	0.9	0.0	0.0	1.4	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	44.9
HCM 7th LOS	D

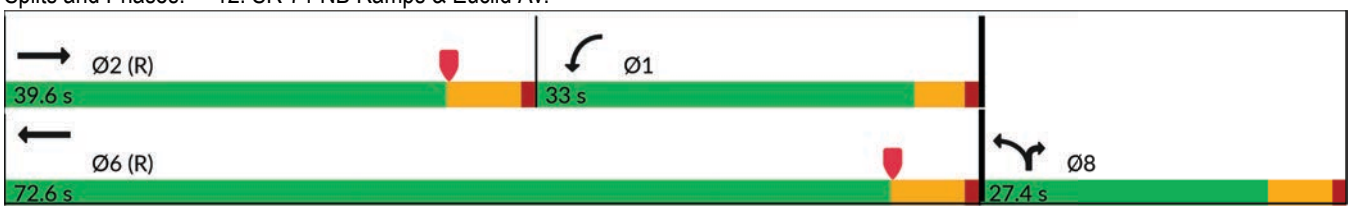
Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	1001	496	846	90	803
Future Volume (vph)	1001	496	846	90	803
Turn Type	NA	Prot	NA	Prot	Prot
Protected Phases	2	1	6	8	8
Permitted Phases					
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	31.5	12.7	24.5	13.8	13.8
Total Split (s)	39.6	33.0	72.6	27.4	27.4
Total Split (%)	39.6%	33.0%	72.6%	27.4%	27.4%
Yellow Time (s)	5.5	3.7	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.7	6.5	5.8	5.8
Lead/Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	None
Act Effct Green (s)	33.1	28.3	66.1	21.6	21.6
Actuated g/C Ratio	0.33	0.28	0.66	0.22	0.22
v/c Ratio	1.08	1.14	0.39	0.15	1.18
Control Delay (s/veh)	77.0	121.8	8.4	32.5	111.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.0	121.8	8.4	32.5	111.9
LOS	E	F	A	C	F
Approach Delay (s/veh)	77.0		50.3	103.9	
Approach LOS	E		D	F	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay (s/veh): 73.5	Intersection LOS: E
Intersection Capacity Utilization 97.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: SR-71 NB Ramps & Euclid Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1001	151	496	846	90	803
Future Volume (veh/h)	1001	151	496	846	90	803
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1700	1800	1600	1800
Adj Flow Rate, veh/h	1054	0	522	891	95	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1116		666	2745	220	
Arrive On Green	0.33	0.00	0.41	0.80	0.07	0.00
Sat Flow, veh/h	3600	0	1619	3510	2956	1525
Grp Volume(v), veh/h	1054	0	522	891	95	0
Grp Sat Flow(s),veh/h/ln	1710	0	1619	1710	1478	1525
Q Serve(g_s), s	30.0	0.0	28.0	7.0	3.1	0.0
Cycle Q Clear(g_c), s	30.0	0.0	28.0	7.0	3.1	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1116		666	2745	220	
V/C Ratio(X)	0.94		0.78	0.32	0.43	
Avail Cap(c_a), veh/h	1132		666	2745	639	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.8	0.0	25.6	2.6	44.3	0.0
Incr Delay (d2), s/veh	10.7	0.0	5.6	0.3	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	0.0	10.5	1.0	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	43.5	0.0	31.1	2.9	45.6	0.0
LnGrp LOS	D		C	A	D	
Approach Vol, veh/h	1054			1413	95	
Approach Delay, s/veh	43.5			13.4	45.6	
Approach LOS	D			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	47.6	39.1				86.8	13.2
Change Period (Y+Rc), s	6.5	* 6.5				6.5	5.8
Max Green Setting (Gmax), s	28.3	* 33				66.1	21.6
Max Q Clear Time (g_c+I1), s	30.0	32.0				9.0	5.1
Green Ext Time (p_c), s	0.0	0.6				4.9	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	27.0
HCM 7th LOS	C

Notes

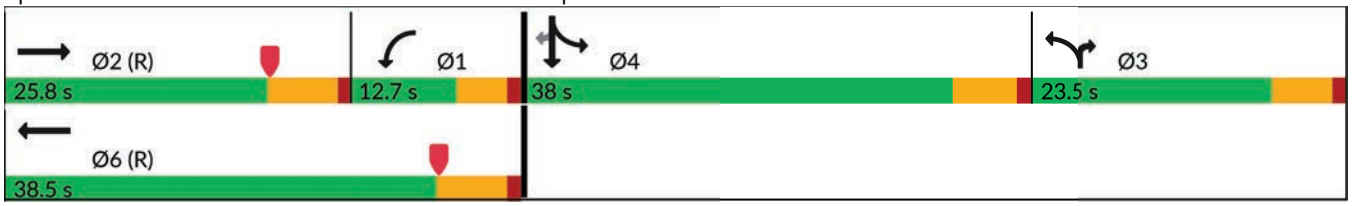
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

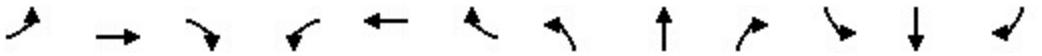
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	598	78	225	17	155	916	58	40
Future Volume (vph)	598	78	225	17	155	916	58	40
Turn Type	NA	Prot	NA	Prot	Prot	Split	NA	Perm
Protected Phases	2	1	6	3	3	4	4	
Permitted Phases								4
Detector Phase	2	1	6	3	3	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	25.2	12.7	27.2	23.5	23.5	34.8	34.8	34.8
Total Split (s)	25.8	12.7	38.5	23.5	23.5	38.0	38.0	38.0
Total Split (%)	25.8%	12.7%	38.5%	23.5%	23.5%	38.0%	38.0%	38.0%
Yellow Time (s)	5.2	3.7	5.2	4.5	4.5	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	4.7	6.2	5.5	5.5	5.8	5.8	5.8
Lead/Lag	Lead	Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	29.6	8.0	39.8	8.8	8.8	33.9	33.9	33.9
Actuated g/C Ratio	0.30	0.08	0.40	0.09	0.09	0.34	0.34	0.34
v/c Ratio	0.65	0.63	0.21	0.13	0.56	0.97	0.92	0.07
Control Delay (s/veh)	34.7	59.2	15.0	43.3	14.5	68.6	56.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.7	59.2	15.0	43.3	14.5	68.6	56.0	0.2
LOS	C	E	B	D	B	E	E	A
Approach Delay (s/veh)	34.7		25.0				59.8	
Approach LOS	C		C				E	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay (s/veh): 43.6	Intersection LOS: D
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: Euclid Av. & SR-71 SB Off-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	598	34	78	225	41	17	0	155	916	58	40
Future Volume (veh/h)	0	598	34	78	225	41	17	0	155	916	58	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1800	1800	1700	1800	1800	1700	0	1800	1700	1800	1800
Adj Flow Rate, veh/h	0	623	16	81	234	0	18	0	75	997	0	24
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	667	17	486	1909		0	0	0	1042	0	491
Arrive On Green	0.00	0.20	0.20	0.60	1.00	0.00	0.00	0.00	0.00	0.32	0.00	0.32
Sat Flow, veh/h	0	3495	87	1619	3510	0		0		3238	0	1525
Grp Volume(v), veh/h	0	313	326	81	234	0		0.0		997	0	24
Grp Sat Flow(s),veh/h/ln	0	1710	1782	1619	1710	0				1619	0	1525
Q Serve(g_s), s	0.0	18.0	18.0	2.2	0.0	0.0				30.2	0.0	1.1
Cycle Q Clear(g_c), s	0.0	18.0	18.0	2.2	0.0	0.0				30.2	0.0	1.1
Prop In Lane	0.00		0.05	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	335	349	486	1909					1042	0	491
V/C Ratio(X)	0.00	0.93	0.93	0.17	0.12					0.96	0.00	0.05
Avail Cap(c_a), veh/h	0	335	349	486	1909					1043	0	491
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.94	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	39.6	39.6	14.4	0.0	0.0				33.2	0.0	23.4
Incr Delay (d2), s/veh	0.0	34.8	34.0	0.1	0.1	0.0				18.3	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
%ile BackOfQ(50%),veh/ln	0.0	10.4	10.8	0.8	0.0	0.0				14.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	74.3	73.6	14.5	0.1	0.0				51.5	0.0	23.4
LnGrp LOS		E	E	B	A					D		C
Approach Vol, veh/h		639			315						1021	
Approach Delay, s/veh		73.9			3.8						50.8	
Approach LOS		E			A						D	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	36.2	25.8		38.0		62.0						
Change Period (Y+Rc), s	6.2	* 6.2		5.8		6.2						
Max Green Setting (Gmax), s	8.0	* 20		32.2		32.3						
Max Q Clear Time (g_c+I1), s	4.2	20.0		32.2		2.0						
Green Ext Time (p_c), s	0.0	0.0		0.0		0.9						

Intersection Summary												
HCM 7th Control Delay, s/veh			50.8									
HCM 7th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	531	23	23	294	31	21	21	80	22	5	8
Future Vol, veh/h	10	531	23	23	294	31	21	21	80	22	5	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	11	577	25	25	320	34	23	23	87	24	5	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	353	0	0	602	0	0	984	1015	590	997	1010	336
Stage 1	-	-	-	-	-	-	611	611	-	386	386	-
Stage 2	-	-	-	-	-	-	372	403	-	610	624	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1217	-	-	985	-	-	230	240	511	225	242	710
Stage 1	-	-	-	-	-	-	484	487	-	641	613	-
Stage 2	-	-	-	-	-	-	652	603	-	485	481	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1217	-	-	985	-	-	212	229	511	161	231	710
Mov Cap-2 Maneuver	-	-	-	-	-	-	212	229	-	161	231	-
Stage 1	-	-	-	-	-	-	478	481	-	621	594	-
Stage 2	-	-	-	-	-	-	618	584	-	378	475	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.14	0.58	21.32	26.3
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	351	32	-	-	117	-	-	207
HCM Lane V/C Ratio	0.377	0.009	-	-	0.025	-	-	0.184
HCM Ctrl Dly (s/v)	21.3	8	0	-	8.7	0	-	26.3
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	1.7	0	-	-	0.1	-	-	0.7

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	1	25	2	0	10
Future Vol, veh/h	4	1	25	2	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	1	27	2	0	11

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	39	15	0	0	29	0
Stage 1	28	-	-	-	-	-
Stage 2	11	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	976	1068	-	-	1597	-
Stage 1	996	-	-	-	-	-
Stage 2	1017	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	976	1068	-	-	1597	-
Mov Cap-2 Maneuver	943	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	1017	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.75	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	965	1597	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Ctrl Dly (s/v)	-	-	8.7	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	423	293	12	22	13
Future Vol, veh/h	8	423	293	12	22	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	460	318	13	24	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	332	0	-	0	802	325
Stage 1	-	-	-	-	325	-
Stage 2	-	-	-	-	477	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1239	-	-	-	356	721
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1239	-	-	-	353	721
Mov Cap-2 Maneuver	-	-	-	-	535	-
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	628	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.15	0	11.32
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	33	-	-	-	535	721
HCM Lane V/C Ratio	0.007	-	-	-	0.045	0.02
HCM Ctrl Dly (s/v)	7.9	0	-	-	12	10.1
HCM Lane LOS	A	A	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

Intersection	
Intersection Delay, s/veh	15.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	323	32	8	109	19	15	155	17	17	147	42
Future Vol, veh/h	45	323	32	8	109	19	15	155	17	17	147	42
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	51	367	36	9	124	22	17	176	19	19	167	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	20.3	11.3	12.6	12.9
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	11%	6%	8%
Vol Thru, %	83%	81%	80%	71%
Vol Right, %	9%	8%	14%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	187	400	136	206
LT Vol	15	45	8	17
Through Vol	155	323	109	147
RT Vol	17	32	19	42
Lane Flow Rate	213	455	155	234
Geometry Grp	1	1	1	1
Degree of Util (X)	0.363	0.694	0.261	0.393
Departure Headway (Hd)	6.158	5.596	6.084	6.047
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	587	650	592	597
Service Time	4.167	3.596	4.111	4.055
HCM Lane V/C Ratio	0.363	0.7	0.262	0.392
HCM Control Delay, s/veh	12.6	20.3	11.3	12.9
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	1.7	5.6	1	1.9

Intersection	
Intersection Delay, s/veh	39.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	457	46	56	245	33	34	93	91	16	93	24
Future Vol, veh/h	44	457	46	56	245	33	34	93	91	16	93	24
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	48	502	51	62	269	36	37	102	100	18	102	26
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	65.7	21.9	16.4	14.1
HCM LOS	F	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	8%	17%	12%
Vol Thru, %	43%	84%	73%	70%
Vol Right, %	42%	8%	10%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	218	547	334	133
LT Vol	34	44	56	16
Through Vol	93	457	245	93
RT Vol	91	46	33	24
Lane Flow Rate	240	601	367	146
Geometry Grp	1	1	1	1
Degree of Util (X)	0.471	1.015	0.666	0.307
Departure Headway (Hd)	7.181	6.078	6.629	7.683
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	505	595	547	471
Service Time	5.181	4.163	4.629	5.683
HCM Lane V/C Ratio	0.475	1.01	0.671	0.31
HCM Control Delay, s/veh	16.4	65.7	21.9	14.1
HCM Lane LOS	C	F	C	B
HCM 95th-tile Q	2.5	15.5	4.9	1.3

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	11	4	7	5	14	2	179	3	11	106	1
Future Vol, veh/h	2	11	4	7	5	14	2	179	3	11	106	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	12	4	8	5	15	2	195	3	12	115	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	341	342	116	346	341	196	116	0	0	198	0	0
Stage 1	140	140	-	201	201	-	-	-	-	-	-	-
Stage 2	202	202	-	145	140	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	617	584	942	612	584	850	1485	-	-	1387	-	-
Stage 1	868	785	-	806	739	-	-	-	-	-	-	-
Stage 2	805	738	-	862	785	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	593	577	942	591	578	850	1485	-	-	1387	-	-
Mov Cap-2 Maneuver	593	577	-	591	578	-	-	-	-	-	-	-
Stage 1	860	778	-	805	738	-	-	-	-	-	-	-
Stage 2	783	737	-	837	777	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	10.82	10.33	0.08	0.71
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	20	-	-	637	703	167	-	-
HCM Lane V/C Ratio	0.001	-	-	0.029	0.04	0.009	-	-
HCM Ctrl Dly (s/v)	7.4	0	-	10.8	10.3	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	12

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	89	385	22	0	220	130	16	37	7	138	16	74
Future Vol, veh/h	89	385	22	0	220	130	16	37	7	138	16	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	109	470	27	0	268	159	20	45	9	168	20	90

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	427	0	0	496	0	0	978	1127	483	1057	1061	348
Stage 1	-	-	-	-	-	-	700	700	-	348	348	-
Stage 2	-	-	-	-	-	-	278	427	-	709	713	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1143	-	-	1078	-	-	232	206	588	205	226	700
Stage 1	-	-	-	-	-	-	433	444	-	673	638	-
Stage 2	-	-	-	-	-	-	733	589	-	428	438	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1143	-	-	1078	-	-	172	187	588	~ 156	204	700
Mov Cap-2 Maneuver	-	-	-	-	-	-	279	284	-	266	308	-
Stage 1	-	-	-	-	-	-	392	402	-	673	638	-
Stage 2	-	-	-	-	-	-	619	589	-	339	397	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.52	0	20.79	50.68
HCM LOS			C	F

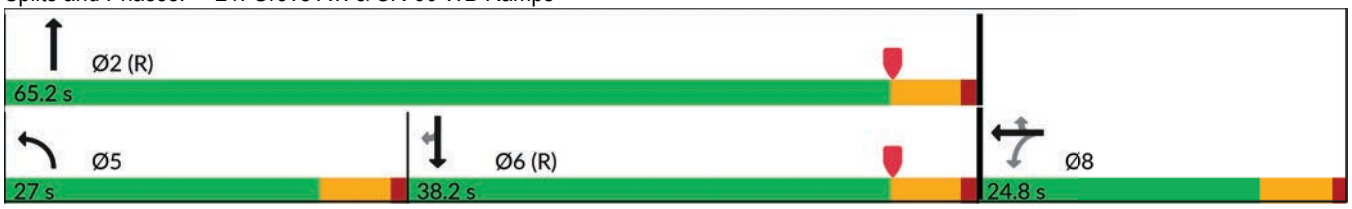
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	301	1143	-	-	1078	-	-	337
HCM Lane V/C Ratio	0.243	0.095	-	-	-	-	-	0.826
HCM Ctrl Dly (s/v)	20.8	8.5	-	-	0	-	-	50.7
HCM Lane LOS	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.9	0.3	-	-	0	-	-	7.2

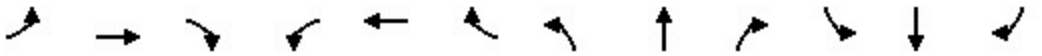
Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	276	324	762	872	725
Future Volume (vph)	0	276	324	762	872	725
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	15.8	24.8	15.8	15.8
Total Split (s)	24.8	24.8	27.0	65.2	38.2	38.2
Total Split (%)	27.6%	27.6%	30.0%	72.4%	42.4%	42.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	16.6	16.6	20.5	61.8	35.5	35.5
Actuated g/C Ratio	0.18	0.18	0.23	0.69	0.39	0.39
v/c Ratio	0.80	0.60	0.90	0.33	0.66	0.78
Control Delay (s/veh)	53.9	13.3	48.7	5.8	26.1	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.9	13.3	48.7	5.8	26.1	11.7
LOS	D	B	D	A	C	B
Approach Delay (s/veh)	32.4			18.6	19.6	
Approach LOS	C			B	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 30.8 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay (s/veh): 21.3	Intersection LOS: C
Intersection Capacity Utilization 96.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 21: Grove Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	247	0	276	324	762	0	0	872	725
Future Volume (veh/h)	0	0	0	247	0	276	324	762	0	0	872	725
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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				1700	1800	1800	1700	1800	0	0	1800	1800
Adj Flow Rate, veh/h				252	0	199	331	778	0	0	890	595
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				295	0	263	353	2390	0	0	1423	618
Arrive On Green				0.17	0.00	0.17	0.44	1.00	0.00	0.00	0.42	0.42
Sat Flow, veh/h				1714	0	1525	1619	3510	0	0	3510	1484
Grp Volume(v), veh/h				252	0	199	331	778	0	0	890	595
Grp Sat Flow(s),veh/h/ln				1714	0	1525	1619	1710	0	0	1710	1484
Q Serve(g_s), s				12.8	0.0	11.2	17.5	0.0	0.0	0.0	18.5	35.2
Cycle Q Clear(g_c), s				12.8	0.0	11.2	17.5	0.0	0.0	0.0	18.5	35.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				295	0	263	353	2390	0	0	1423	618
V/C Ratio(X)				0.85	0.00	0.76	0.94	0.33	0.00	0.00	0.63	0.96
Avail Cap(c_a), veh/h				362	0	322	381	2390	0	0	1423	618
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	0.22	0.22	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				36.1	0.0	35.5	24.8	0.0	0.0	0.0	20.7	25.6
Incr Delay (d2), s/veh				14.3	0.0	7.2	9.5	0.1	0.0	0.0	2.1	28.2
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				6.2	0.0	4.4	5.4	0.0	0.0	0.0	7.1	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				50.4	0.0	42.6	34.2	0.1	0.0	0.0	22.8	53.8
LnGrp LOS				D		D	C	A			C	D
Approach Vol, veh/h					451			1109			1485	
Approach Delay, s/veh					47.0			10.3			35.2	
Approach LOS					D			B			D	

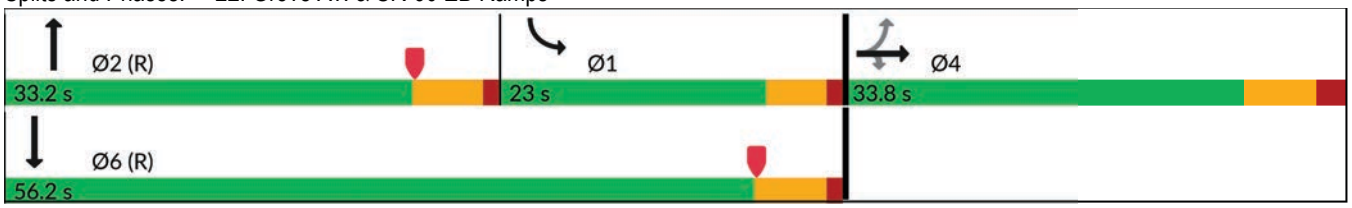
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	68.7		25.4	43.3		21.3						
Change Period (Y+Rc), s	5.8		5.8	5.8		5.8						
Max Green Setting (Gmax), s	59.4		21.2	32.4		19.0						
Max Q Clear Time (g_c+I1), s	2.0		19.5	37.2		14.8						
Green Ext Time (p_c), s	4.5		0.1	0.0		0.7						

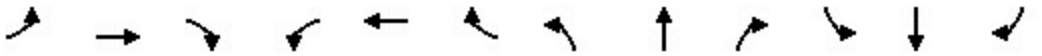
Intersection Summary		
HCM 7th Control Delay, s/veh	27.9	
HCM 7th LOS	C	

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	1	266	693	340	778
Future Volume (vph)	1	266	693	340	778
Turn Type	NA	Perm	NA	Prot	NA
Protected Phases	4		2	1	6
Permitted Phases		4			
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	31.8	15.0	25.8
Total Split (s)	33.8	33.8	33.2	23.0	56.2
Total Split (%)	37.6%	37.6%	36.9%	25.6%	62.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	5.8	5.0	5.8
Lead/Lag			Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	24.1	24.1	30.3	18.0	53.3
Actuated g/C Ratio	0.27	0.27	0.34	0.20	0.59
v/c Ratio	0.88	0.51	0.94	1.07	0.39
Control Delay (s/veh)	52.7	13.8	43.9	95.6	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.7	13.8	43.9	95.6	11.8
LOS	D	B	D	F	B
Approach Delay (s/veh)	37.0		43.9		37.3
Approach LOS	D		D		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay (s/veh): 39.7	Intersection LOS: D
Intersection Capacity Utilization 96.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	1	266	0	0	0	0	693	375	340	778	0
Future Volume (veh/h)	394	1	266	0	0	0	0	693	375	340	778	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	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	1700	1800	1800				0	1800	1800	1700	1800	0
Adj Flow Rate, veh/h	402	1	159				0	707	314	347	794	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	444	1	395				0	694	308	375	2053	0
Arrive On Green	0.26	0.26	0.26				0.00	0.30	0.30	0.46	1.00	0.00
Sat Flow, veh/h	1710	4	1522				0	2370	1012	1619	3510	0
Grp Volume(v), veh/h	403	0	159				0	530	491	347	794	0
Grp Sat Flow(s),veh/h/ln	1714	0	1522				0	1710	1582	1619	1710	0
Q Serve(g_s), s	20.5	0.0	7.8				0.0	27.4	27.4	18.1	0.0	0.0
Cycle Q Clear(g_c), s	20.5	0.0	7.8				0.0	27.4	27.4	18.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.64	1.00		0.00
Lane Grp Cap(c), veh/h	445	0	395				0	521	482	375	2053	0
V/C Ratio(X)	0.90	0.00	0.40				0.00	1.02	1.02	0.93	0.39	0.00
Avail Cap(c_a), veh/h	514	0	457				0	521	482	375	2053	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	0.70	0.70	0.00
Uniform Delay (d), s/veh	32.2	0.0	27.5				0.0	31.3	31.3	23.5	0.0	0.0
Incr Delay (d2), s/veh	16.7	0.0	0.2				0.0	44.2	45.9	22.0	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	9.9	0.0	2.7				0.0	16.7	15.7	6.7	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.9	0.0	27.8				0.0	75.5	77.2	45.5	0.4	0.0
LnGrp LOS	D		C					F	F	D	A	
Approach Vol, veh/h		562						1021			1141	
Approach Delay, s/veh		42.9						76.3			14.1	
Approach LOS		D						E			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	26.6	33.2		30.2		59.8
Change Period (Y+Rc), s	5.8	* 5.8		6.8		5.8
Max Green Setting (Gmax), s	18.0	* 27		27.0		50.4
Max Q Clear Time (g_c+I1), s	20.1	29.4		22.5		2.0
Green Ext Time (p_c), s	0.0	0.0		0.8		4.6

Intersection Summary	
HCM 7th Control Delay, s/veh	43.4
HCM 7th LOS	D

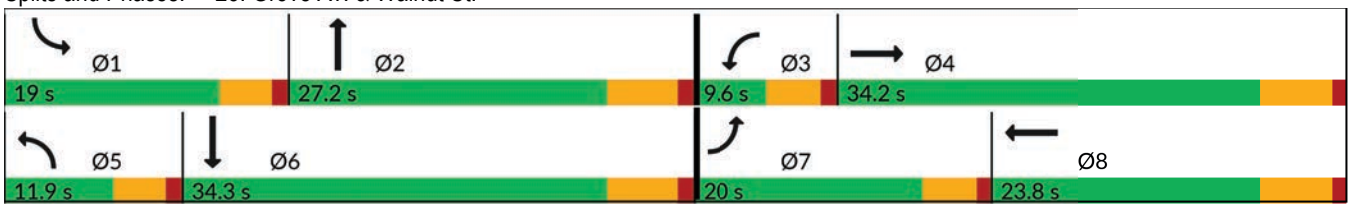
Notes

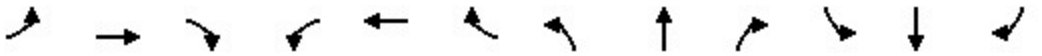
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	174	344	17	184	61	710	163	553
Future Volume (vph)	174	344	17	184	61	710	163	553
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	9.6	23.8
Total Split (s)	20.0	34.2	9.6	23.8	11.9	27.2	19.0	34.3
Total Split (%)	22.2%	38.0%	10.7%	26.4%	13.2%	30.2%	21.1%	38.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.3	25.4	5.1	12.0	6.6	21.6	11.7	29.0
Actuated g/C Ratio	0.16	0.32	0.06	0.15	0.08	0.27	0.15	0.37
v/c Ratio	0.72	0.41	0.17	0.54	0.47	0.85	0.71	0.58
Control Delay (s/veh)	49.2	21.4	42.7	22.4	49.0	38.8	49.9	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.2	21.4	42.7	22.4	49.0	38.8	49.9	23.0
LOS	D	C	D	C	D	D	D	C
Approach Delay (s/veh)		29.4		23.5		39.6		28.1
Approach LOS		C		C		D		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 31.5	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Grove Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	344	86	17	184	122	61	710	51	163	553	135
Future Volume (veh/h)	174	344	86	17	184	122	61	710	51	163	553	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	181	358	79	18	192	103	64	740	43	170	576	106
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	220	738	161	34	328	168	84	895	52	207	1003	184
Arrive On Green	0.14	0.27	0.27	0.02	0.15	0.15	0.05	0.27	0.27	0.13	0.35	0.35
Sat Flow, veh/h	1619	2784	607	1619	2175	1112	1619	3282	191	1619	2877	528
Grp Volume(v), veh/h	181	218	219	18	149	146	64	385	398	170	342	340
Grp Sat Flow(s),veh/h/ln	1619	1710	1680	1619	1710	1577	1619	1710	1762	1619	1710	1695
Q Serve(g_s), s	7.2	7.1	7.3	0.7	5.4	5.8	2.6	14.1	14.1	6.8	10.8	10.9
Cycle Q Clear(g_c), s	7.2	7.1	7.3	0.7	5.4	5.8	2.6	14.1	14.1	6.8	10.8	10.9
Prop In Lane	1.00		0.36	1.00		0.70	1.00		0.11	1.00		0.31
Lane Grp Cap(c), veh/h	220	453	446	34	258	238	84	466	481	207	596	591
V/C Ratio(X)	0.82	0.48	0.49	0.52	0.58	0.61	0.76	0.83	0.83	0.82	0.57	0.58
Avail Cap(c_a), veh/h	375	730	717	122	463	427	178	550	567	350	733	726
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	20.6	20.7	32.2	26.3	26.4	31.1	22.7	22.7	28.3	17.6	17.7
Incr Delay (d2), s/veh	3.0	0.8	0.8	4.5	2.0	2.6	5.1	8.8	8.6	3.1	0.9	0.9
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(50%),veh/ln	2.7	2.6	2.6	0.3	2.1	2.1	1.0	6.0	6.2	2.6	3.9	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.9	21.4	21.5	36.7	28.3	29.0	36.2	31.5	31.3	31.3	18.5	18.5
LnGrp LOS	C	C	C	D	C	C	D	C	C	C	B	B
Approach Vol, veh/h		618			313			847			852	
Approach Delay, s/veh		24.2			29.1			31.7			21.1	
Approach LOS		C			C			C			C	

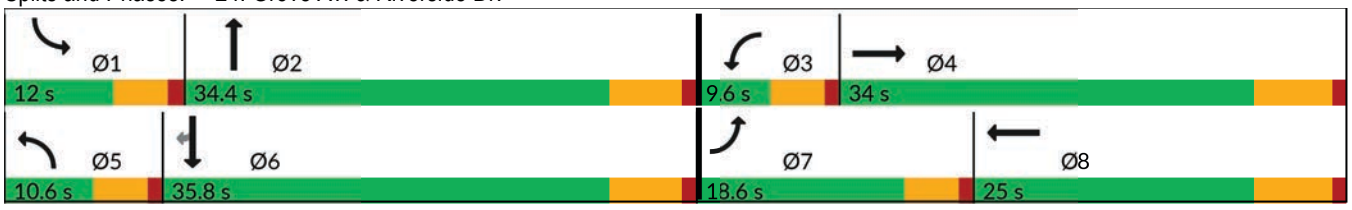
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	23.9	6.0	23.4	8.1	29.0	13.6	15.8
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	14.4	21.4	5.0	28.4	7.3	28.5	15.4	18.0
Max Q Clear Time (g_c+I1), s	8.8	16.1	2.7	9.3	4.6	12.9	9.2	7.8
Green Ext Time (p_c), s	0.1	2.1	0.0	2.2	0.0	3.5	0.1	1.1

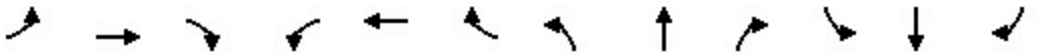
Intersection Summary	
HCM 7th Control Delay, s/veh	26.2
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	128	409	34	420	27	561	85	338	123
Future Volume (vph)	128	409	34	420	27	561	85	338	123
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	18.6	34.0	9.6	25.0	10.6	34.4	12.0	35.8	35.8
Total Split (%)	20.7%	37.8%	10.7%	27.8%	11.8%	38.2%	13.3%	39.8%	39.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.7	25.3	5.2	18.2	5.7	29.7	7.1	34.7	34.7
Actuated g/C Ratio	0.13	0.31	0.06	0.22	0.07	0.36	0.09	0.43	0.43
v/c Ratio	0.62	0.82	0.34	0.71	0.25	0.99	0.63	0.45	0.16
Control Delay (s/veh)	49.3	40.7	50.3	35.2	45.4	64.5	60.8	22.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.3	40.7	50.3	35.2	45.4	64.5	60.8	22.5	0.8
LOS	D	D	D	D	D	E	E	C	A
Approach Delay (s/veh)		42.6		36.1		63.7		23.6	
Approach LOS		D		D		E		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay (s/veh): 42.5	Intersection LOS: D
Intersection Capacity Utilization 87.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	409	35	34	420	109	27	561	69	85	338	123
Future Volume (veh/h)	128	409	35	34	420	109	27	561	69	85	338	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	131	417	36	35	429	85	28	572	62	87	345	89
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	465	40	54	625	123	47	563	61	108	703	596
Arrive On Green	0.10	0.29	0.29	0.03	0.22	0.22	0.03	0.35	0.35	0.07	0.39	0.39
Sat Flow, veh/h	1619	1630	141	1619	2841	558	1619	1596	173	1619	1800	1525
Grp Volume(v), veh/h	131	0	453	35	257	257	28	0	634	87	345	89
Grp Sat Flow(s),veh/h/ln	1619	0	1771	1619	1710	1689	1619	0	1769	1619	1800	1525
Q Serve(g_s), s	6.4	0.0	19.9	1.7	11.2	11.4	1.4	0.0	28.6	4.3	11.7	3.1
Cycle Q Clear(g_c), s	6.4	0.0	19.9	1.7	11.2	11.4	1.4	0.0	28.6	4.3	11.7	3.1
Prop In Lane	1.00		0.08	1.00		0.33	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	161	0	506	54	376	371	47	0	624	108	703	596
V/C Ratio(X)	0.81	0.00	0.90	0.64	0.68	0.69	0.60	0.00	1.02	0.80	0.49	0.15
Avail Cap(c_a), veh/h	279	0	607	100	396	392	120	0	624	148	703	596
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	0.0	27.8	38.7	29.0	29.1	38.9	0.0	26.3	37.3	18.6	16.0
Incr Delay (d2), s/veh	3.8	0.0	14.2	4.6	4.5	4.9	4.5	0.0	40.2	14.3	0.5	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(50%),veh/ln	2.5	0.0	9.5	0.7	4.6	4.7	0.6	0.0	17.6	2.0	4.4	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.6	0.0	42.0	43.3	33.5	34.0	43.4	0.0	66.5	51.7	19.2	16.1
LnGrp LOS	D		D	D	C	C	D		F	D	B	B
Approach Vol, veh/h		584			549			662			521	
Approach Delay, s/veh		41.4			34.4			65.5			24.1	
Approach LOS		D			C			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	34.4	7.3	29.4	6.9	37.5	12.7	24.0
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	7.4	28.6	5.0	27.8	6.0	30.0	14.0	18.8
Max Q Clear Time (g_c+I1), s	6.3	30.6	3.7	21.9	3.4	13.7	8.4	13.4
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2	0.0	1.9	0.1	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	42.7
HCM 7th LOS	D

Intersection	
Intersection Delay, s/veh	65.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	99	194	74	8	109	33	24	503	18	19	362	16
Future Vol, veh/h	99	194	74	8	109	33	24	503	18	19	362	16
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	103	202	77	8	114	34	25	524	19	20	377	17
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	36.9	17.5	114.9	42.1
HCM LOS	E	C	F	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	27%	5%	5%
Vol Thru, %	92%	53%	73%	91%
Vol Right, %	3%	20%	22%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	545	367	150	397
LT Vol	24	99	8	19
Through Vol	503	194	109	362
RT Vol	18	74	33	16
Lane Flow Rate	568	382	156	414
Geometry Grp	1	1	1	1
Degree of Util (X)	1.151	0.806	0.372	0.854
Departure Headway (Hd)	7.299	8.067	9.159	7.868
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	494	451	395	463
Service Time	5.386	6.067	7.159	5.868
HCM Lane V/C Ratio	1.15	0.847	0.395	0.894
HCM Control Delay, s/veh	114.9	36.9	17.5	42.1
HCM Lane LOS	F	E	C	E
HCM 95th-tile Q	19.8	7.4	1.7	8.6

Intersection	
Intersection Delay, s/veh	56.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	243	22	7	76	35	21	426	0	24	365	34
Future Vol, veh/h	83	243	22	7	76	35	21	426	0	24	365	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	92	270	24	8	84	39	23	473	0	27	406	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	39	16.4	76.9	60.6
HCM LOS	E	C	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	24%	6%	6%
Vol Thru, %	95%	70%	64%	86%
Vol Right, %	0%	6%	30%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	447	348	118	423
LT Vol	21	83	7	24
Through Vol	426	243	76	365
RT Vol	0	22	35	34
Lane Flow Rate	497	387	131	470
Geometry Grp	1	1	1	1
Degree of Util (X)	1.031	0.826	0.323	0.965
Departure Headway (Hd)	7.474	7.993	9.145	7.569
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	487	456	396	484
Service Time	5.512	5.993	7.145	5.569
HCM Lane V/C Ratio	1.021	0.849	0.331	0.971
HCM Control Delay, s/veh	76.9	39	16.4	60.6
HCM Lane LOS	F	E	C	F
HCM 95th-tile Q	14.6	7.9	1.4	12.1

Intersection	
Intersection Delay, s/veh	134.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	94	453	15	5	262	44	27	290	10	69	238	44
Future Vol, veh/h	94	453	15	5	262	44	27	290	10	69	238	44
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	102	492	16	5	285	48	29	315	11	75	259	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	268.4	50.2	57	65.6
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	17%	2%	20%
Vol Thru, %	89%	81%	84%	68%
Vol Right, %	3%	3%	14%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	327	562	311	351
LT Vol	27	94	5	69
Through Vol	290	453	262	238
RT Vol	10	15	44	44
Lane Flow Rate	355	611	338	382
Geometry Grp	1	1	1	1
Degree of Util (X)	0.883	1.517	0.842	0.932
Departure Headway (Hd)	10.514	8.938	10.462	10.327
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	348	409	348	355
Service Time	8.514	6.938	8.462	8.327
HCM Lane V/C Ratio	1.02	1.494	0.971	1.076
HCM Control Delay, s/veh	57	268.4	50.2	65.6
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	8.4	33	7.6	9.7

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	10	15	11	6	10	6	385	6	4	103	6
Future Vol, veh/h	16	10	15	11	6	10	6	385	6	4	103	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	0	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	17	11	16	12	7	11	7	418	7	4	112	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	559	562	115	558	559	418	118	0	0	425	0	0
Stage 1	124	124	-	432	432	-	-	-	-	-	-	-
Stage 2	435	438	-	126	127	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	443	439	943	444	441	639	1482	-	-	1145	-	-
Stage 1	885	797	-	606	586	-	-	-	-	-	-	-
Stage 2	604	582	-	883	795	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	426	435	943	423	437	639	1482	-	-	1145	-	-
Mov Cap-2 Maneuver	494	489	-	502	493	-	-	-	-	-	-	-
Stage 1	882	794	-	604	583	-	-	-	-	-	-	-
Stage 2	584	580	-	852	792	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.52	12.01	0.11	0.29
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1482	-	-	596	543	1145	-	-
HCM Lane V/C Ratio	0.004	-	-	0.075	0.054	0.004	-	-
HCM Ctrl Dly (s/v)	7.4	-	-	11.5	12	8.2	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-

Intersection	
Int Delay, s/veh	97.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	69	498	56	19	277	259	35	22	10	373	29	53
Future Vol, veh/h	69	498	56	19	277	259	35	22	10	373	29	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	79	572	64	22	318	298	40	25	11	429	33	61

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	616	0	0	637	0	0	1142	1423	605	1255	1306	467
Stage 1	-	-	-	-	-	-	763	763	-	511	511	-
Stage 2	-	-	-	-	-	-	379	660	-	744	795	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	974	-	-	956	-	-	179	137	502	~ 150	161	600
Stage 1	-	-	-	-	-	-	400	416	-	549	540	-
Stage 2	-	-	-	-	-	-	647	463	-	~ 410	402	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	974	-	-	956	-	-	125	121	502	~ 117	143	600
Mov Cap-2 Maneuver	-	-	-	-	-	-	240	226	-	~ 231	252	-
Stage 1	-	-	-	-	-	-	367	382	-	529	521	-
Stage 2	-	-	-	-	-	-	524	446	-	~ 343	369	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1	0.3	25.13	$ 359.7
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	255	974	-	-	56	-	-	231	252	462
HCM Lane V/C Ratio	0.302	0.081	-	-	0.023	-	-	1.852	0.066	0.168
HCM Ctrl Dly (s/v)	25.1	9	-	-	8.9	0	-	$ 435.4	20.3	14.4
HCM Lane LOS	D	A	-	-	A	A	-	F	C	B
HCM 95th %tile Q(veh)	1.2	0.3	-	-	0.1	-	-	30	0.2	0.6

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

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	21	180	17	49	28	65	216	11	16	221	50
Future Vol, veh/h	80	21	180	17	49	28	65	216	11	16	221	50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	89	23	200	19	54	31	72	240	12	18	246	56
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	13.8	10.7	14.6	14.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	28%	18%	6%
Vol Thru, %	74%	7%	52%	77%
Vol Right, %	4%	64%	30%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	292	281	94	287
LT Vol	65	80	17	16
Through Vol	216	21	49	221
RT Vol	11	180	28	50
Lane Flow Rate	324	312	104	319
Geometry Grp	1	1	1	1
Degree of Util (X)	0.511	0.482	0.182	0.494
Departure Headway (Hd)	5.675	5.553	6.279	5.578
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	629	643	574	641
Service Time	3.759	3.637	4.279	3.662
HCM Lane V/C Ratio	0.515	0.485	0.181	0.498
HCM Control Delay, s/veh	14.6	13.8	10.7	14.1
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.9	2.6	0.7	2.7

Intersection	
Intersection Delay, s/veh	213.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	486	8	143	279	98	17	173	223	222	131	13
Future Vol, veh/h	20	486	8	143	279	98	17	173	223	222	131	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	22	534	9	157	307	108	19	190	245	244	144	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	273.3	276.8	143.4	118
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	4%	28%	61%
Vol Thru, %	42%	95%	54%	36%
Vol Right, %	54%	2%	19%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	413	514	520	366
LT Vol	17	20	143	222
Through Vol	173	486	279	131
RT Vol	223	8	98	13
Lane Flow Rate	454	565	571	402
Geometry Grp	1	1	1	1
Degree of Util (X)	1.169	1.504	1.513	1.083
Departure Headway (Hd)	12.59	12.016	11.929	13.402
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	295	311	309	273
Service Time	10.59	10.016	9.929	11.402
HCM Lane V/C Ratio	1.539	1.817	1.848	1.473
HCM Control Delay, s/veh	143.4	273.3	276.8	118
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	14.6	25.5	26	11.9

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	12	5	337	226	15
Future Vol, veh/h	29	12	5	337	226	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	13	5	366	246	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	631	254	262	0	-	0
Stage 1	254	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	448	790	1314	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	698	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	446	790	1314	-	-	-
Mov Cap-2 Maneuver	606	-	-	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	698	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.94	0.11	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1314	-	650	-	-
HCM Lane V/C Ratio	0.004	-	0.069	-	-
HCM Ctrl Dly (s/v)	7.8	-	10.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Intersection Delay, s/veh	114.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	149	411	101	2	266	97	73	117	8	108	73	123
Future Vol, veh/h	149	411	101	2	266	97	73	117	8	108	73	123
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	175	484	119	2	313	114	86	138	9	127	86	145
Number of Lanes	1	1	0	0	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	1	2
HCM Control Delay, s/veh	193.4	97.9	19.4	24.1
HCM LOS	F	F	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	1%	100%	0%
Vol Thru, %	0%	100%	0%	0%	80%	73%	0%	37%
Vol Right, %	0%	0%	100%	0%	20%	27%	0%	63%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	117	8	149	512	365	108	196
LT Vol	73	0	0	149	0	2	108	0
Through Vol	0	117	0	0	411	266	0	73
RT Vol	0	0	8	0	101	97	0	123
Lane Flow Rate	86	138	9	175	602	429	127	231
Geometry Grp	6	6	6	6	6	6	6	6
Degree of Util (X)	0.251	0.384	0.024	0.451	1.459	1.068	0.356	0.585
Departure Headway (Hd)	11.67	11.141	10.401	9.679	9.017	9.754	11.209	10.208
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	310	325	346	375	410	374	323	355
Service Time	9.37	8.841	8.101	7.379	6.717	7.454	8.909	7.908
HCM Lane V/C Ratio	0.277	0.425	0.026	0.467	1.468	1.147	0.393	0.651
HCM Control Delay, s/veh	18.2	20.6	13.4	20.1	243.8	97.9	20	26.3
HCM Lane LOS	C	C	B	C	F	F	C	D
HCM 95th-tile Q	1	1.7	0.1	2.3	30.2	13.8	1.6	3.5

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	634	34	14	459	18	49
Future Volume (vph)	634	34	14	459	18	49
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	8	8	2	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.2	24.2	28.6	28.6
Total Split (s)	83.0	83.0	83.0	83.0	37.0	37.0
Total Split (%)	69.2%	69.2%	69.2%	69.2%	30.8%	30.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	23.0	23.0	23.0	23.0	8.4	8.4
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.25	0.25
v/c Ratio	0.32	0.04	0.04	0.44	0.05	0.14
Control Delay (s/veh)	6.2	5.1	7.3	8.5	13.2	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.2	5.1	7.3	8.5	13.2	5.5
LOS	A	A	A	A	B	A
Approach Delay (s/veh)	6.2			8.4	7.6	
Approach LOS	A			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 33.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay (s/veh): 7.1	Intersection LOS: A
Intersection Capacity Utilization 38.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 34: Hellman Av. & Eucalyptus Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	634	34	14	459	18	49
Future Volume (veh/h)	634	34	14	459	18	49
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1700	1800	1700	1800
Adj Flow Rate, veh/h	764	37	17	553	22	46
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1636	730	511	861	123	116
Arrive On Green	0.48	0.48	0.48	0.48	0.08	0.08
Sat Flow, veh/h	3510	1525	651	1800	1619	1525
Grp Volume(v), veh/h	764	37	17	553	22	46
Grp Sat Flow(s),veh/h/ln	1710	1525	651	1800	1619	1525
Q Serve(g_s), s	3.6	0.3	0.4	5.6	0.3	0.7
Cycle Q Clear(g_c), s	3.6	0.3	4.1	5.6	0.3	0.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1636	730	511	861	123	116
V/C Ratio(X)	0.47	0.05	0.03	0.64	0.18	0.40
Avail Cap(c_a), veh/h	10844	4837	2265	5707	2166	2041
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.2	3.4	5.6	4.8	10.5	10.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.8	0.3	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.2	0.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	4.5	3.4	5.6	5.6	10.7	11.5
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h	801			570	68	
Approach Delay, s/veh	4.4			5.6	11.2	
Approach LOS	A			A	B	

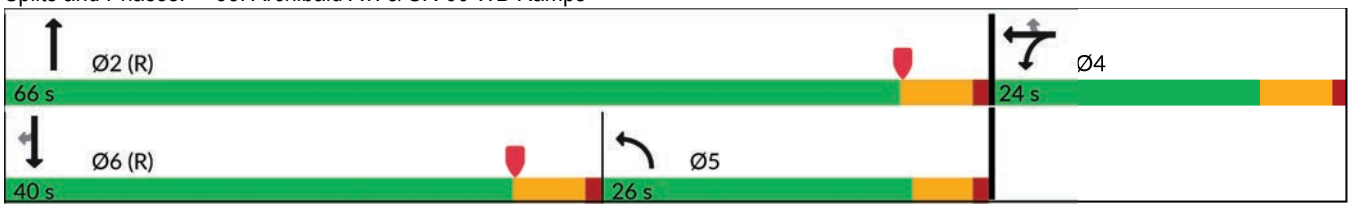
Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	6.4	17.8	17.8
Change Period (Y+Rc), s	4.6	6.2	6.2
Max Green Setting (Gmax), s	32.4	76.8	76.8
Max Q Clear Time (g_c+I1), s	2.7	5.6	7.6
Green Ext Time (p_c), s	0.1	6.0	3.8

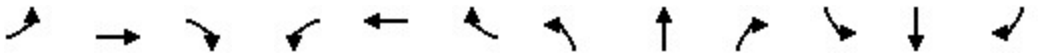
Intersection Summary	
HCM 7th Control Delay, s/veh	5.2
HCM 7th LOS	A

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	362	6	246	523	629	1268	323
Future Volume (vph)	362	6	246	523	629	1268	323
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4	4		5	2	6	
Permitted Phases			4				6
Detector Phase	4	4	4	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	8.0	8.0	8.0
Minimum Split (s)	10.8	10.8	10.8	10.0	43.8	38.8	38.8
Total Split (s)	24.0	24.0	24.0	26.0	66.0	40.0	40.0
Total Split (%)	26.7%	26.7%	26.7%	28.9%	73.3%	44.4%	44.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.0	5.8	5.8	5.8
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	16.7	16.7	16.7	19.8	61.7	36.9	36.9
Actuated g/C Ratio	0.19	0.19	0.19	0.22	0.69	0.41	0.41
v/c Ratio	0.81	0.75	0.47	0.86	0.20	0.54	0.42
Control Delay (s/veh)	57.6	48.6	8.6	43.3	0.8	21.7	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	48.6	8.6	43.3	0.8	21.7	4.3
LOS	E	D	A	D	A	C	A
Approach Delay (s/veh)		39.2			20.1	18.2	
Approach LOS		D			C	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 29.6 (33%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 22.7	Intersection LOS: C
Intersection Capacity Utilization 67.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 35: Archibald Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	362	6	246	523	629	0	0	1268	323
Future Volume (veh/h)	0	0	0	362	6	246	523	629	0	0	1268	323
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
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				1700	1800	1800	1600	1800	0	0	1800	1800
Adj Flow Rate, veh/h				433	0	90	562	676	0	0	1363	224
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				521	0	246	994	3489	0	0	1916	460
Arrive On Green				0.16	0.00	0.16	0.34	0.71	0.00	0.00	0.31	0.31
Sat Flow, veh/h				3238	0	1525	2956	5076	0	0	6444	1488
Grp Volume(v), veh/h				433	0	90	562	676	0	0	1363	224
Grp Sat Flow(s),veh/h/ln				1619	0	1525	1478	1638	0	0	1548	1488
Q Serve(g_s), s				11.7	0.0	4.7	14.0	4.2	0.0	0.0	17.5	11.0
Cycle Q Clear(g_c), s				11.7	0.0	4.7	14.0	4.2	0.0	0.0	17.5	11.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				521	0	246	994	3489	0	0	1916	460
V/C Ratio(X)				0.83	0.00	0.37	0.57	0.19	0.00	0.00	0.71	0.49
Avail Cap(c_a), veh/h				655	0	308	994	3489	0	0	2353	565
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	1.00	0.92	0.92	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				36.6	0.0	33.7	24.5	4.4	0.0	0.0	27.5	25.3
Incr Delay (d2), s/veh				7.2	0.0	0.9	0.4	0.1	0.0	0.0	2.3	3.7
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 BackOfQ(50%),veh/ln				4.9	0.0	4.2	4.6	1.0	0.0	0.0	6.3	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				43.8	0.0	34.6	24.9	4.5	0.0	0.0	29.8	28.9
LnGrp LOS				D		C	C	A			C	C
Approach Vol, veh/h					523			1238			1587	
Approach Delay, s/veh					42.2			13.8			29.7	
Approach LOS					D			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	69.7	20.3	36.1	33.6
Change Period (Y+Rc), s	5.8	5.8	5.8	* 5.8
Max Green Setting (Gmax), s	60.2	18.2	21.0	* 34
Max Q Clear Time (g_c+I1), s	6.2	13.7	16.0	19.5
Green Ext Time (p_c), s	4.8	0.8	0.6	8.3

Intersection Summary	
HCM 7th Control Delay, s/veh	25.8
HCM 7th LOS	C

Notes

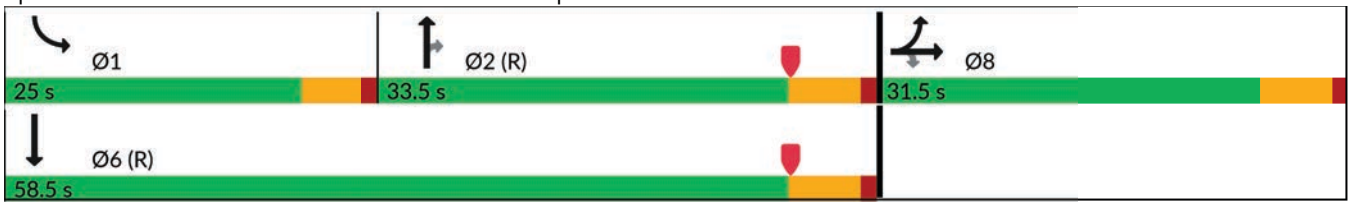
User approved volume balancing among the lanes for turning movement.

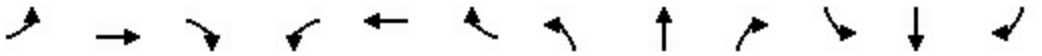
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	141	0	544	938	437	453	1093
Future Volume (vph)	141	0	544	938	437	453	1093
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8	8		2		1	6
Permitted Phases			8		2		
Detector Phase	8	8	8	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	10.8	10.8	10.8	32.8	32.8	10.0	33.8
Total Split (s)	31.5	31.5	31.5	33.5	33.5	25.0	58.5
Total Split (%)	35.0%	35.0%	35.0%	37.2%	37.2%	27.8%	65.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.0	5.8
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	19.3	19.3	19.3	36.0	36.0	18.1	59.1
Actuated g/C Ratio	0.21	0.21	0.21	0.40	0.40	0.20	0.66
v/c Ratio	0.41	0.80	0.76	0.40	0.52	0.81	0.36
Control Delay (s/veh)	32.6	37.9	34.8	21.5	4.8	57.1	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.6	37.9	34.8	21.5	4.8	57.1	2.1
LOS	C	D	C	C	A	E	A
Approach Delay (s/veh)		35.7		16.2			18.3
Approach LOS		D		B			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 29.6 (33%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 20.8	Intersection LOS: C
Intersection Capacity Utilization 67.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 36: Archibald Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	0	544	0	0	0	0	938	437	453	1093	0
Future Volume (veh/h)	141	0	544	0	0	0	0	938	437	453	1093	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1700	1800	1800				0	1800	1800	1600	1800	0
Adj Flow Rate, veh/h	100	0	421				0	998	314	482	1163	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	279	0	525				0	2862	705	536	3435	0
Arrive On Green	0.17	0.00	0.17				0.00	0.46	0.46	0.36	1.00	0.00
Sat Flow, veh/h	1619	0	3051				0	6444	1525	2956	5076	0
Grp Volume(v), veh/h	100	0	421				0	998	314	482	1163	0
Grp Sat Flow(s),veh/h/ln	1619	0	1525				0	1548	1525	1478	1638	0
Q Serve(g_s), s	4.9	0.0	11.9				0.0	9.3	12.5	13.9	0.0	0.0
Cycle Q Clear(g_c), s	4.9	0.0	11.9				0.0	9.3	12.5	13.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	279	0	525				0	2862	705	536	3435	0
V/C Ratio(X)	0.36	0.00	0.80				0.00	0.35	0.45	0.90	0.34	0.00
Avail Cap(c_a), veh/h	462	0	871				0	2862	705	657	3435	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	0.79	0.79	0.00
Uniform Delay (d), s/veh	32.9	0.0	35.8				0.0	15.5	16.4	27.9	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	2.9				0.0	0.3	2.0	10.0	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	1.9	0.0	4.4				0.0	2.9	4.2	4.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.6	0.0	38.7				0.0	15.9	18.4	37.9	0.2	0.0
LnGrp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		521						1312			1645	
Approach Delay, s/veh		37.7						16.5			11.3	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	21.3	47.4				68.7		21.3				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	20.0	27.7				52.7		25.7				
Max Q Clear Time (g_c+I1), s	15.9	14.5				2.0		13.9				
Green Ext Time (p_c), s	0.4	6.0				9.3		1.6				

Intersection Summary	
HCM 7th Control Delay, s/veh	17.2
HCM 7th LOS	B

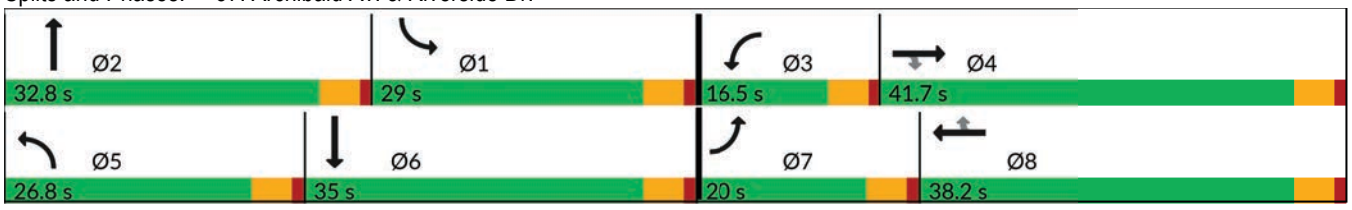
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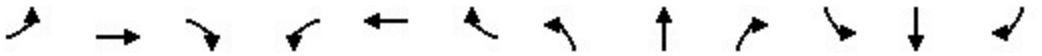
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	200	431	201	121	358	173	247	766	336	801
Future Volume (vph)	200	431	201	121	358	173	247	766	336	801
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.2	38.2	9.6	38.2	38.2	9.6	32.2	9.6	33.2
Total Split (s)	20.0	41.7	41.7	16.5	38.2	38.2	26.8	32.8	29.0	35.0
Total Split (%)	16.7%	34.8%	34.8%	13.8%	31.8%	31.8%	22.3%	27.3%	24.2%	29.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.6	22.7	22.7	10.8	18.0	18.0	19.4	23.4	25.3	29.2
Actuated g/C Ratio	0.15	0.23	0.23	0.11	0.18	0.18	0.19	0.23	0.25	0.29
v/c Ratio	0.82	0.57	0.41	0.71	0.60	0.43	0.81	0.76	0.85	0.72
Control Delay (s/veh)	69.4	38.2	7.1	68.3	42.3	8.7	60.9	40.9	58.2	35.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.4	38.2	7.1	68.3	42.3	8.7	60.9	40.9	58.2	35.3
LOS	E	D	A	E	D	A	E	D	E	D
Approach Delay (s/veh)		38.2			38.2			45.4		41.1
Approach LOS		D			D			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 41.2	Intersection LOS: D
Intersection Capacity Utilization 79.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 37: Archibald Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	431	201	121	358	173	247	766	73	336	801	194
Future Volume (veh/h)	200	431	201	121	358	173	247	766	73	336	801	194
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	204	440	134	123	365	125	252	782	62	343	817	172
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	237	766	335	151	584	253	287	1066	84	377	1157	242
Arrive On Green	0.15	0.22	0.22	0.09	0.17	0.17	0.18	0.23	0.23	0.23	0.29	0.29
Sat Flow, veh/h	1619	3420	1498	1619	3420	1481	1619	4638	366	1619	4054	847
Grp Volume(v), veh/h	204	440	134	123	365	125	252	551	293	343	659	330
Grp Sat Flow(s),veh/h/ln	1619	1710	1498	1619	1710	1481	1619	1638	1728	1619	1638	1625
Q Serve(g_s), s	10.3	9.6	6.4	6.2	8.3	3.8	12.7	13.0	13.1	17.2	15.1	15.2
Cycle Q Clear(g_c), s	10.3	9.6	6.4	6.2	8.3	3.8	12.7	13.0	13.1	17.2	15.1	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.52
Lane Grp Cap(c), veh/h	237	766	335	151	584	253	287	753	397	377	935	464
V/C Ratio(X)	0.86	0.57	0.40	0.81	0.63	0.49	0.88	0.73	0.74	0.91	0.70	0.71
Avail Cap(c_a), veh/h	298	1517	664	230	1373	595	430	1104	582	472	1190	590
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	28.9	27.7	37.2	32.2	10.8	33.5	29.8	29.9	31.2	26.7	26.8
Incr Delay (d2), s/veh	15.6	0.7	0.8	6.9	1.1	1.5	9.2	1.4	2.7	16.8	1.4	2.9
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(50%),veh/ln	4.8	3.7	2.2	2.6	3.2	2.1	5.3	4.8	5.3	7.9	5.5	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.5	29.6	28.4	44.1	33.3	12.3	42.7	31.2	32.6	48.1	28.1	29.7
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		778			613			1096			1332	
Approach Delay, s/veh		34.9			31.2			34.2			33.6	
Approach LOS		C			C			C			C	

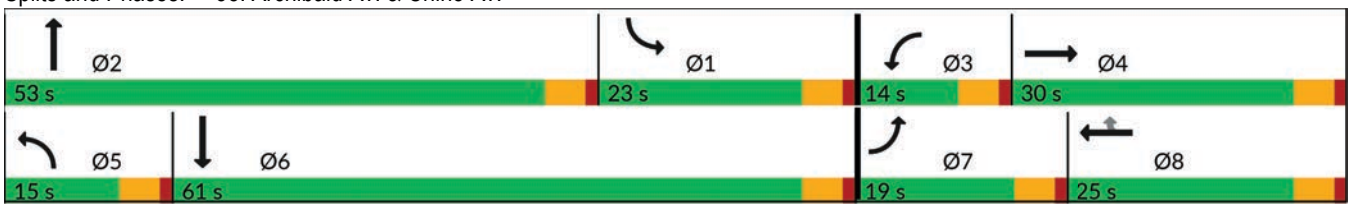
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.1	23.8	12.4	23.3	19.4	28.5	16.9	18.9
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	24.4	28.2	11.9	37.1	22.2	30.4	15.4	33.6
Max Q Clear Time (g_c+I1), s	19.2	15.1	8.2	11.6	14.7	17.2	12.3	10.3
Green Ext Time (p_c), s	0.2	4.0	0.0	3.0	0.2	4.8	0.1	2.5

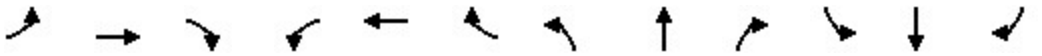
Intersection Summary	
HCM 7th Control Delay, s/veh	33.7
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	70	16	51	29	114	51	799	102	916
Future Volume (vph)	70	16	51	29	114	51	799	102	916
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	19.0	30.0	14.0	25.0	25.0	15.0	53.0	23.0	61.0
Total Split (%)	15.8%	25.0%	11.7%	20.8%	20.8%	12.5%	44.2%	19.2%	50.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.5	11.3	10.1	10.4	10.4	10.2	28.6	16.2	36.6
Actuated g/C Ratio	0.17	0.17	0.15	0.16	0.16	0.15	0.43	0.24	0.55
v/c Ratio	0.27	0.19	0.22	0.11	0.31	0.22	0.39	0.28	0.52
Control Delay (s/veh)	36.9	16.9	39.0	35.0	3.6	38.5	22.3	29.4	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.9	16.9	39.0	35.0	3.6	38.5	22.3	29.4	17.7
LOS	D	B	D	D	A	D	C	C	B
Approach Delay (s/veh)		28.2		17.6			23.2		18.8
Approach LOS		C		B			C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 66.2	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay (s/veh): 20.9	Intersection LOS: C
Intersection Capacity Utilization 55.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 38: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	16	38	51	29	114	51	799	53	102	916	47
Future Volume (veh/h)	70	16	38	51	29	114	51	799	53	102	916	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	75	17	33	55	31	68	55	859	49	110	985	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	107	48	94	88	138	117	88	1542	88	273	1437	60
Arrive On Green	0.07	0.09	0.09	0.05	0.08	0.08	0.05	0.30	0.30	0.17	0.42	0.42
Sat Flow, veh/h	1619	547	1062	1619	1800	1525	1619	5060	288	1619	3428	143
Grp Volume(v), veh/h	75	0	50	55	31	68	55	610	298	110	517	509
Grp Sat Flow(s),veh/h/ln	1619	0	1609	1619	1800	1525	1619	1800	1748	1619	1800	1771
Q Serve(g_s), s	2.2	0.0	1.4	1.6	0.8	1.3	1.6	6.8	6.8	2.9	11.2	11.2
Cycle Q Clear(g_c), s	2.2	0.0	1.4	1.6	0.8	1.3	1.6	6.8	6.8	2.9	11.2	11.2
Prop In Lane	1.00		0.66	1.00		1.00	1.00		0.16	1.00		0.08
Lane Grp Cap(c), veh/h	107	0	142	88	138	117	88	1097	533	273	754	742
V/C Ratio(X)	0.70	0.00	0.35	0.63	0.23	0.58	0.63	0.56	0.56	0.40	0.69	0.69
Avail Cap(c_a), veh/h	487	0	854	318	767	650	352	3640	1767	622	2121	2086
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	0.0	20.5	22.2	20.8	7.9	22.2	13.9	13.9	17.8	11.3	11.3
Incr Delay (d2), s/veh	8.1	0.0	1.5	7.1	0.8	4.6	7.1	0.4	0.9	1.0	1.1	1.1
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(50%),veh/ln	1.0	0.0	0.5	0.7	0.3	0.8	0.7	2.0	2.0	0.9	3.1	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.0	0.0	22.0	29.3	21.6	12.5	29.3	14.4	14.9	18.7	12.4	12.5
LnGrp LOS	C		C	C	C	B	C	B	B	B	B	B
Approach Vol, veh/h		125			154			963			1136	
Approach Delay, s/veh		26.8			20.3			15.4			13.1	
Approach LOS		C			C			B			B	

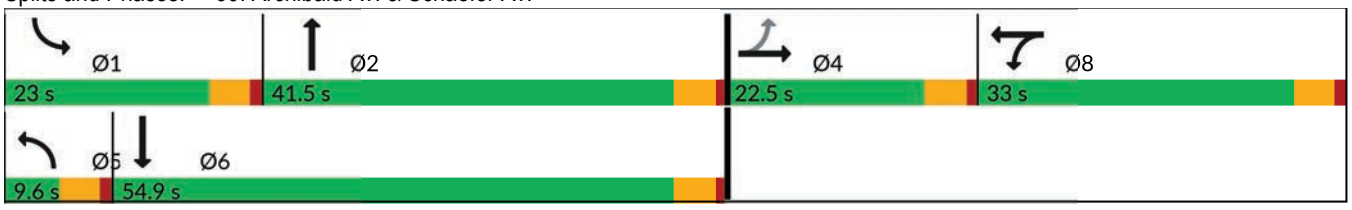
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	19.2	7.2	8.8	7.2	24.7	7.8	8.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	48.4	9.4	25.4	10.4	56.4	14.4	20.4
Max Q Clear Time (g_c+I1), s	4.9	8.8	3.6	3.4	3.6	13.2	4.2	3.3
Green Ext Time (p_c), s	0.2	5.8	0.0	0.2	0.0	6.9	0.1	0.3

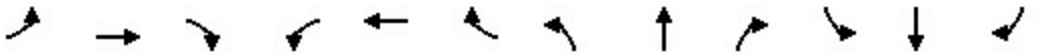
Intersection Summary	
HCM 7th Control Delay, s/veh	15.2
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	163	57	35	45	84	860	115	909
Future Volume (vph)	163	57	35	45	84	860	115	909
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	22.5	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	22.5	22.5	33.0	33.0	9.6	41.5	23.0	54.9
Total Split (%)	18.8%	18.8%	27.5%	27.5%	8.0%	34.6%	19.2%	45.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		18.9	10.7	10.7	5.3	29.0	11.4	35.1
Actuated g/C Ratio		0.22	0.12	0.12	0.06	0.34	0.13	0.41
v/c Ratio		3.96	0.18	0.31	0.90	0.57	0.57	0.83
Control Delay (s/veh)		Error	38.4	31.5	114.6	26.7	50.0	29.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		Error	38.4	31.5	114.6	26.7	50.0	29.2
LOS		F	D	C	F	C	D	C
Approach Delay (s/veh)		1382.2		33.8		34.2		31.2
Approach LOS		F		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.4	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.96	
Intersection Signal Delay (s/veh): 174.8	Intersection LOS: F
Intersection Capacity Utilization 71.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	57	50	35	45	24	84	860	40	115	909	177
Future Volume (veh/h)	163	57	50	35	45	24	84	860	40	115	909	177
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	170	59	52	36	47	23	88	896	39	120	947	184
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	200	69	61	104	73	36	109	1894	82	150	1192	231
Arrive On Green	0.20	0.20	0.20	0.06	0.06	0.06	0.07	0.39	0.39	0.09	0.42	0.42
Sat Flow, veh/h	1024	355	313	1619	1141	558	1619	4828	210	1619	2856	554
Grp Volume(v), veh/h	281	0	0	36	0	70	88	607	328	120	567	564
Grp Sat Flow(s),veh/h/ln	1692	0	0	1619	0	1699	1619	1638	1762	1619	1710	1700
Q Serve(g_s), s	11.5	0.0	0.0	1.5	0.0	2.9	3.9	9.9	10.0	5.2	20.8	20.8
Cycle Q Clear(g_c), s	11.5	0.0	0.0	1.5	0.0	2.9	3.9	9.9	10.0	5.2	20.8	20.8
Prop In Lane	0.60		0.19	1.00		0.33	1.00		0.12	1.00		0.33
Lane Grp Cap(c), veh/h	330	0	0	104	0	109	109	1285	691	150	714	709
V/C Ratio(X)	0.85	0.00	0.00	0.35	0.00	0.64	0.81	0.47	0.47	0.80	0.79	0.80
Avail Cap(c_a), veh/h	421	0	0	639	0	671	113	1681	904	414	1196	1189
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	27.9	0.0	0.0	32.2	0.0	32.8	33.1	16.3	16.3	32.0	18.3	18.3
Incr Delay (d2), s/veh	12.5	0.0	0.0	2.0	0.0	6.1	32.9	0.3	0.5	3.7	2.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	0.0	0.6	0.0	1.3	2.4	3.1	3.4	2.0	6.9	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.4	0.0	0.0	34.2	0.0	38.9	66.0	16.6	16.8	35.7	20.3	20.4
LnGrp LOS	D			C		D	E	B	B	D	C	C
Approach Vol, veh/h		281			106			1023			1251	
Approach Delay, s/veh		40.4			37.3			20.9			21.8	
Approach LOS		D			D			C			C	

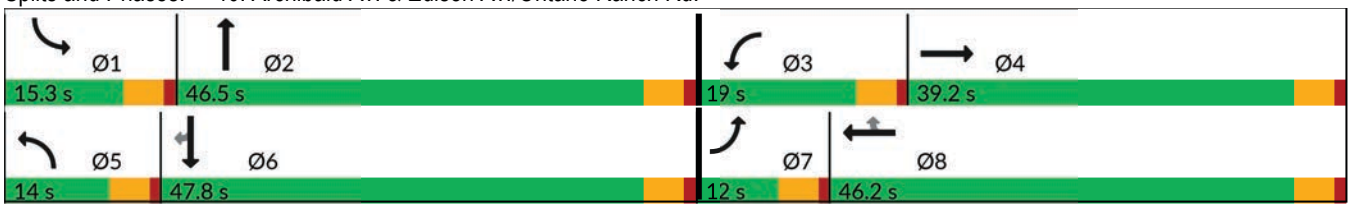
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	32.8		18.6	9.4	34.6		9.2				
Change Period (Y+Rc), s	4.6	4.6		4.6	4.6	4.6		4.6				
Max Green Setting (Gmax), s	18.4	36.9		17.9	5.0	50.3		28.4				
Max Q Clear Time (g_c+I1), s	7.2	12.0		13.5	5.9	22.8		4.9				
Green Ext Time (p_c), s	0.1	5.5		0.6	0.0	7.2		0.4				

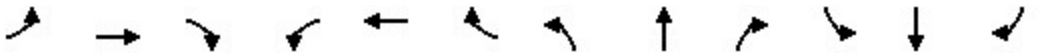
Intersection Summary			
HCM 7th Control Delay, s/veh		24.1	
HCM 7th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	186	803	214	316	636	76	97	610	305	79	708	97
Future Volume (vph)	186	803	214	316	636	76	97	610	305	79	708	97
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	12.0	39.2		19.0	46.2	46.2	14.0	46.5		15.3	47.8	47.8
Total Split (%)	10.0%	32.7%		15.8%	38.5%	38.5%	11.7%	38.8%		12.8%	39.8%	39.8%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	7.4	35.0	106.1	14.2	41.8	41.8	9.0	31.8	106.1	8.9	29.4	29.4
Actuated g/C Ratio	0.07	0.33	1.00	0.13	0.39	0.39	0.08	0.30	1.00	0.08	0.28	0.28
v/c Ratio	0.95	0.52	0.15	0.84	0.94	0.12	0.74	0.63	0.21	0.62	0.79	0.19
Control Delay (s/veh)	102.4	31.2	0.2	65.5	55.7	3.8	80.6	35.8	0.3	68.3	41.8	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	102.4	31.2	0.2	65.5	55.7	3.8	80.6	35.8	0.3	68.3	41.8	2.6
LOS	F	C	A	E	E	A	F	D	A	E	D	A
Approach Delay (s/veh)		36.7			54.9			29.4			39.9	
Approach LOS		D			D			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay (s/veh): 40.1	Intersection LOS: D
Intersection Capacity Utilization 83.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 40: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	803	214	316	636	76	97	610	305	79	708	97
Future Volume (veh/h)	186	803	214	316	636	76	97	610	305	79	708	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1600	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	196	845	0	333	669	51	102	642	0	83	745	83
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	220	1654		388	709	601	125	969		103	923	412
Arrive On Green	0.07	0.34	0.00	0.13	0.39	0.39	0.08	0.28	0.00	0.06	0.27	0.27
Sat Flow, veh/h	2956	4914	1525	2956	1800	1525	1619	3420	1525	1619	3420	1525
Grp Volume(v), veh/h	196	845	0	333	669	51	102	642	0	83	745	83
Grp Sat Flow(s),veh/h/ln	1478	1638	1525	1478	1800	1525	1619	1710	1525	1619	1710	1525
Q Serve(g_s), s	6.5	13.7	0.0	11.0	35.7	2.1	6.2	16.5	0.0	5.0	20.3	4.2
Cycle Q Clear(g_c), s	6.5	13.7	0.0	11.0	35.7	2.1	6.2	16.5	0.0	5.0	20.3	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	1654		388	709	601	125	969		103	923	412
V/C Ratio(X)	0.89	0.51		0.86	0.94	0.08	0.81	0.66		0.80	0.81	0.20
Avail Cap(c_a), veh/h	220	1707		427	752	637	153	1439		174	1483	662
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	26.5	0.0	42.3	29.1	18.9	45.3	31.5	0.0	46.0	33.9	28.1
Incr Delay (d2), s/veh	32.6	0.2	0.0	13.6	19.8	0.1	19.8	0.8	0.0	5.4	1.8	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(50%),veh/ln	3.3	5.0	0.0	4.5	17.7	0.7	3.0	6.3	0.0	2.1	7.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.3	26.7	0.0	56.0	48.9	19.0	65.1	32.3	0.0	51.4	35.7	28.3
LnGrp LOS	E	C		E	D	B	E	C		D	D	C
Approach Vol, veh/h		1041			1053			744			911	
Approach Delay, s/veh		36.4			49.7			36.8			36.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	32.8	17.7	38.1	12.3	31.5	12.0	43.8
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	10.7	41.9	14.4	34.6	9.4	43.2	7.4	41.6
Max Q Clear Time (g_c+I1), s	7.0	18.5	13.0	15.7	8.2	22.3	8.5	37.7
Green Ext Time (p_c), s	0.0	3.8	0.1	5.0	0.0	4.6	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	40.2
HCM 7th LOS	D

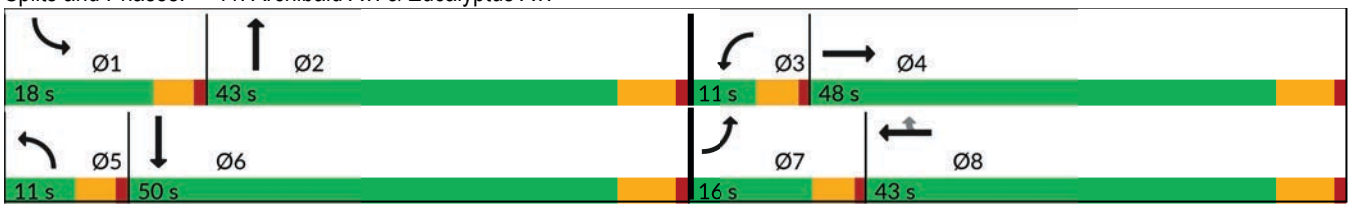
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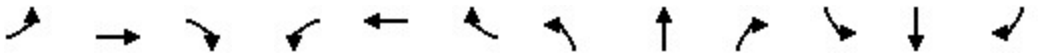
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	254	93	22	57	59	43	712	118	866
Future Volume (vph)	254	93	22	57	59	43	712	118	866
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	42.2	9.6	42.2	42.2	9.6	32.2	9.6	32.2
Total Split (s)	16.0	48.0	11.0	43.0	43.0	11.0	43.0	18.0	50.0
Total Split (%)	13.3%	40.0%	9.2%	35.8%	35.8%	9.2%	35.8%	15.0%	41.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.3	23.5	6.1	14.8	14.8	6.4	21.8	8.5	26.1
Actuated g/C Ratio	0.18	0.32	0.08	0.20	0.20	0.09	0.30	0.12	0.36
v/c Ratio	0.50	0.14	0.09	0.09	0.13	0.17	0.43	0.36	0.66
Control Delay (s/veh)	38.2	15.4	42.5	28.3	0.6	42.1	23.2	39.9	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.2	15.4	42.5	28.3	0.6	42.1	23.2	39.9	22.5
LOS	D	B	D	C	A	D	C	D	C
Approach Delay (s/veh)		30.0		18.7			24.2		24.2
Approach LOS		C		B			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 72.7	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay (s/veh): 24.8	Intersection LOS: C
Intersection Capacity Utilization 56.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 41: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	93	50	22	57	59	43	712	42	118	866	217
Future Volume (veh/h)	254	93	50	22	57	59	43	712	42	118	866	217
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	267	98	51	23	60	24	45	749	30	124	912	200
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	361	500	245	78	442	194	130	1962	78	214	1399	305
Arrive On Green	0.12	0.22	0.22	0.03	0.13	0.13	0.04	0.32	0.32	0.07	0.35	0.35
Sat Flow, veh/h	2956	2225	1089	2956	3420	1502	2956	6151	245	2956	4025	879
Grp Volume(v), veh/h	267	74	75	23	60	24	45	564	215	124	742	370
Grp Sat Flow(s),veh/h/ln	1478	1710	1604	1478	1710	1502	1478	1548	1752	1478	1638	1628
Q Serve(g_s), s	5.3	2.1	2.3	0.5	0.9	0.9	0.9	5.7	5.8	2.5	11.5	11.6
Cycle Q Clear(g_c), s	5.3	2.1	2.3	0.5	0.9	0.9	0.9	5.7	5.8	2.5	11.5	11.6
Prop In Lane	1.00		0.68	1.00		1.00	1.00		0.14	1.00		0.54
Lane Grp Cap(c), veh/h	361	384	360	78	442	194	130	1481	559	214	1138	566
V/C Ratio(X)	0.74	0.19	0.21	0.29	0.14	0.12	0.35	0.38	0.38	0.58	0.65	0.65
Avail Cap(c_a), veh/h	558	1183	1110	313	2083	915	313	2828	1067	656	2375	1180
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	19.0	19.1	28.9	23.3	23.3	28.0	16.0	16.0	27.1	16.6	16.7
Incr Delay (d2), s/veh	1.1	0.2	0.3	0.8	0.1	0.3	0.6	0.2	0.4	0.9	0.6	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.8	0.8	0.2	0.3	0.3	0.3	1.6	1.9	0.8	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.7	19.2	19.3	29.6	23.5	23.6	28.6	16.1	16.4	28.1	17.3	17.9
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		416			107			824			1236	
Approach Delay, s/veh		24.1			24.8			16.9			18.6	
Approach LOS		C			C			B			B	

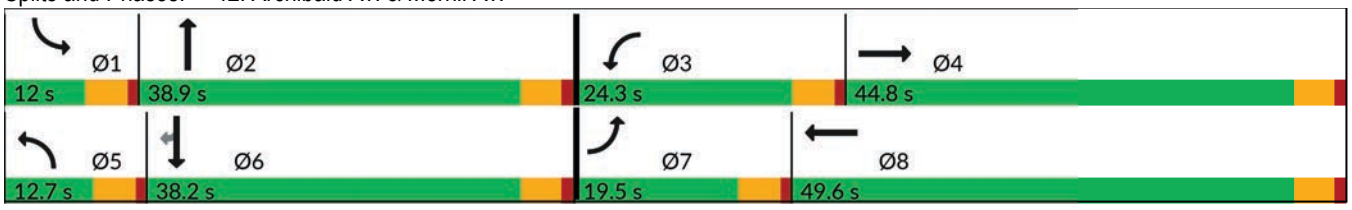
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	25.5	6.2	19.8	7.3	27.2	12.0	14.0
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	13.4	36.8	6.4	41.8	6.4	43.8	11.4	36.8
Max Q Clear Time (g_c+I1), s	4.5	7.8	2.5	4.3	2.9	13.6	7.3	2.9
Green Ext Time (p_c), s	0.1	4.7	0.0	0.8	0.0	7.4	0.2	0.4

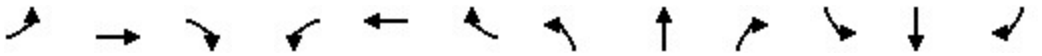
Intersection Summary	
HCM 7th Control Delay, s/veh	19.2
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	186	378	294	131	187	162	556	68	694	161
Future Volume (vph)	186	378	294	131	187	162	556	68	694	161
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			Free							6
Detector Phase	7	4		3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	44.8		9.6	45.8	9.6	32.5	9.6	31.5	31.5
Total Split (s)	19.5	44.8		24.3	49.6	12.7	38.9	12.0	38.2	38.2
Total Split (%)	16.3%	37.3%		20.3%	41.3%	10.6%	32.4%	10.0%	31.8%	31.8%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	None	None
Act Effct Green (s)	11.2	18.1	83.4	13.1	19.9	8.5	28.6	7.2	24.4	24.4
Actuated g/C Ratio	0.13	0.22	1.00	0.16	0.24	0.10	0.34	0.09	0.29	0.29
v/c Ratio	0.50	0.53	0.21	0.57	0.30	0.57	0.31	0.29	0.73	0.31
Control Delay (s/veh)	41.5	31.9	0.3	45.4	23.2	48.7	21.6	45.1	32.5	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.5	31.9	0.3	45.4	23.2	48.7	21.6	45.1	32.5	6.2
LOS	D	C	A	D	C	D	C	D	C	A
Approach Delay (s/veh)		23.1			31.2		26.8		28.8	
Approach LOS		C			C		C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.4	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay (s/veh): 26.9	Intersection LOS: C
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 42: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	378	294	131	187	50	162	556	131	68	694	161
Future Volume (veh/h)	186	378	294	131	187	50	162	556	131	68	694	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	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	1600	1800	1800	1700	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	204	415	0	144	205	34	178	611	93	75	763	150
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	309	661		183	588	96	267	2039	299	182	1099	465
Arrive On Green	0.10	0.18	0.00	0.11	0.20	0.20	0.09	0.33	0.33	0.06	0.31	0.31
Sat Flow, veh/h	3048	3600	1525	1619	3011	490	3048	6124	899	3048	3600	1524
Grp Volume(v), veh/h	204	415	0	144	121	118	178	536	168	75	763	150
Grp Sat Flow(s),veh/h/ln	1524	1800	1525	1619	1800	1701	1524	1800	1623	1524	1800	1524
Q Serve(g_s), s	3.8	6.3	0.0	5.1	3.4	3.6	3.4	4.4	4.6	1.4	11.1	4.5
Cycle Q Clear(g_c), s	3.8	6.3	0.0	5.1	3.4	3.6	3.4	4.4	4.6	1.4	11.1	4.5
Prop In Lane	1.00		1.00	1.00		0.29	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	309	661		183	351	332	267	1798	540	182	1099	465
V/C Ratio(X)	0.66	0.63		0.79	0.34	0.36	0.67	0.30	0.31	0.41	0.69	0.32
Avail Cap(c_a), veh/h	766	2442		538	1367	1292	416	3125	939	381	2041	864
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	22.3	0.0	25.6	20.6	20.6	26.2	14.6	14.7	26.9	18.2	15.9
Incr Delay (d2), s/veh	2.4	1.0	0.0	7.3	0.6	0.6	2.9	0.1	0.3	1.5	0.8	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.4	0.0	2.1	1.3	1.3	1.1	1.4	1.4	0.5	3.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.0	23.3	0.0	32.9	21.2	21.3	29.1	14.7	15.0	28.3	19.0	16.3
LnGrp LOS	C	C		C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		619			383			882			988	
Approach Delay, s/veh		24.9			25.6			17.7			19.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	24.3	11.3	15.5	9.8	22.7	10.6	16.2
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	7.4	34.3	19.7	40.2	8.1	33.6	14.9	45.0
Max Q Clear Time (g_c+I1), s	3.4	6.6	7.1	8.3	5.4	13.1	5.8	5.6
Green Ext Time (p_c), s	0.0	4.2	0.3	2.6	0.1	5.0	0.4	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	20.8
HCM 7th LOS	C

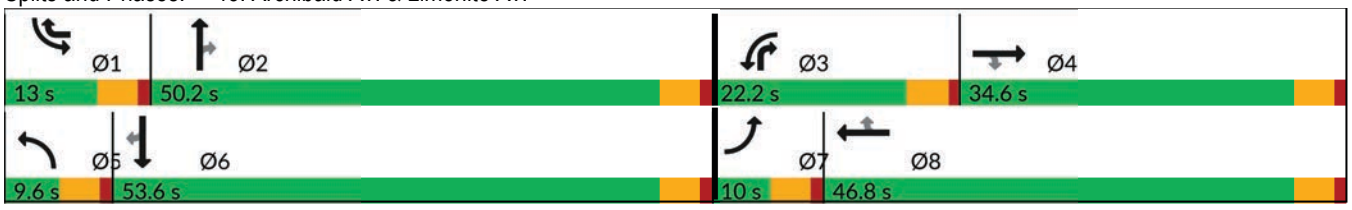
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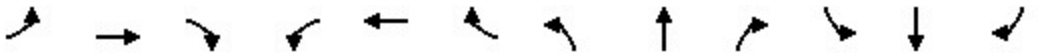
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	641	69	357	400	264	46	435	271	363	618	162
Future Volume (vph)	160	641	69	357	400	264	46	435	271	363	618	162
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.6	22.5	22.5	9.6	46.8	9.6	9.6	49.5	9.6	9.6	39.5	39.5
Total Split (s)	10.0	34.6	34.6	22.2	46.8	13.0	9.6	50.2	22.2	13.0	53.6	53.6
Total Split (%)	8.3%	28.8%	28.8%	18.5%	39.0%	10.8%	8.0%	41.8%	18.5%	10.8%	44.7%	44.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.6	21.9	21.9	15.1	31.4	40.2	5.2	19.7	34.8	8.8	28.0	28.0
Actuated g/C Ratio	0.07	0.26	0.26	0.18	0.37	0.47	0.06	0.23	0.41	0.10	0.33	0.33
v/c Ratio	0.83	0.74	0.14	0.69	0.32	0.19	0.26	0.56	0.42	1.21	0.39	0.27
Control Delay (s/veh)	76.7	35.9	0.6	42.9	20.7	2.2	48.4	31.4	13.6	159.1	24.0	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	76.7	35.9	0.6	42.9	20.7	2.2	48.4	31.4	13.6	159.1	24.0	5.1
LOS	E	D	A	D	C	A	D	C	B	F	C	A
Approach Delay (s/veh)		40.6			23.7			26.0			64.2	
Approach LOS		D			C			C			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.7	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay (s/veh): 40.3	Intersection LOS: D
Intersection Capacity Utilization 72.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 43: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	641	69	357	400	264	46	435	271	363	618	162
Future Volume (veh/h)	160	641	69	357	400	264	46	435	271	363	618	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	163	654	54	364	408	184	47	444	208	370	631	96
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	229	883	394	454	1143	1220	127	697	538	356	1384	430
Arrive On Green	0.08	0.26	0.26	0.15	0.33	0.33	0.04	0.20	0.20	0.12	0.28	0.28
Sat Flow, veh/h	2956	3420	1525	2956	3420	2682	2956	3420	1489	2956	4914	1525
Grp Volume(v), veh/h	163	654	54	364	408	184	47	444	208	370	631	96
Grp Sat Flow(s),veh/h/ln	1478	1710	1525	1478	1710	1341	1478	1710	1489	1478	1638	1525
Q Serve(g_s), s	3.8	12.2	1.9	8.3	6.3	2.8	1.1	8.3	7.3	8.4	7.4	3.4
Cycle Q Clear(g_c), s	3.8	12.2	1.9	8.3	6.3	2.8	1.1	8.3	7.3	8.4	7.4	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	229	883	394	454	1143	1220	127	697	538	356	1384	430
V/C Ratio(X)	0.71	0.74	0.14	0.80	0.36	0.15	0.37	0.64	0.39	1.04	0.46	0.22
Avail Cap(c_a), veh/h	229	1472	656	746	2070	1947	212	2237	1208	356	3454	1072
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	23.7	19.9	28.5	17.5	11.1	32.5	25.4	16.7	30.7	20.6	19.2
Incr Delay (d2), s/veh	8.6	1.2	0.2	1.3	0.2	0.1	0.7	1.0	0.5	58.1	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.5	0.6	2.7	2.2	0.7	0.4	3.0	2.2	5.5	2.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.0	25.0	20.0	29.8	17.7	11.2	33.1	26.4	17.2	88.8	20.9	19.5
LnGrp LOS	D	C	C	C	B	B	C	C	B	F	C	B
Approach Vol, veh/h		871			956			699			1097	
Approach Delay, s/veh		27.5			21.1			24.1			43.7	
Approach LOS		C			C			C			D	

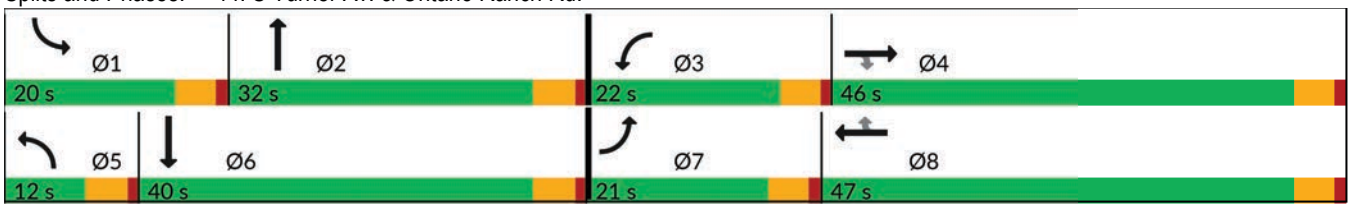
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	18.8	15.3	22.6	7.6	24.2	10.0	27.9
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	8.4	45.6	17.6	30.0	5.0	49.0	5.4	42.2
Max Q Clear Time (g_c+I1), s	10.4	10.3	10.3	14.2	3.1	9.4	5.8	8.3
Green Ext Time (p_c), s	0.0	3.4	0.4	3.8	0.0	4.4	0.0	3.3

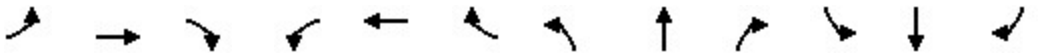
Intersection Summary	
HCM 7th Control Delay, s/veh	30.0
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	74	1150	49	85	1028	43	16	43	68	65
Future Volume (vph)	74	1150	49	85	1028	43	16	43	68	65
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.8	23.8	9.6	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	21.0	46.0	46.0	22.0	47.0	47.0	12.0	32.0	20.0	40.0
Total Split (%)	17.5%	38.3%	38.3%	18.3%	39.2%	39.2%	10.0%	26.7%	16.7%	33.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.0	37.2	37.2	9.6	37.7	37.7	6.4	9.8	8.8	16.2
Actuated g/C Ratio	0.12	0.48	0.48	0.12	0.48	0.48	0.08	0.13	0.11	0.21
v/c Ratio	0.42	0.71	0.07	0.45	0.62	0.06	0.13	0.41	0.40	0.34
Control Delay (s/veh)	45.9	22.4	0.2	45.8	20.0	0.1	44.9	27.4	45.8	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.9	22.4	0.2	45.8	20.0	0.1	44.9	27.4	45.8	26.2
LOS	D	C	A	D	C	A	D	C	D	C
Approach Delay (s/veh)		22.9			21.2			29.9		33.2
Approach LOS		C			C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 78.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay (s/veh): 23.2	Intersection LOS: C
Intersection Capacity Utilization 65.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1150	49	85	1028	43	16	43	54	68	65	57
Future Volume (veh/h)	74	1150	49	85	1028	43	16	43	54	68	65	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	78	1211	44	89	1082	42	17	45	31	72	68	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	102	1695	718	110	1713	726	34	66	45	98	103	73
Arrive On Green	0.06	0.47	0.47	0.07	0.48	0.48	0.02	0.07	0.07	0.06	0.11	0.11
Sat Flow, veh/h	1619	3600	1525	1619	3600	1525	1619	990	682	1619	973	687
Grp Volume(v), veh/h	78	1211	44	89	1082	42	17	0	76	72	0	116
Grp Sat Flow(s),veh/h/ln	1619	1800	1525	1619	1800	1525	1619	0	1672	1619	0	1660
Q Serve(g_s), s	2.6	14.8	0.9	3.0	12.4	0.8	0.6	0.0	2.5	2.4	0.0	3.7
Cycle Q Clear(g_c), s	2.6	14.8	0.9	3.0	12.4	0.8	0.6	0.0	2.5	2.4	0.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		0.41
Lane Grp Cap(c), veh/h	102	1695	718	110	1713	726	34	0	111	98	0	176
V/C Ratio(X)	0.76	0.71	0.06	0.81	0.63	0.06	0.51	0.00	0.68	0.73	0.00	0.66
Avail Cap(c_a), veh/h	482	2704	1146	511	2770	1174	217	0	831	452	0	1066
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.4	11.6	7.9	25.3	10.8	7.8	26.7	0.0	25.2	25.4	0.0	23.7
Incr Delay (d2), s/veh	4.3	0.6	0.0	5.1	0.4	0.0	4.3	0.0	7.2	3.9	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.3	0.2	1.2	3.5	0.2	0.2	0.0	1.1	0.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.7	12.2	8.0	30.4	11.2	7.8	31.0	0.0	32.4	29.4	0.0	27.8
LnGrp LOS	C	B	A	C	B	A	C		C	C		C
Approach Vol, veh/h		1333			1213			93			188	
Approach Delay, s/veh		13.1			12.5			32.1			28.4	
Approach LOS		B			B			C			C	

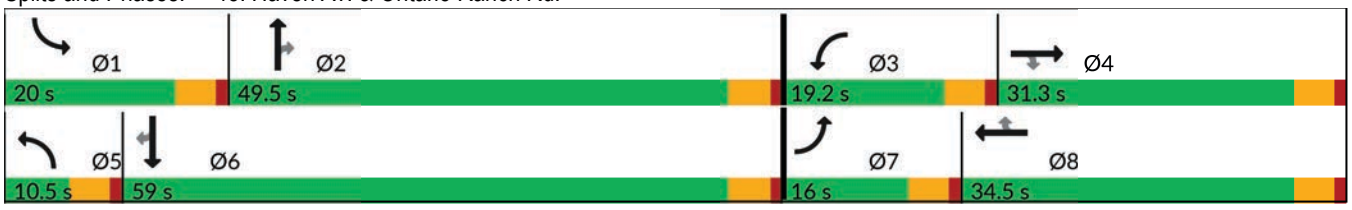
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	8.3	8.4	30.5	5.7	10.5	8.1	30.8
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	27.4	17.4	41.4	7.4	35.4	16.4	42.4
Max Q Clear Time (g_c+I1), s	4.4	4.5	5.0	16.8	2.6	5.7	4.6	14.4
Green Ext Time (p_c), s	0.0	0.3	0.1	9.2	0.0	0.6	0.1	8.3

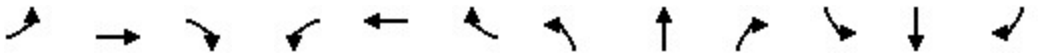
Intersection Summary	
HCM 7th Control Delay, s/veh	14.5
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	1091	73	223	1066	221	28	263	83	225	379	62
Future Volume (vph)	177	1091	73	223	1066	221	28	263	83	225	379	62
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	34.5	34.5	9.6	47.8	47.8	9.6	45.8	45.8
Total Split (s)	16.0	31.3	31.3	19.2	34.5	34.5	10.5	49.5	49.5	20.0	59.0	59.0
Total Split (%)	13.3%	26.1%	26.1%	16.0%	28.8%	28.8%	8.8%	41.3%	41.3%	16.7%	49.2%	49.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.6	27.3	27.3	11.6	27.3	27.3	5.6	22.2	22.2	15.6	36.6	36.6
Actuated g/C Ratio	0.12	0.29	0.29	0.12	0.29	0.29	0.06	0.23	0.23	0.16	0.38	0.38
v/c Ratio	0.98	0.84	0.15	0.67	0.65	0.40	0.32	0.68	0.19	0.93	0.60	0.11
Control Delay (s/veh)	105.6	40.4	0.8	51.6	32.9	6.4	56.8	41.7	1.9	82.3	28.7	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	105.6	40.4	0.8	51.6	32.9	6.4	56.8	41.7	1.9	82.3	28.7	1.9
LOS	F	D	A	D	C	A	E	D	A	F	C	A
Approach Delay (s/veh)		46.8			31.8			34.0			44.4	
Approach LOS		D			C			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay (s/veh): 39.3	Intersection LOS: D
Intersection Capacity Utilization 73.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 45: Haven Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	1091	73	223	1066	221	28	263	83	225	379	62
Future Volume (veh/h)	177	1091	73	223	1066	221	28	263	83	225	379	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	192	1186	52	242	1159	154	30	286	44	245	412	49
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	222	1498	465	313	1694	413	49	353	299	278	608	512
Arrive On Green	0.14	0.30	0.30	0.11	0.27	0.27	0.03	0.20	0.20	0.17	0.34	0.34
Sat Flow, veh/h	1619	4914	1525	2956	6192	1509	1619	1800	1525	1619	1800	1516
Grp Volume(v), veh/h	192	1186	52	242	1159	154	30	286	44	245	412	49
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1478	1548	1509	1619	1800	1525	1619	1800	1516
Q Serve(g_s), s	9.6	18.4	2.0	6.6	13.9	6.9	1.5	12.6	2.0	12.3	16.3	1.8
Cycle Q Clear(g_c), s	9.6	18.4	2.0	6.6	13.9	6.9	1.5	12.6	2.0	12.3	16.3	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	1498	465	313	1694	413	49	353	299	278	608	512
V/C Ratio(X)	0.86	0.79	0.11	0.77	0.68	0.37	0.62	0.81	0.15	0.88	0.68	0.10
Avail Cap(c_a), veh/h	222	1580	490	520	2229	543	115	973	825	300	1179	993
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	26.5	20.8	36.2	27.0	24.4	39.8	31.9	27.6	33.6	23.6	18.8
Incr Delay (d2), s/veh	26.8	2.7	0.1	1.5	0.6	0.6	4.6	4.5	0.2	22.4	1.3	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(50%),veh/ln	5.2	6.8	0.7	2.3	4.6	2.2	0.6	5.5	0.7	6.2	6.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.9	29.2	20.9	37.7	27.5	25.0	44.4	36.4	27.9	56.0	25.0	18.9
LnGrp LOS	E	C	C	D	C	C	D	D	C	E	C	B
Approach Vol, veh/h		1430			1555			360			706	
Approach Delay, s/veh		33.3			28.9			36.0			35.3	
Approach LOS		C			C			D			D	

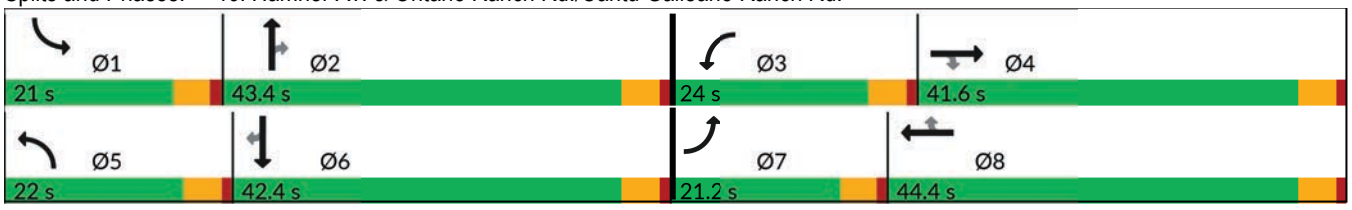
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.9	20.9	13.4	29.9	7.1	32.6	16.0	27.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	44.9	14.6	26.7	5.9	54.4	11.4	29.9
Max Q Clear Time (g_c+I1), s	14.3	14.6	8.6	20.4	3.5	18.3	11.6	15.9
Green Ext Time (p_c), s	0.0	1.7	0.2	3.7	0.0	2.6	0.0	6.4

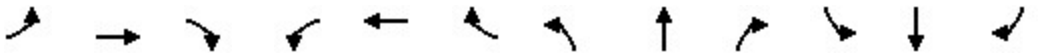
Intersection Summary	
HCM 7th Control Delay, s/veh	32.2
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	927	235	353	1074	149	306	448	287	294	680	320
Future Volume (vph)	212	927	235	353	1074	149	306	448	287	294	680	320
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6
Total Split (s)	21.2	41.6	41.6	24.0	44.4	44.4	22.0	43.4	43.4	21.0	42.4	42.4
Total Split (%)	16.3%	32.0%	32.0%	18.5%	34.2%	34.2%	16.9%	33.4%	33.4%	16.2%	32.6%	32.6%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.8	30.1	30.1	17.8	35.2	35.2	15.8	26.1	26.1	15.2	25.5	25.5
Actuated g/C Ratio	0.12	0.28	0.28	0.16	0.33	0.33	0.15	0.24	0.24	0.14	0.24	0.24
v/c Ratio	0.66	0.74	0.42	0.79	0.73	0.27	0.77	0.41	0.55	0.77	0.64	0.62
Control Delay (s/veh)	57.7	39.9	6.4	58.3	36.5	6.0	59.5	36.2	10.8	60.4	40.5	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.7	39.9	6.4	58.3	36.5	6.0	59.5	36.2	10.8	60.4	40.5	14.6
LOS	E	D	A	E	D	A	E	D	B	E	D	B
Approach Delay (s/veh)		36.9			38.5			36.0			38.6	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 108.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay (s/veh): 37.6	Intersection LOS: D
Intersection Capacity Utilization 71.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 46: Hamner Av. & Ontario Ranch Rd./Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	927	235	353	1074	149	306	448	287	294	680	320
Future Volume (veh/h)	212	927	235	353	1074	149	306	448	287	294	680	320
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
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	1600	1800	1800	1600	1800	1800	1600	1800	1800	1600	1800	1800
Adj Flow Rate, veh/h	230	1008	114	384	1167	121	333	487	184	320	739	262
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	294	1354	420	449	1611	494	397	1210	371	384	1187	363
Arrive On Green	0.10	0.28	0.28	0.15	0.33	0.33	0.13	0.25	0.25	0.13	0.24	0.24
Sat Flow, veh/h	2956	4914	1524	2956	4914	1505	2956	4914	1506	2956	4914	1504
Grp Volume(v), veh/h	230	1008	114	384	1167	121	333	487	184	320	739	262
Grp Sat Flow(s),veh/h/ln	1478	1638	1524	1478	1638	1505	1478	1638	1506	1478	1638	1504
Q Serve(g_s), s	7.1	17.5	5.5	11.8	19.6	5.5	10.3	7.8	9.8	9.9	12.6	15.0
Cycle Q Clear(g_c), s	7.1	17.5	5.5	11.8	19.6	5.5	10.3	7.8	9.8	9.9	12.6	15.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	294	1354	420	449	1611	494	397	1210	371	384	1187	363
V/C Ratio(X)	0.78	0.74	0.27	0.85	0.72	0.25	0.84	0.40	0.50	0.83	0.62	0.72
Avail Cap(c_a), veh/h	524	1943	602	613	2090	640	550	2037	624	518	1985	607
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	30.9	26.6	38.7	27.7	23.0	39.5	29.5	30.3	39.7	31.7	32.6
Incr Delay (d2), s/veh	1.7	0.9	0.3	6.7	0.9	0.3	6.0	0.2	1.0	6.4	0.5	2.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	6.4	1.9	4.4	7.0	1.8	3.8	2.9	3.4	3.7	4.7	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.9	31.8	26.9	45.4	28.6	23.2	45.5	29.7	31.3	46.2	32.2	35.3
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	D
Approach Vol, veh/h		1352			1672			1004			1321	
Approach Delay, s/veh		33.3			32.1			35.2			36.2	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	27.6	18.8	30.4	17.2	27.2	13.9	35.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	16.4	38.8	19.4	37.0	17.4	37.8	16.6	39.8
Max Q Clear Time (g_c+I1), s	11.9	11.8	13.8	19.5	12.3	17.0	9.1	21.6
Green Ext Time (p_c), s	0.3	3.6	0.4	6.1	0.3	5.4	0.2	7.3

Intersection Summary	
HCM 7th Control Delay, s/veh	34.0
HCM 7th LOS	C

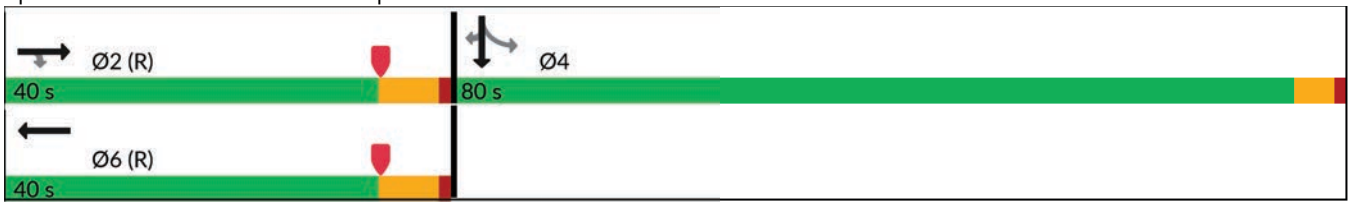
Notes

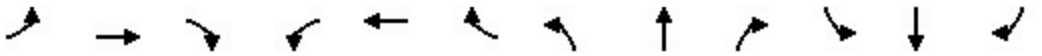
User approved pedestrian interval to be less than phase max green.

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1340	662	720	220	281	0	1510
Future Volume (vph)	1340	662	720	220	281	0	1510
Turn Type	NA	Perm	NA	Free	Perm	NA	Perm
Protected Phases	2		6			4	
Permitted Phases		2		Free	4		4
Detector Phase	2	2	6		4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	40.0	40.0	40.0		80.0	80.0	80.0
Total Split (%)	33.3%	33.3%	33.3%		66.7%	66.7%	66.7%
Yellow Time (s)	5.5	5.5	5.5		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5		4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Min	C-Min	C-Min		Min	Min	Min
Act Effct Green (s)	35.6	35.6	35.6	120.0	73.3	73.3	73.3
Actuated g/C Ratio	0.30	0.30	0.30	1.00	0.61	0.61	0.61
v/c Ratio	0.91	0.78	0.73	0.16	0.28	0.88	0.88
Control Delay (s/veh)	50.7	10.9	52.1	0.2	11.4	30.6	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.7	10.9	52.1	0.2	11.4	30.6	31.3
LOS	D	B	D	A	B	C	C
Approach Delay (s/veh)	37.5		40.0			28.2	
Approach LOS	D		D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 8.1 (7%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay (s/veh): 34.5	Intersection LOS: C
Intersection Capacity Utilization 96.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 47: I-15 SB Ramps & Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	1340	662	0	720	220	0	0	0	281	0	1510
Future Volume (veh/h)	0	1340	662	0	720	220	0	0	0	281	0	1510
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
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	0	1800	1800	0	1800	1800				1700	1800	1800
Adj Flow Rate, veh/h	0	1457	0	0	783	0				203	0	1499
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	0	0	0	0	0				0	0	0
Cap, veh/h	0	2017		0	1344					865	0	1629
Arrive On Green	0.00	0.37	0.00	0.00	0.37	0.00				0.53	0.00	0.53
Sat Flow, veh/h	0	5400	1525	0	3600	1525				1619	0	3051
Grp Volume(v), veh/h	0	1457	0	0	783	0				203	0	1499
Grp Sat Flow(s),veh/h/ln	0	1800	1525	0	1800	1525				1619	0	1525
Q Serve(g_s), s	0.0	27.8	0.0	0.0	20.9	0.0				8.0	0.0	54.0
Cycle Q Clear(g_c), s	0.0	27.8	0.0	0.0	20.9	0.0				8.0	0.0	54.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2017		0	1344					865	0	1629
V/C Ratio(X)	0.00	0.72		0.00	0.58					0.23	0.00	0.92
Avail Cap(c_a), veh/h	0	2017		0	1344					1017	0	1917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.64	0.00	0.00	0.85	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	32.3	0.0	0.0	30.1	0.0				14.9	0.0	25.6
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.0	1.6	0.0				0.1	0.0	7.0
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	0.0	11.5	0.0	0.0	8.7	0.0				2.8	0.0	19.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	33.7	0.0	0.0	31.7	0.0				15.0	0.0	32.6
LnGrp LOS		C			C					B		C
Approach Vol, veh/h		1457			783						1702	
Approach Delay, s/veh		33.7			31.7						30.5	
Approach LOS		C			C						C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	51.3	68.7	51.3
Change Period (Y+Rc), s	6.5	4.6	6.5
Max Green Setting (Gmax), s	33.5	75.4	33.5
Max Q Clear Time (g_c+I1), s	29.8	56.0	22.9
Green Ext Time (p_c), s	2.7	8.1	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	31.9
HCM 7th LOS	C

Notes

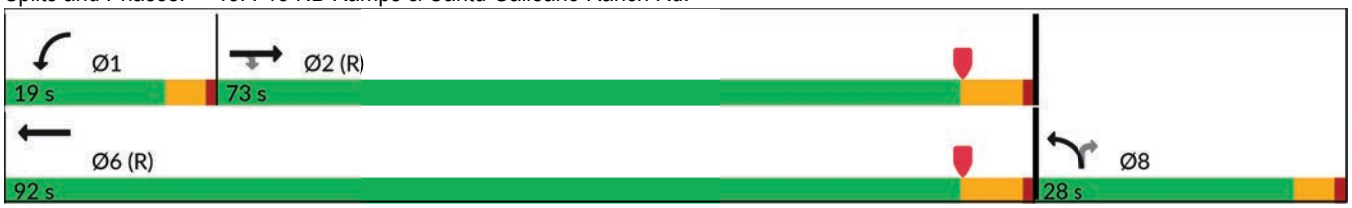
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	626	994	256	487	470	199
Future Volume (vph)	626	994	256	487	470	199
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	61.3	61.3	11.0	22.5	22.5	22.5
Total Split (s)	73.0	73.0	19.0	92.0	28.0	28.0
Total Split (%)	60.8%	60.8%	15.8%	76.7%	23.3%	23.3%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.6	4.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	67.8	67.8	14.0	86.4	22.5	22.5
Actuated g/C Ratio	0.57	0.57	0.12	0.72	0.19	0.19
v/c Ratio	0.22	0.94	0.79	0.14	0.88	0.44
Control Delay (s/veh)	12.4	43.8	68.0	5.4	63.7	9.0
Queue Delay	0.0	5.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.4	48.9	68.0	5.4	63.7	9.0
LOS	B	D	E	A	E	A
Approach Delay (s/veh)	34.8			27.0	49.1	
Approach LOS	C			C	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 15.4 (13%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay (s/veh): 36.0	Intersection LOS: D
Intersection Capacity Utilization 84.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 48: I-15 NB Ramps & Cantu Galleano Ranch Rd.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	626	994	256	487	470	199
Future Volume (veh/h)	626	994	256	487	470	199
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1600	1800	1700	1800
Adj Flow Rate, veh/h	680	815	278	529	511	143
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	3156	891	328	3944	574	270
Arrive On Green	0.98	0.98	0.11	0.73	0.18	0.18
Sat Flow, veh/h	5400	1524	3048	5400	3238	1525
Grp Volume(v), veh/h	680	815	278	529	511	143
Grp Sat Flow(s),veh/h/ln	1800	1524	1524	1800	1619	1525
Q Serve(g_s), s	0.5	14.4	10.7	3.5	18.5	10.2
Cycle Q Clear(g_c), s	0.5	14.4	10.7	3.5	18.5	10.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3156	891	328	3944	574	270
V/C Ratio(X)	0.22	0.92	0.85	0.13	0.89	0.53
Avail Cap(c_a), veh/h	3156	891	366	3944	631	297
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.6	0.8	52.6	4.8	48.2	44.8
Incr Delay (d2), s/veh	0.1	8.5	15.6	0.1	13.9	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.6	4.6	1.0	8.4	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.7	9.3	68.2	4.9	62.2	46.4
LnGrp LOS	A	A	E	A	E	D
Approach Vol, veh/h	1495			807	654	
Approach Delay, s/veh	5.4			26.7	58.7	
Approach LOS	A			C	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	17.5	76.6				94.1	25.9
Change Period (Y+Rc), s	4.6	6.5				6.5	4.6
Max Green Setting (Gmax), s	14.4	66.5				85.5	23.4
Max Q Clear Time (g_c+I1), s	12.7	16.4				5.5	20.5
Green Ext Time (p_c), s	0.2	9.5				3.4	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	23.0
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	2	25	1	1	13
Future Vol, veh/h	3	2	25	1	1	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	2	27	1	1	14

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	44	14	0	0	28	0
Stage 1	28	-	-	-	-	-
Stage 2	16	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	969	1069	-	-	1598	-
Stage 1	997	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	969	1069	-	-	1598	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	1011	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.66	0	0.52
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	988	1598	-
HCM Lane V/C Ratio	-	-	0.006	0.001	-
HCM Ctrl Dly (s/v)	-	-	8.7	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	5	21	8	2	15
Future Vol, veh/h	11	5	21	8	2	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	5	23	9	2	16

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	48	16	0	0	32	0
Stage 1	27	-	-	-	-	-
Stage 2	21	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	964	1066	-	-	1594	-
Stage 1	998	-	-	-	-	-
Stage 2	1007	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	963	1066	-	-	1594	-
Mov Cap-2 Maneuver	938	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	1006	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.76	0	0.85
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	975	1594	-
HCM Lane V/C Ratio	-	-	0.018	0.001	-
HCM Ctrl Dly (s/v)	-	-	8.8	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	15	14	6	6	20
Future Vol, veh/h	15	15	14	6	6	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	16	15	7	7	22

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	53	11	0	0	22	0
Stage 1	18	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	957	1074	-	-	1607	-
Stage 1	1007	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	953	1074	-	-	1607	-
Mov Cap-2 Maneuver	932	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	989	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.73	0	1.67
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	998	1607	-
HCM Lane V/C Ratio	-	-	0.033	0.004	-
HCM Ctrl Dly (s/v)	-	-	8.7	7.2	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	2	4	2	3	9
Future Vol, veh/h	1	2	4	2	3	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	2	4	2	3	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	3	0	13	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1632	-	1011	1088
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	1017	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1632	-	1009	1088
Mov Cap-2 Maneuver	-	-	-	-	1009	-
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	1015	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	4.81	8.42
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1067	-	-	1200	-
HCM Lane V/C Ratio	0.012	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	461	294	17	42	11
Future Vol, veh/h	4	461	294	17	42	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	501	320	18	46	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	338	0	-	0	839	329
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	510	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1232	-	-	-	339	717
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	607	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1232	-	-	-	338	717
Mov Cap-2 Maneuver	-	-	-	-	521	-
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	607	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.07	0	12.28
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1232	-	-	-	552
HCM Lane V/C Ratio	0.004	-	-	-	0.104
HCM Ctrl Dly (s/v)	7.9	-	-	-	12.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	1	3	4	2	8
Future Vol, veh/h	9	1	3	4	2	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	10	1	3	4	2	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	21	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1622	-	1001	1077
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	1017	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1622	-	999	1077
Mov Cap-2 Maneuver	-	-	-	-	999	-
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	1015	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.1	8.43
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1060	-	-	771	-
HCM Lane V/C Ratio	0.01	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	3	118	0	26	1	156	105	22	82	0
Future Vol, veh/h	1	0	3	118	0	26	1	156	105	22	82	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	0	3	128	0	28	1	170	114	24	89	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	309	423	89	366	366	227	89	0	0	284	0	0
Stage 1	137	137	-	229	229	-	-	-	-	-	-	-
Stage 2	172	286	-	137	137	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	648	526	974	594	566	818	1519	-	-	1290	-	-
Stage 1	871	787	-	779	719	-	-	-	-	-	-	-
Stage 2	835	679	-	871	787	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	613	515	974	580	554	818	1519	-	-	1290	-	-
Mov Cap-2 Maneuver	613	515	-	580	554	-	-	-	-	-	-	-
Stage 1	854	772	-	778	718	-	-	-	-	-	-	-
Stage 2	805	678	-	851	772	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.26	12.89	0.03	1.66
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	6	-	-	849	612	381	-	-
HCM Lane V/C Ratio	0.001	-	-	0.005	0.256	0.019	-	-
HCM Ctrl Dly (s/v)	7.4	0	-	9.3	12.9	7.8	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1	0.1	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	0	12	7	0	3	9	252	6	2	199	3
Future Vol, veh/h	7	0	12	7	0	3	9	252	6	2	199	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	0	13	8	0	3	10	274	7	2	216	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	516	522	218	517	521	277	220	0	0	280	0	0
Stage 1	222	222	-	297	297	-	-	-	-	-	-	-
Stage 2	293	300	-	221	224	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	473	462	827	472	463	766	1362	-	-	1294	-	-
Stage 1	785	723	-	716	671	-	-	-	-	-	-	-
Stage 2	719	669	-	786	722	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	466	457	827	459	458	766	1362	-	-	1294	-	-
Mov Cap-2 Maneuver	466	457	-	459	458	-	-	-	-	-	-	-
Stage 1	783	722	-	710	666	-	-	-	-	-	-	-
Stage 2	710	664	-	772	721	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	10.78	12.04	0.26	0.08
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	60	-	-	643	522	18	-	-
HCM Lane V/C Ratio	0.007	-	-	0.032	0.021	0.002	-	-
HCM Ctrl Dly (s/v)	7.7	0	-	10.8	12	7.8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	0	13	6	0	6	5	249	4	4	210	5
Future Vol, veh/h	12	0	13	6	0	6	5	249	4	4	210	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	0	14	7	0	7	5	271	4	4	228	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	521	526	231	521	526	273	234	0	0	275	0	0
Stage 1	240	240	-	284	284	-	-	-	-	-	-	-
Stage 2	282	286	-	237	242	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	469	460	813	469	460	771	1346	-	-	1300	-	-
Stage 1	768	711	-	728	680	-	-	-	-	-	-	-
Stage 2	730	679	-	771	709	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	461	456	813	457	456	771	1346	-	-	1300	-	-
Mov Cap-2 Maneuver	461	456	-	457	456	-	-	-	-	-	-	-
Stage 1	765	708	-	724	677	-	-	-	-	-	-	-
Stage 2	720	676	-	754	706	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.34	11.42	0.15	0.14
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	35	-	-	595	574	33	-	-
HCM Lane V/C Ratio	0.004	-	-	0.046	0.023	0.003	-	-
HCM Ctrl Dly (s/v)	7.7	0	-	11.3	11.4	7.8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	11	1	12	13	4
Future Vol, veh/h	14	11	1	12	13	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	15	12	1	13	14	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	27	0	36	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	15	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1600	-	981	1062
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	1013	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1600	-	981	1062
Mov Cap-2 Maneuver	-	-	-	-	981	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	1012	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.56	8.67
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	999	-	-	138	-
HCM Lane V/C Ratio	0.019	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	572	352	12	21	6
Future Vol, veh/h	3	572	352	12	21	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	622	383	13	23	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	396	0	-	0	1017	389
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	628	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1174	-	-	-	265	664
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	536	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1174	-	-	-	265	664
Mov Cap-2 Maneuver	-	-	-	-	457	-
Stage 1	-	-	-	-	687	-
Stage 2	-	-	-	-	536	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.04	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1174	-	-	-	491
HCM Lane V/C Ratio	0.003	-	-	-	0.06
HCM Ctrl Dly (s/v)	8.1	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	17	1	4	11	2	9
Future Vol, veh/h	17	1	4	11	2	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	18	1	4	12	2	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	40	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1610	-	977	1065
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1610	-	974	1065
Mov Cap-2 Maneuver	-	-	-	-	974	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	1005	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.93	8.48
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1047	-	-	480	-
HCM Lane V/C Ratio	0.011	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	581	347	13	17	17
Future Vol, veh/h	12	581	347	13	17	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	632	377	14	18	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	391	0	-	0	1042	384
Stage 1	-	-	-	-	384	-
Stage 2	-	-	-	-	658	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1178	-	-	-	257	668
Stage 1	-	-	-	-	693	-
Stage 2	-	-	-	-	519	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1178	-	-	-	254	668
Mov Cap-2 Maneuver	-	-	-	-	445	-
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	519	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.16	0	12.24
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1178	-	-	-	534
HCM Lane V/C Ratio	0.011	-	-	-	0.069
HCM Ctrl Dly (s/v)	8.1	-	-	-	12.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	1	4	12	3	10
Future Vol, veh/h	24	1	4	12	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	1	4	13	3	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	27	0	48	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	22	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1600	-	966	1055
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1006	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1600	-	964	1055
Mov Cap-2 Maneuver	-	-	-	-	964	-
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1003	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.81	8.54
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1032	-	-	450	-
HCM Lane V/C Ratio	0.014	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	593	351	21	37	9
Future Vol, veh/h	6	593	351	21	37	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	645	382	23	40	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	404	0	-	0	1051	393
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	658	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1165	-	-	-	254	660
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	519	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1165	-	-	-	252	660
Mov Cap-2 Maneuver	-	-	-	-	444	-
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	519	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.08	0	13.48
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1165	-	-	-	475
HCM Lane V/C Ratio	0.006	-	-	-	0.105
HCM Ctrl Dly (s/v)	8.1	-	-	-	13.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	0	2	15	1	5
Future Vol, veh/h	33	0	2	15	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	36	0	2	16	1	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	36	0	57	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1588	-	956	1043
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1588	-	955	1043
Mov Cap-2 Maneuver	-	-	-	-	955	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1006	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.86	8.53
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1027	-	-	212	-
HCM Lane V/C Ratio	0.006	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	37	0	1	16	1	1
Future Vol, veh/h	37	0	1	16	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	40	0	1	17	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	40	0	60	40
Stage 1	-	-	-	-	40	-
Stage 2	-	-	-	-	20	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1582	-	952	1037
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	1008	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1582	-	951	1037
Mov Cap-2 Maneuver	-	-	-	-	951	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	1008	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.43	8.64
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	992	-	-	106	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	38	0	1	17	0	3
Future Vol, veh/h	38	0	1	17	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	0	1	18	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	41	0	62	41
Stage 1	-	-	-	-	41	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1581	-	949	1035
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1581	-	949	1035
Mov Cap-2 Maneuver	-	-	-	-	949	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	1007	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.4	8.49
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1035	-	-	100	-
HCM Lane V/C Ratio	0.003	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	9	0	0	12	20	391	0	0	436	0
Future Vol, veh/h	0	0	9	0	0	12	20	391	0	0	436	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	10	0	0	13	22	425	0	0	474	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	730	942	237	705	942	213	474	0	0	425	0	0
Stage 1	474	474	-	468	468	-	-	-	-	-	-	-
Stage 2	256	468	-	237	474	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	314	265	771	327	265	799	1099	-	-	1145	-	-
Stage 1	546	561	-	550	564	-	-	-	-	-	-	-
Stage 2	732	564	-	751	561	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	303	260	771	316	260	799	1099	-	-	1145	-	-
Mov Cap-2 Maneuver	415	373	-	420	368	-	-	-	-	-	-	-
Stage 1	546	561	-	539	553	-	-	-	-	-	-	-
Stage 2	706	553	-	741	561	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.73	9.58	0.41	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1099	-	-	771	799	1145	-	-
HCM Lane V/C Ratio	0.02	-	-	0.013	0.016	-	-	-
HCM Ctrl Dly (s/v)	8.3	-	-	9.7	9.6	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	9	0	0	12	0	391	0	0	436	0
Future Vol, veh/h	0	0	9	0	0	12	0	391	0	0	436	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	10	0	0	13	0	425	0	0	474	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	237	-	-	213	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	771	0	0	799	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	771	-	-	799	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.73	9.58	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	771	799	-	-
HCM Lane V/C Ratio	-	-	0.013	0.016	-	-
HCM Ctrl Dly (s/v)	-	-	9.7	9.6	-	-
HCM Lane LOS	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	1	0	22	6	0
Future Vol, veh/h	20	1	0	22	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	1	0	24	7	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	23	0	46	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	24	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1606	-	969	1061
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1606	-	969	1061
Mov Cap-2 Maneuver	-	-	-	-	969	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	1004	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	8.74
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	969	-	-	1606	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	1	3	22	0	5
Future Vol, veh/h	18	1	3	22	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	20	1	3	24	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	51	20
Stage 1	-	-	-	-	20	-
Stage 2	-	-	-	-	30	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1608	-	963	1064
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1608	-	961	1064
Mov Cap-2 Maneuver	-	-	-	-	961	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	995	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.87	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1064	-	-	216	-
HCM Lane V/C Ratio	0.005	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	622	455	14	24	28
Future Vol, veh/h	16	622	455	14	24	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	676	495	15	26	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	510	0	-	0	1213	502
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	711	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1066	-	-	-	203	573
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	490	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1066	-	-	-	199	573
Mov Cap-2 Maneuver	-	-	-	-	401	-
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	490	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.21	0	13.53
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1066	-	-	-	479
HCM Lane V/C Ratio	0.016	-	-	-	0.118
HCM Ctrl Dly (s/v)	8.4	-	-	-	13.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	21	3	3	18	6	6
Future Vol, veh/h	21	3	3	18	6	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	23	3	3	20	7	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	26	0	51	24
Stage 1	-	-	-	-	24	-
Stage 2	-	-	-	-	26	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1601	-	963	1058
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	1002	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1601	-	961	1058
Mov Cap-2 Maneuver	-	-	-	-	961	-
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	1000	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.04	8.62
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1007	-	-	257	-
HCM Lane V/C Ratio	0.013	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	25	2	3	16	5	7
Future Vol, veh/h	25	2	3	16	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	27	2	3	17	5	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	29	0	52	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	24	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1597	-	961	1053
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1597	-	959	1053
Mov Cap-2 Maneuver	-	-	-	-	959	-
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	1002	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.15	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1012	-	-	284	-
HCM Lane V/C Ratio	0.013	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	635	453	17	24	16
Future Vol, veh/h	11	635	453	17	24	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	690	492	18	26	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	511	0	-	0	1216	502
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	714	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1065	-	-	-	202	574
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	489	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1065	-	-	-	200	574
Mov Cap-2 Maneuver	-	-	-	-	401	-
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	489	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.14	0	13.72
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1065	-	-	-	456
HCM Lane V/C Ratio	0.011	-	-	-	0.095
HCM Ctrl Dly (s/v)	8.4	-	-	-	13.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	30	1	5	16	3	10
Future Vol, veh/h	30	1	5	16	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	33	1	5	17	3	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	34	0	61	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	28	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1591	-	950	1046
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1591	-	947	1046
Mov Cap-2 Maneuver	-	-	-	-	947	-
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.73	8.57
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1021	-	-	429	-
HCM Lane V/C Ratio	0.014	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	650	454	9	15	15
Future Vol, veh/h	9	650	454	9	15	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	10	707	493	10	16	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	503	0	-	0	1224	498
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	726	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1072	-	-	-	200	576
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	483	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1072	-	-	-	198	576
Mov Cap-2 Maneuver	-	-	-	-	398	-
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	483	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.11	0	13.21
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1072	-	-	-	471
HCM Lane V/C Ratio	0.009	-	-	-	0.069
HCM Ctrl Dly (s/v)	8.4	-	-	-	13.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	1	354	302	1
Future Vol, veh/h	2	3	1	354	302	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	3	1	385	328	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	716	329	329	0	-	0
Stage 1	329	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	400	717	1242	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	400	717	1242	-	-	-
Mov Cap-2 Maneuver	576	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	691	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.56	0.02	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1242	-	653	-	-
HCM Lane V/C Ratio	0.001	-	0.008	-	-
HCM Ctrl Dly (s/v)	7.9	-	10.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	4	3	344	297	9
Future Vol, veh/h	11	4	3	344	297	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	4	3	374	323	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	708	328	333	0	-	0
Stage 1	328	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	404	718	1238	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	695	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	403	718	1238	-	-	-
Mov Cap-2 Maneuver	578	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	695	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.06	0.07	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1238	-	610	-	-
HCM Lane V/C Ratio	0.003	-	0.027	-	-
HCM Ctrl Dly (s/v)	7.9	-	11.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	6	3	344	299	2
Future Vol, veh/h	3	6	3	344	299	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	7	3	374	325	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	707	326	327	0	-	0
Stage 1	326	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	405	720	1244	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	695	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	404	720	1244	-	-	-
Mov Cap-2 Maneuver	579	-	-	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	695	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.49	0.07	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1244	-	666	-	-
HCM Lane V/C Ratio	0.003	-	0.015	-	-
HCM Ctrl Dly (s/v)	7.9	-	10.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

APPENDIX 6.4:

OPENING YEAR (2031) WITHOUT PROJECT SIGNAL WARRANT ANALYSIS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

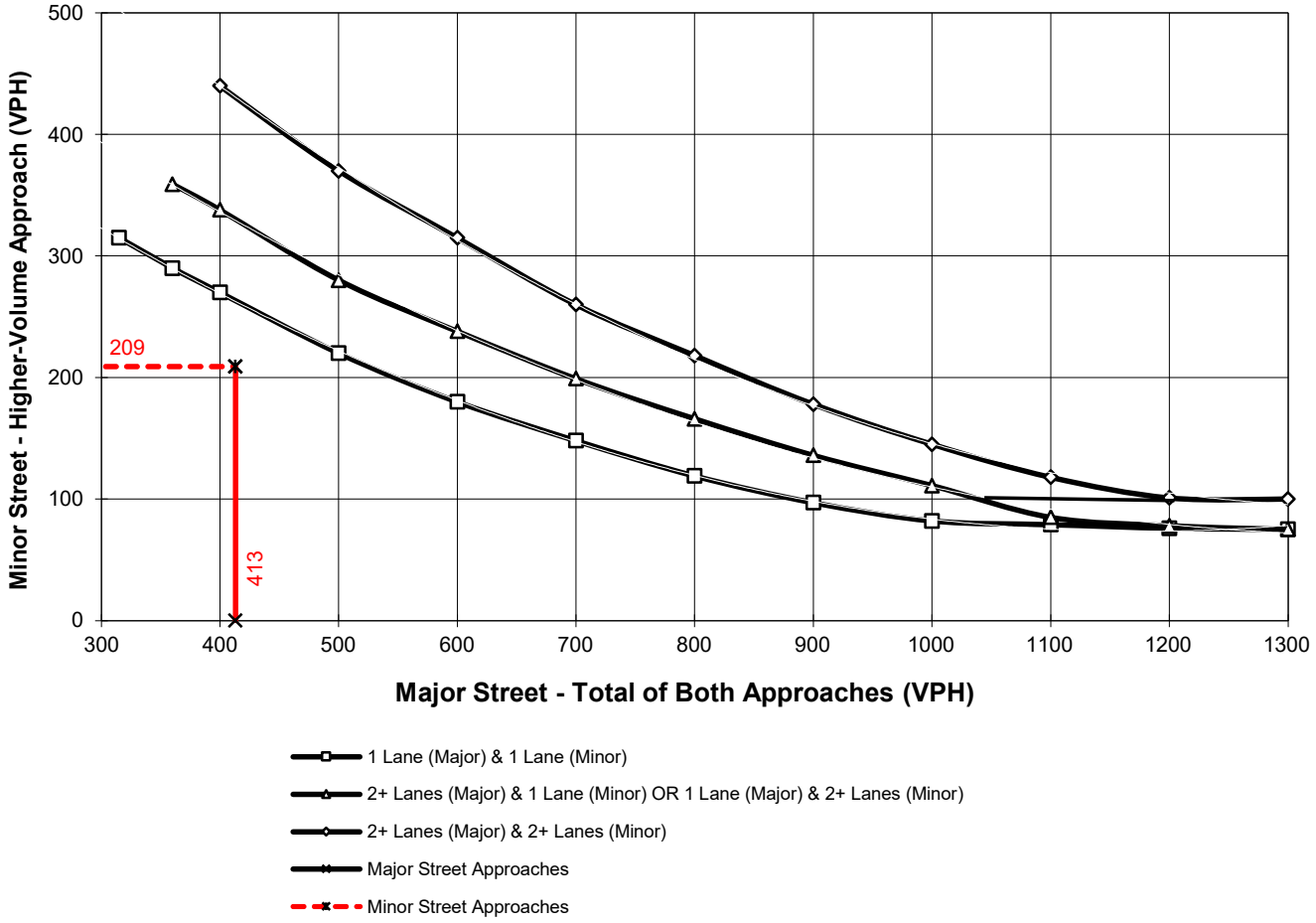
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2031 Without Project - Weekday AM Peak Hour**

Major Street Name = **Bon View Av.**
Total of Both Approaches (VPH) = **413**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Schaefer Av.**
High Volume Approach (VPH) = **209**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

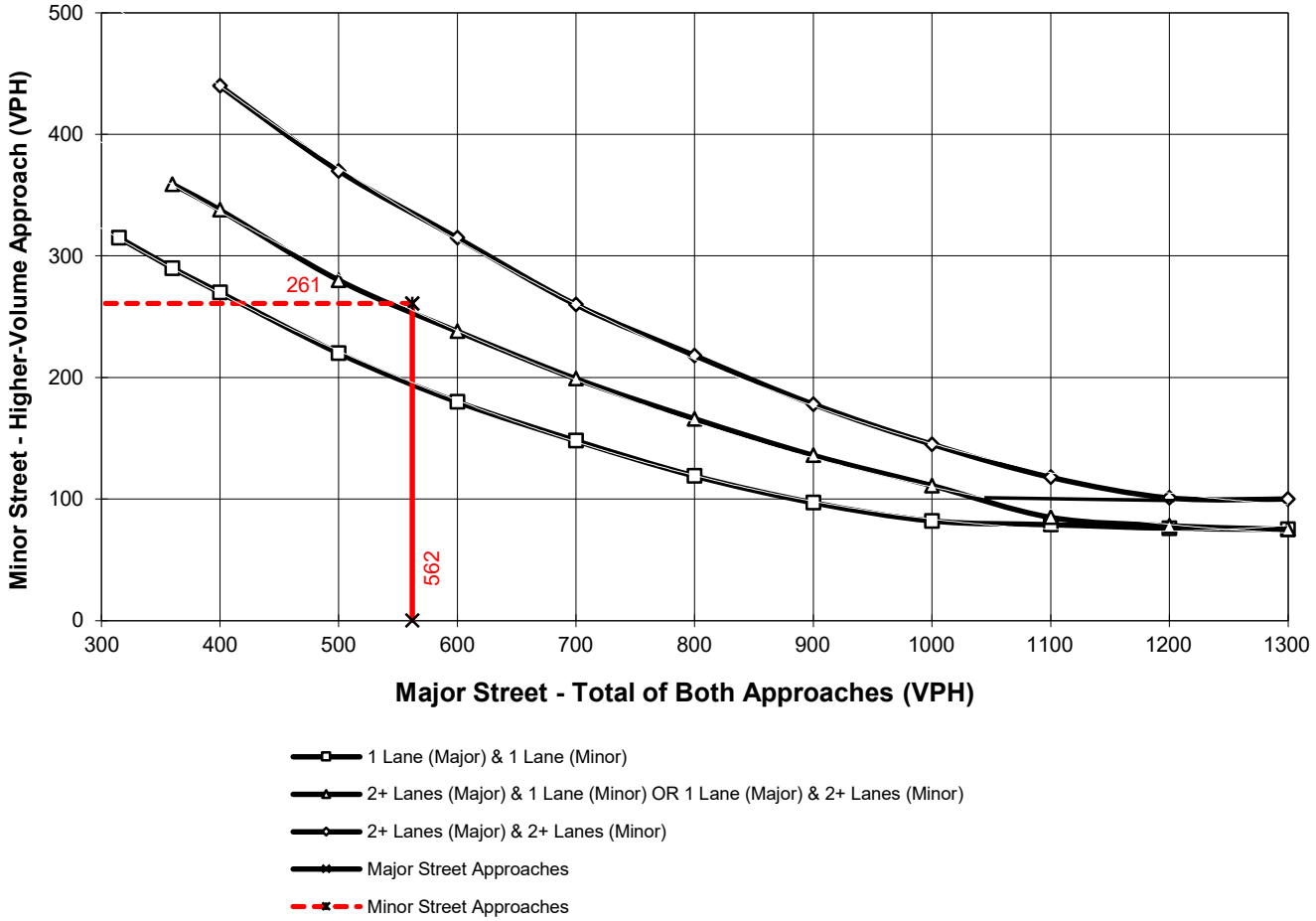
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2031 Without Project - Weekday PM Peak Hour**

Major Street Name = **Walker Av.**
Total of Both Approaches (VPH) = **562**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Schaefer Av.**
High Volume Approach (VPH) = **261**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

APPENDIX 6.5:

OPENING YEAR (2031) WITH PROJECT SIGNAL WARRANT ANALYSIS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	2031 With Project
				CALC JB	DATE 11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE 11/11/25
Major Street: Edison Avenue				Critical Approach Speed (Major)	45 mph
Minor Street: Campus Avenue				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **11,052** vpd Minor Street Future ADT = **1,220** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **11,052**	*1* **1,220**	8,000	5,600 *	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied XX	Not Satisfied				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **11,052**	*1* **1,220**	12,000	8,400 *	1,200	850 *
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 73% **B** 100%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Campus Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **New Public Street**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **265** vpd Minor Street Future ADT = **33** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……

(Based on Estimated Average Daily Traffic - See Note)

URBAN RURAL
XX

CONDITION A - Minimum Vehicular Volume

Satisfied Not Satisfied
XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **265**	*1* **33**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied Not Satisfied
XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **265**	*1* **33**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied Not Satisfied
XX

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 2% **B** 3%

2 CONDITIONS 80% 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Eucalyptus Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Campus Avenue**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **6,879** vpd Minor Street Future ADT = **192** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL: XX

CONDITION A - Minimum Vehicular Volume

Satisfied / Not Satisfied: XX

Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
		Urban	Rural	Urban	Rural
1 **6,879**	*1* **192**	8,000	5,600 *	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied / Not Satisfied: XX

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **6,879**	*1* **192**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied / Not Satisfied: XX

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 11% **B** 23%

2 CONDITIONS 80%

2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

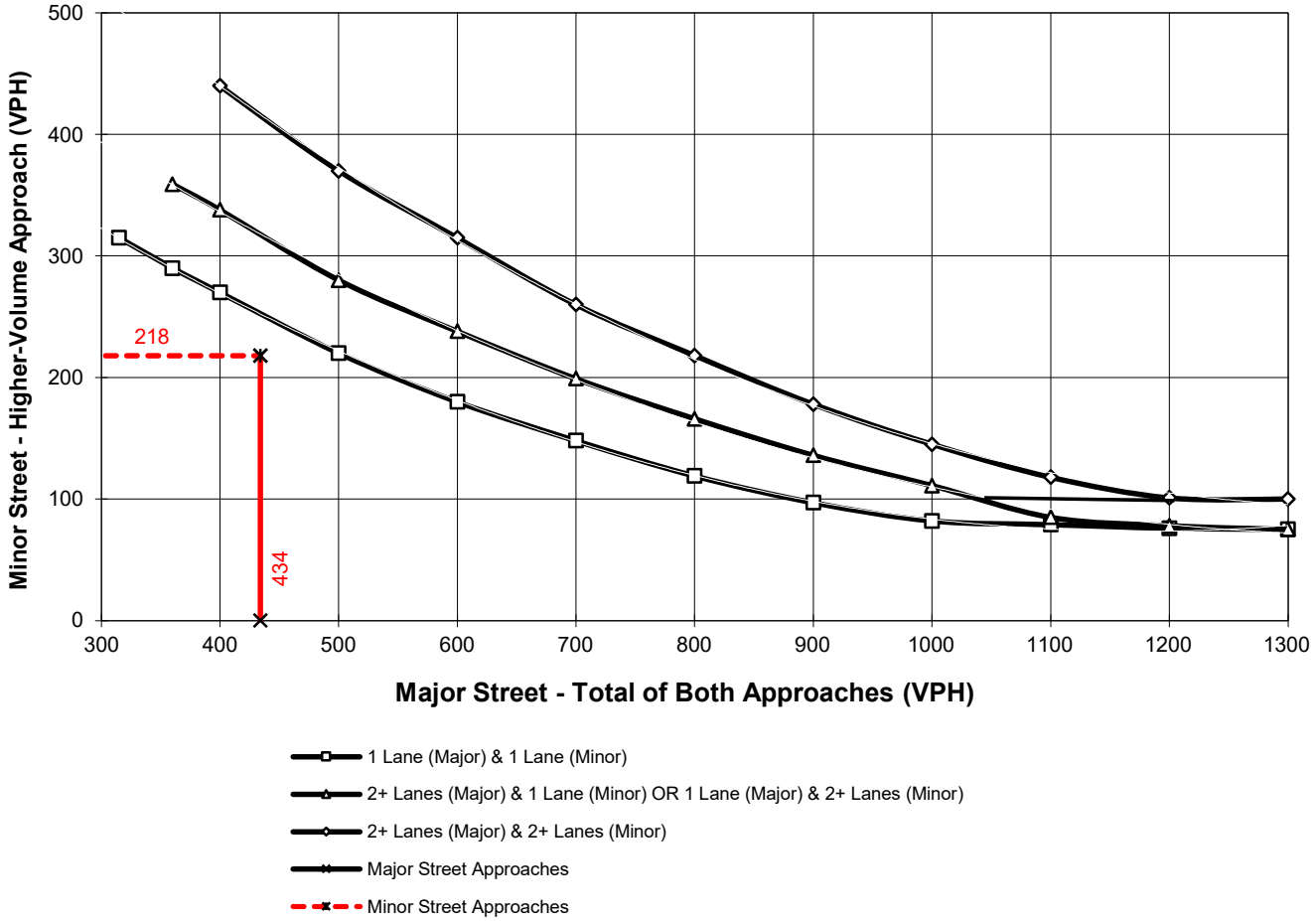
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **2031 With Project - Weekday AM Peak Hour**

Major Street Name = **Bon View Av.**
Total of Both Approaches (VPH) = **434**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Schaefer Av.**
High Volume Approach (VPH) = **218**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Bon View Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **New Public Street**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **2,873** vpd Minor Street Future ADT = **332** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN RURAL **XX**

CONDITION A - Minimum Vehicular Volume

Satisfied Not Satisfied **XX**

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **2,873**	*1* **332**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied Not Satisfied **XX**

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **2,873**	*1* **332**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied Not Satisfied **XX**

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** **20%** **B** **34%**

2 CONDITIONS 80% 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Grove Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **New Public Street**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **5,561** vpd Minor Street Future ADT = **496** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……

(Based on Estimated Average Daily Traffic - See Note)

URBAN RURAL **XX**

CONDITION A - Minimum Vehicular Volume

Satisfied Not Satisfied **XX**

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **5,561**	*1* **496**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied Not Satisfied **XX**

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **5,561**	*1* **496**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied Not Satisfied **XX**

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** **30%** **B** **58%**

2 CONDITIONS 80% 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Walker Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **New Public Street**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **5,557** vpd Minor Street Future ADT = **244** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
			Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Major Street	Minor Street	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume						
Satisfied / Not Satisfied XX / XX						
	1 **5,557**	*1* **244**	8,000	5,600	2,400	1,680
	2 +	*1*	9,600	6,720	2,400	1,680
	2 +	*2* +	9,600	6,720	3,200	2,240
	1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic						
Satisfied / Not Satisfied XX						
	1 **5,557**	*1* **244**	12,000	8,400	1,200	850
	2 +	*1*	14,400	10,080	1,200	850
	2 +	*2* +	14,400	10,080	1,600	1,120
	1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B						
Satisfied / Not Satisfied XX			2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 15%	**B** 29%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM				
				TRAFFIC CONDITIONS		**2031 With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Campus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 1**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **287** vpd Minor Street Future ADT = **43** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **287**	*1* **43**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **287**	*1* **43**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 3% **B** 3%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Campus Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 2**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **340** vpd Minor Street Future ADT = **90** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street: *1* **340** / Minor Street: *1* **90**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street: *1* **340** / Minor Street: *1* **90**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 5% **B** 4%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM		TRAFFIC CONDITIONS	**2031 With Project**
				CALC	JB	DATE 11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE 11/11/25
Major Street:	**Campus Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street:	**Driveway 3**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **384** vpd Minor Street Future ADT = **128** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **384** / *1* **128**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **384** / *1* **128**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX				
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 7% B: 5%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM		TRAFFIC CONDITIONS		**2031 With Project**
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Public Street A**				Critical Approach Speed (Major)		45 mph
Minor Street:	**Driveway 4**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **104** vpd Minor Street Future ADT = **80** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX / XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **104** / *1* **80**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **104** / *1* **80**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 2% **B** 1%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM				
___	___	___	___	TRAFFIC CONDITIONS		**2031 With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Eucalyptus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 5**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **7,067** vpd Minor Street Future ADT = **234** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **7,067**	*1* **234**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **7,067**	*1* **234**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 14% **B** 28%		2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM		TRAFFIC CONDITIONS		**2031 With Project**
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Public Street A**				Critical Approach Speed (Major)		45 mph
Minor Street:	**Driveway 6**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **186** vpd Minor Street Future ADT = **66** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **186** / *1* **66**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **186** / *1* **66**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 3% **B** 2%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Bon View Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 7**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **3,660** vpd Minor Street Future ADT = **1,429** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **3,660**	*1* **1,429**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **3,660**	*1* **1,429**	12,000	8,400	1,200	850 *
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 65% **B** 44%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Bon View Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 8**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **4,737** vpd Minor Street Future ADT = **172** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Number of lanes for moving traffic on each approach		Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Major Street	Minor Street	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume						
Satisfied / Not Satisfied: XX / XX						
	1 **4,737**	1 **172**	8,000	5,600	2,400	1,680
	2 +	1	9,600	6,720	2,400	1,680
	2 +	2 +	9,600	6,720	3,200	2,240
	1	2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic						
Satisfied / Not Satisfied: XX						
	1 **4,737**	1 **172**	12,000	8,400	1,200	850
	2 +	1	14,400	10,080	1,200	850
	2 +	2 +	14,400	10,080	1,600	1,120
	1	2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B						
Satisfied / Not Satisfied: XX			2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 10%	**B** 20%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM		TRAFFIC CONDITIONS		**2031 With Project**
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Bon View Avenue**				Critical Approach Speed (Major)		45 mph
Minor Street:	**Driveway 9**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **4,817** vpd Minor Street Future ADT = **184** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **4,817** / *1* **184**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **4,817** / *1* **184**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 11% **B** 22%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 10**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **359** vpd Minor Street Future ADT = **127** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN RURAL
XX

CONDITION A - Minimum Vehicular Volume

Satisfied Not Satisfied
XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **359**	1 **127**	8,000	5,600	2,400	1,680
2 +	1	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied Not Satisfied
XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **359**	1 **127**	12,000	8,400	1,200	850
2 +	1	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied Not Satisfied
XX

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 6% **B** 4%

2 CONDITIONS 80% 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM				
				TRAFFIC CONDITIONS		**2031 With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Eucalyptus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 11**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **8,571** vpd Minor Street Future ADT = **169** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **8,571**	*1* **169**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **8,571**	*1* **169**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 10% **B** 20%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 12**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **329** vpd Minor Street Future ADT = **75** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **329** / *1* **75**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **329** / *1* **75**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 4% **B** 4%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Eucalyptus Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 13**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **8,666** vpd Minor Street Future ADT = **228** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Number of lanes for moving traffic on each approach: Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
CONDITION A - Minimum Vehicular Volume						
Satisfied / Not Satisfied XX						
RURAL XX	1	1	8,000	5,600	2,400	1,680
	2 + **8,666**	1 **228**	9,600	6,720 *	2,400	1,680
	2 +	2 +	9,600	6,720	3,200	2,240
	1	2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic						
Satisfied / Not Satisfied XX						
	1	1	12,000	8,400	1,200	850
	2 + **8,666**	1 **228**	14,400	10,080	1,200	850
	2 +	2 +	14,400	10,080	1,600	1,120
	1	2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B						
Satisfied / Not Satisfied XX						
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 14%	**B** 27%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM		TRAFFIC CONDITIONS	**2031 With Project**
				CALC	JB	DATE 11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE 11/11/25
Major Street:	**Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street:	**Driveway 14**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **425** vpd Minor Street Future ADT = **81** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied (XX)	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **425** / *1* **81**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied (XX)	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **425** / *1* **81**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 5% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM				
				TRAFFIC CONDITIONS		**2031 With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Eucalyptus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 15**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **8,834** vpd Minor Street Future ADT = **282** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **8,834**	*1* **282**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **8,834**	*1* **282**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 17% **B** 33%		2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM		TRAFFIC CONDITIONS		**2031 With Project**
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Public Street A**				Critical Approach Speed (Major)		45 mph
Minor Street:	**Driveway 16**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **498** vpd Minor Street Future ADT = **44** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied (XX)	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **498** / *1* **44**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied (XX)	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **498** / *1* **44**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 3% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 17**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **518** vpd Minor Street Future ADT = **12** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **518**	*1* **12**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **518**	*1* **12**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 1% **B** 1%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM		TRAFFIC CONDITIONS		**2031 With Project**
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Public Street A**				Critical Approach Speed (Major)		45 mph
Minor Street:	**Driveway 18**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **538** vpd Minor Street Future ADT = **28** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street / Minor Street				
1 **538** / *1* **28**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street / Minor Street				
1 **538** / *1* **28**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 2% **B** 3%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM		TRAFFIC CONDITIONS	**2031 With Project**
				CALC	JB	DATE 11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE 11/11/25
Major Street:	**Grove Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street:	**Driveway 19**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **9,170** vpd Minor Street Future ADT = **577** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **9,170**	*1* **577**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **9,170**	*1* **577**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 34% **B** 68%		2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 21**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **378** vpd Minor Street Future ADT = **42** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **378** / *1* **42**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **378** / *1* **42**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 2% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 22**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **366** vpd Minor Street Future ADT = **34** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **366** / *1* **34**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **366** / *1* **34**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 2% **B** 4%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM				
				TRAFFIC CONDITIONS		**2031 With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Eucalyptus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 23**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **10,199** vpd Minor Street Future ADT = **319** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **10,199**	*1* **319**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **10,199**	*1* **319**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 19% **B** 38%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 24**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **391** vpd Minor Street Future ADT = **79** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population .....

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL: XX

CONDITION A - Minimum Vehicular Volume

Satisfied / Not Satisfied: XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **391**	*1* **79**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied / Not Satisfied: XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **391**	*1* **79**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied / Not Satisfied: XX

No one condition satisfied, but following conditions fulfilled 80% of more ..... **A** 5% **B** 5%

2 CONDITIONS 80%

2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 25**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **397** vpd Minor Street Future ADT = **85** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **397** / *1* **85**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **397** / *1* **85**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 5% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM				
				TRAFFIC CONDITIONS		**2031 With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Eucalyptus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 26**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **10,232** vpd Minor Street Future ADT = **262** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **10,232**	*1* **262**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **10,232**	*1* **262**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 16% **B** 31%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 27**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **448** vpd Minor Street Future ADT = **92** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population .....

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **448** / *1* **92**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **448** / *1* **92**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)				
No one condition satisfied, but following conditions fulfilled 80% of more ..... **A** 5% **B** 5%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Eucalyptus Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 28**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **10,284** vpd Minor Street Future ADT = **188** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 / *1*	8,000	5,600	2,400	1,680
2 + **10,284** / *1* **188**	9,600	6,720 *	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 / *1*	12,000	8,400	1,200	850
2 + **10,284** / *1* **188**	14,400	10,080 *	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 11% **B** 22%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM				
				TRAFFIC CONDITIONS		**2031 With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Walker Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 29**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **6,026** vpd Minor Street Future ADT = **43** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **6,026**	*1* **43**	8,000	5,600 *	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **6,026**	*1* **43**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 3% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2031 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Walker Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 30**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **5,987** vpd Minor Street Future ADT = **102** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
			Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Major Street	Minor Street	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume						
Satisfied / Not Satisfied XX	*1* **5,987**	*1* **102**	8,000	5,600 *	2,400	1,680
	2 +	*1*	9,600	6,720	2,400	1,680
	2 +	*2* +	9,600	6,720	3,200	2,240
	1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic						
Satisfied / Not Satisfied XX	*1* **5,987**	*1* **102**	12,000	8,400	1,200	850
	2 +	*1*	14,400	10,080	1,200	850
	2 +	*2* +	14,400	10,080	1,600	1,120
	1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B						
Satisfied / Not Satisfied XX			2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 6%	**B** 12%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM		TRAFFIC CONDITIONS	**2031 With Project**
				CALC	JB	DATE 11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE 11/11/25
Major Street:	**Walker Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street:	**Driveway 31**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **5,957** vpd Minor Street Future ADT = **56** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **5,957**	*1* **56**	8,000	5,600 *	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **5,957**	*1* **56**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 3% **B** 7%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

APPENDIX 6.6:

OPENING YEAR (2031) WITHOUT PROJECT OFF-RAMP QUEUING ANALYSIS

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Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	335	325	300	471	942	920	603
v/c Ratio	0.99	0.78	0.68	1.15	0.43	0.84	0.70
Control Delay (s/veh)	82.4	36.3	24.0	111.1	4.5	36.6	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.4	36.3	24.0	111.1	4.5	36.6	8.1
Queue Length 50th (ft)	200	128	77	~333	84	253	14
Queue Length 95th (ft)	#381	#275	175	m#370	m90	#336	114
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	340	417	442	410	2166	1102	861
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.78	0.68	1.15	0.43	0.83	0.70

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	356	431	1029	800	382	1085
v/c Ratio	0.95	0.99	0.93	0.88	1.00	0.52
Control Delay (s/veh)	71.5	67.7	45.8	19.7	70.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.2
Total Delay (s/veh)	71.5	67.7	45.8	19.7	70.3	7.7
Queue Length 50th (ft)	210	204	296	95	238	122
Queue Length 95th (ft)	#389	#409	#425	#375	m#322	m142
Internal Link Dist (ft)		1588	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	374	437	1102	909	382	2090
Starvation Cap Reductn	0	0	0	0	0	717
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.99	0.93	0.88	1.00	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	971	776	1029	70	676
v/c Ratio	1.00	1.08	0.39	0.24	0.89
Control Delay (s/veh)	57.6	86.2	4.1	43.1	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	86.2	4.1	43.1	18.8
Queue Length 50th (ft)	273	~556	86	21	0
Queue Length 95th (ft)	#463	#783	122	42	#190
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	970	718	2661	342	775
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.00	1.08	0.39	0.20	0.87

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	628	172	301	46	313	347	355	39
v/c Ratio	0.65	0.83	0.19	0.27	0.83	0.86	0.82	0.07
Control Delay (s/veh)	36.9	69.9	15.7	44.4	30.2	56.1	50.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.9	69.9	15.7	44.4	30.2	56.1	50.8	0.3
Queue Length 50th (ft)	196	108	47	27	42	212	214	0
Queue Length 95th (ft)	#282	#218	78	62	#169	#356	#335	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	960	218	1550	203	405	447	479	562
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.79	0.19	0.23	0.77	0.78	0.74	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	227	520	300	1115	604	476
v/c Ratio	0.42	0.94	0.87	0.59	0.64	0.63
Control Delay (s/veh)	26.4	50.2	43.3	16.7	33.6	7.2
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay (s/veh)	26.4	50.2	43.3	17.1	33.6	7.2
Queue Length 50th (ft)	98	229	186	217	168	0
Queue Length 95th (ft)	162	#425	m177	m206	230	85
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	575	582	380	1896	943	755
Starvation Cap Reductn	0	0	0	285	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.89	0.79	0.69	0.64	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	598	255	1149	304	508
v/c Ratio	1.08	0.38	1.05	1.06	0.26
Control Delay (s/veh)	91.4	4.9	70.6	111.0	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	91.4	4.9	70.6	111.0	12.4
Queue Length 50th (ft)	~382	0	~339	~201	54
Queue Length 95th (ft)	#584	51	#463	#368	107
Internal Link Dist (ft)	1339		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	556	668	1095	287	1928
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.08	0.38	1.05	1.06	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	242	234	221	808	1315	538	123
v/c Ratio	0.68	0.60	0.53	0.85	0.42	0.33	0.25
Control Delay (s/veh)	44.4	30.6	22.0	34.4	4.3	27.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.4	30.6	22.0	34.4	4.3	27.6	6.0
Queue Length 50th (ft)	127	89	56	237	53	76	0
Queue Length 95th (ft)	#305	#240	#168	#353	24	81	34
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	354	389	416	952	3505	2352	648
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.60	0.53	0.85	0.38	0.23	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	293	290	269	1636	366	144	686
v/c Ratio	0.73	0.68	0.51	0.57	0.41	0.56	0.23
Control Delay (s/veh)	40.5	31.0	11.0	19.5	3.6	57.6	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.5	31.0	11.0	19.5	3.6	57.6	1.4
Queue Length 50th (ft)	158	129	33	195	0	37	15
Queue Length 95th (ft)	226	201	93	260	54	m#62	9
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	531	551	632	2889	899	264	2995
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.53	0.43	0.57	0.41	0.55	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1128	591	638	230	254	606	602
v/c Ratio	0.41	0.56	0.34	0.15	0.40	0.85	0.85
Control Delay (s/veh)	20.1	4.2	25.6	0.2	26.5	33.8	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.1	4.2	25.6	0.2	26.5	33.8	33.6
Queue Length 50th (ft)	176	0	209	0	137	309	306
Queue Length 95th (ft)	259	76	281	m0	169	389	387
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	2852	1068	1901	1530	741	803	799
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.55	0.34	0.15	0.34	0.75	0.75

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	499	921	302	388	468	211
v/c Ratio	0.16	0.82	0.76	0.10	0.81	0.47
Control Delay (s/veh)	7.7	19.2	63.7	5.0	58.3	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.7	19.2	63.7	5.0	58.3	9.4
Queue Length 50th (ft)	30	370	112	27	170	0
Queue Length 95th (ft)	30	572	162	33	#257	68
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3106	1135	420	4009	595	453
Starvation Cap Reductn	0	2	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.81	0.72	0.10	0.79	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	415	406	372	350	995	972	534
v/c Ratio	0.97	0.81	0.78	1.16	0.50	0.85	0.63
Control Delay (s/veh)	71.9	36.6	33.7	129.5	19.4	36.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Total Delay (s/veh)	71.9	36.6	33.7	129.5	20.0	36.9	5.9
Queue Length 50th (ft)	245	175	145	~238	278	267	0
Queue Length 95th (ft)	#441	#346	#296	m#293	m314	#361	73
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	426	500	478	302	1976	1140	850
Starvation Cap Reductn	0	0	0	0	561	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.81	0.78	1.16	0.70	0.85	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	284	416	1004	588	341	1322
v/c Ratio	0.67	0.93	0.96	0.68	0.84	0.64
Control Delay (s/veh)	39.6	58.5	52.6	6.9	30.0	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	39.6	58.5	52.6	6.9	30.0	6.1
Queue Length 50th (ft)	154	213	295	0	115	52
Queue Length 95th (ft)	#278	#424	#432	86	m167	m83
Internal Link Dist (ft)		1671	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	421	446	1042	862	453	2166
Starvation Cap Reductn	0	0	0	0	0	224
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.93	0.96	0.68	0.75	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1213	522	891	95	845
v/c Ratio	1.08	1.14	0.39	0.15	1.18
Control Delay (s/veh)	77.0	121.8	8.4	32.5	111.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.0	121.8	8.4	32.5	111.9
Queue Length 50th (ft)	~440	~392	123	25	~384
Queue Length 95th (ft)	m#536	#593	158	47	#621
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	1118	457	2260	636	716
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.08	1.14	0.39	0.15	1.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	658	81	277	18	161	506	508	42
v/c Ratio	0.65	0.63	0.21	0.13	0.56	0.97	0.92	0.07
Control Delay (s/veh)	34.7	59.2	15.0	43.3	14.5	68.6	56.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.7	59.2	15.0	43.3	14.5	68.6	56.0	0.2
Queue Length 50th (ft)	190	52	40	11	0	~364	332	0
Queue Length 95th (ft)	268	#119	58	32	55	#572	#552	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	1006	129	1336	290	411	519	555	626
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.63	0.21	0.06	0.39	0.97	0.92	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	252	282	331	778	890	740
v/c Ratio	0.80	0.60	0.90	0.33	0.66	0.78
Control Delay (s/veh)	53.9	13.3	48.7	5.8	26.1	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.9	13.3	48.7	5.8	26.1	11.7
Queue Length 50th (ft)	135	24	147	98	226	53
Queue Length 95th (ft)	#233	98	m179	m112	297	231
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	361	505	384	2347	1349	953
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.56	0.86	0.33	0.66	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	403	271	1090	347	794
v/c Ratio	0.88	0.51	0.94	1.07	0.39
Control Delay (s/veh)	52.7	13.8	43.9	95.6	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.7	13.8	43.9	95.6	11.8
Queue Length 50th (ft)	213	44	295	~204	108
Queue Length 95th (ft)	#351	113	#456	#376	174
Internal Link Dist (ft)	1341		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	514	571	1156	323	2027
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.47	0.94	1.07	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	230	223	207	562	676	1363	347
v/c Ratio	0.81	0.75	0.47	0.86	0.20	0.54	0.42
Control Delay (s/veh)	57.6	48.6	8.6	43.3	0.8	21.7	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	48.6	8.6	43.3	0.8	21.7	4.3
Queue Length 50th (ft)	129	119	0	176	3	179	3
Queue Length 95th (ft)	#244	#226	60	#243	7	211	57
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	311	322	459	693	3372	2550	820
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.69	0.45	0.81	0.20	0.53	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	135	299	295	998	465	482	1163
v/c Ratio	0.41	0.80	0.76	0.40	0.52	0.81	0.36
Control Delay (s/veh)	32.6	37.9	34.8	21.5	4.8	57.1	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.6	37.9	34.8	21.5	4.8	57.1	2.1
Queue Length 50th (ft)	69	120	111	119	0	134	23
Queue Length 95th (ft)	115	209	194	168	70	188	18
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	438	467	483	2479	891	662	3227
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.64	0.61	0.40	0.52	0.73	0.36

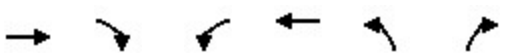
Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1457	720	783	239	274	835	837
v/c Ratio	0.73	0.72	0.59	0.16	0.31	0.97	0.98
Control Delay (s/veh)	35.5	6.6	43.7	0.2	16.7	50.2	51.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.5	6.6	43.7	0.2	16.7	50.2	51.9
Queue Length 50th (ft)	321	0	288	0	114	575	581
Queue Length 95th (ft)	372	97	m350	m0	172	#878	#885
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	2002	1008	1335	1530	871	859	855
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.71	0.59	0.16	0.31	0.97	0.98

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	680	1080	278	529	533	194
v/c Ratio	0.22	0.94	0.79	0.14	0.88	0.44
Control Delay (s/veh)	8.0	41.1	68.0	5.4	63.7	9.0
Queue Delay	0.0	1.6	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.0	42.6	68.0	5.4	63.7	9.0
Queue Length 50th (ft)	30	551	106	38	199	0
Queue Length 95th (ft)	m37	m#707	#163	50	#282	62
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3052	1155	365	3887	631	454
Starvation Cap Reductn	0	22	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.95	0.76	0.14	0.84	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 6.7:

OPENING YEAR (2031) WITH PROJECT OFF-RAMP QUEUING ANALYSIS

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Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	335	325	300	471	942	920	603
v/c Ratio	0.99	0.78	0.68	1.15	0.43	0.84	0.70
Control Delay (s/veh)	82.4	36.3	24.0	111.1	4.5	36.6	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.4	36.3	24.0	111.1	4.5	36.6	8.1
Queue Length 50th (ft)	200	128	77	~333	84	253	14
Queue Length 95th (ft)	#381	#275	175	m#370	m90	#336	114
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	340	417	442	410	2166	1102	861
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.78	0.68	1.15	0.43	0.83	0.70

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	356	431	1029	800	382	1085
v/c Ratio	0.95	0.99	0.93	0.88	1.00	0.52
Control Delay (s/veh)	71.5	67.7	45.8	19.7	70.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.2
Total Delay (s/veh)	71.5	67.7	45.8	19.7	70.3	7.7
Queue Length 50th (ft)	210	204	296	95	238	122
Queue Length 95th (ft)	#389	#409	#425	#375	m#322	m142
Internal Link Dist (ft)		1588	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	374	437	1102	909	382	2090
Starvation Cap Reductn	0	0	0	0	0	717
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.99	0.93	0.88	1.00	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	971	776	1029	70	676
v/c Ratio	1.00	1.08	0.39	0.24	0.89
Control Delay (s/veh)	57.6	86.2	4.1	43.1	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	86.2	4.1	43.1	18.8
Queue Length 50th (ft)	273	~556	86	21	0
Queue Length 95th (ft)	#463	#783	122	42	#190
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	970	718	2661	342	775
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.00	1.08	0.39	0.20	0.87

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	628	172	301	46	313	347	355	39
v/c Ratio	0.65	0.83	0.19	0.27	0.83	0.86	0.82	0.07
Control Delay (s/veh)	36.9	69.9	15.7	44.4	30.2	56.1	50.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.9	69.9	15.7	44.4	30.2	56.1	50.8	0.3
Queue Length 50th (ft)	196	108	47	27	42	212	214	0
Queue Length 95th (ft)	#282	#218	78	62	#169	#356	#335	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	960	218	1550	203	405	447	479	562
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.79	0.19	0.23	0.77	0.78	0.74	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	227	520	300	1115	604	476
v/c Ratio	0.42	0.94	0.87	0.59	0.64	0.63
Control Delay (s/veh)	26.4	50.2	43.3	16.7	33.6	7.2
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay (s/veh)	26.4	50.2	43.3	17.1	33.6	7.2
Queue Length 50th (ft)	98	229	186	217	168	0
Queue Length 95th (ft)	162	#425	m177	m206	230	85
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	575	582	380	1896	943	755
Starvation Cap Reductn	0	0	0	285	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.89	0.79	0.69	0.64	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	598	255	1149	304	508
v/c Ratio	1.08	0.38	1.05	1.06	0.26
Control Delay (s/veh)	91.4	4.9	70.6	111.0	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	91.4	4.9	70.6	111.0	12.4
Queue Length 50th (ft)	~382	0	~339	~201	54
Queue Length 95th (ft)	#584	51	#463	#368	107
Internal Link Dist (ft)	1339		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	556	668	1095	287	1928
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.08	0.38	1.05	1.06	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	242	234	221	808	1315	538	123
v/c Ratio	0.68	0.60	0.53	0.85	0.42	0.33	0.25
Control Delay (s/veh)	44.4	30.6	22.0	34.4	4.3	27.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.4	30.6	22.0	34.4	4.3	27.6	6.0
Queue Length 50th (ft)	127	89	56	237	53	76	0
Queue Length 95th (ft)	#305	#240	#168	#353	24	81	34
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	354	389	416	952	3505	2352	648
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.60	0.53	0.85	0.38	0.23	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	293	290	269	1636	366	144	686
v/c Ratio	0.73	0.68	0.51	0.57	0.41	0.56	0.23
Control Delay (s/veh)	40.5	31.0	11.0	19.5	3.6	57.6	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.5	31.0	11.0	19.5	3.6	57.6	1.4
Queue Length 50th (ft)	158	129	33	195	0	37	15
Queue Length 95th (ft)	226	201	93	260	54	m#62	9
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	531	551	632	2889	899	264	2995
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.53	0.43	0.57	0.41	0.55	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1128	591	638	230	254	606	602
v/c Ratio	0.41	0.56	0.34	0.15	0.40	0.85	0.85
Control Delay (s/veh)	20.1	4.2	25.6	0.2	26.5	33.8	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.1	4.2	25.6	0.2	26.5	33.8	33.6
Queue Length 50th (ft)	176	0	209	0	137	309	306
Queue Length 95th (ft)	259	76	281	m0	169	389	387
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	2852	1068	1901	1530	741	803	799
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.55	0.34	0.15	0.34	0.75	0.75

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	499	921	302	388	468	211
v/c Ratio	0.16	0.82	0.76	0.10	0.81	0.47
Control Delay (s/veh)	7.7	19.2	63.7	5.0	58.3	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.7	19.2	63.7	5.0	58.3	9.4
Queue Length 50th (ft)	30	370	112	27	170	0
Queue Length 95th (ft)	30	572	162	33	#257	68
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3106	1135	420	4009	595	453
Starvation Cap Reductn	0	2	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.81	0.72	0.10	0.79	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	415	406	372	350	995	972	534
v/c Ratio	0.97	0.81	0.78	1.16	0.50	0.85	0.63
Control Delay (s/veh)	71.9	36.6	33.7	129.5	19.4	36.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Total Delay (s/veh)	71.9	36.6	33.7	129.5	20.0	36.9	5.9
Queue Length 50th (ft)	245	175	145	~238	278	267	0
Queue Length 95th (ft)	#441	#346	#296	m#293	m314	#361	73
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	426	500	478	302	1976	1140	850
Starvation Cap Reductn	0	0	0	0	561	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.81	0.78	1.16	0.70	0.85	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	284	416	1004	588	341	1322
v/c Ratio	0.67	0.93	0.96	0.68	0.84	0.64
Control Delay (s/veh)	39.6	58.5	52.6	6.9	30.0	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	39.6	58.5	52.6	6.9	30.0	6.1
Queue Length 50th (ft)	154	213	295	0	115	52
Queue Length 95th (ft)	#278	#424	#432	86	m167	m83
Internal Link Dist (ft)		1671	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	421	446	1042	862	453	2166
Starvation Cap Reductn	0	0	0	0	0	224
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.93	0.96	0.68	0.75	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1213	522	891	95	845
v/c Ratio	1.08	1.14	0.39	0.15	1.18
Control Delay (s/veh)	77.0	121.8	8.4	32.5	111.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.0	121.8	8.4	32.5	111.9
Queue Length 50th (ft)	~440	~392	123	25	~384
Queue Length 95th (ft)	m#536	#593	158	47	#621
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	1118	457	2260	636	716
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.08	1.14	0.39	0.15	1.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBR
Lane Group Flow (vph)	658	81	277	18	161	506	508	42
v/c Ratio	0.65	0.63	0.21	0.13	0.56	0.97	0.92	0.07
Control Delay (s/veh)	34.7	59.2	15.0	43.3	14.5	68.6	56.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.7	59.2	15.0	43.3	14.5	68.6	56.0	0.2
Queue Length 50th (ft)	190	52	40	11	0	~364	332	0
Queue Length 95th (ft)	268	#119	58	32	55	#572	#552	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	1006	129	1336	290	411	519	555	626
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.63	0.21	0.06	0.39	0.97	0.92	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	252	282	331	778	890	740
v/c Ratio	0.80	0.60	0.90	0.33	0.66	0.78
Control Delay (s/veh)	53.9	13.3	48.7	5.8	26.1	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.9	13.3	48.7	5.8	26.1	11.7
Queue Length 50th (ft)	135	24	147	98	226	53
Queue Length 95th (ft)	#233	98	m179	m112	297	231
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	361	505	384	2347	1349	953
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.56	0.86	0.33	0.66	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	403	271	1090	347	794
v/c Ratio	0.88	0.51	0.94	1.07	0.39
Control Delay (s/veh)	52.7	13.8	43.9	95.6	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.7	13.8	43.9	95.6	11.8
Queue Length 50th (ft)	213	44	295	~204	108
Queue Length 95th (ft)	#351	113	#456	#376	174
Internal Link Dist (ft)	1341		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	514	571	1156	323	2027
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.47	0.94	1.07	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	230	223	207	562	676	1363	347
v/c Ratio	0.81	0.75	0.47	0.86	0.20	0.54	0.42
Control Delay (s/veh)	57.6	48.6	8.6	43.3	0.8	21.7	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	48.6	8.6	43.3	0.8	21.7	4.3
Queue Length 50th (ft)	129	119	0	176	3	179	3
Queue Length 95th (ft)	#244	#226	60	#243	7	211	57
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	311	322	459	693	3372	2550	820
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.69	0.45	0.81	0.20	0.53	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	135	299	295	998	465	482	1163
v/c Ratio	0.41	0.80	0.76	0.40	0.52	0.81	0.36
Control Delay (s/veh)	32.6	37.9	34.8	21.5	4.8	57.1	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.6	37.9	34.8	21.5	4.8	57.1	2.1
Queue Length 50th (ft)	69	120	111	119	0	134	23
Queue Length 95th (ft)	115	209	194	168	70	188	18
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	438	467	483	2479	891	662	3227
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.64	0.61	0.40	0.52	0.73	0.36

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1457	720	783	239	274	835	837
v/c Ratio	0.73	0.72	0.59	0.16	0.31	0.97	0.98
Control Delay (s/veh)	35.5	6.6	43.7	0.2	16.7	50.2	51.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.5	6.6	43.7	0.2	16.7	50.2	51.9
Queue Length 50th (ft)	321	0	288	0	114	575	581
Queue Length 95th (ft)	372	97	m350	m0	172	#878	#885
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	2002	1008	1335	1530	871	859	855
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.71	0.59	0.16	0.31	0.97	0.98

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	680	1080	278	529	533	194
v/c Ratio	0.22	0.94	0.79	0.14	0.88	0.44
Control Delay (s/veh)	8.0	41.1	68.0	5.4	63.7	9.0
Queue Delay	0.0	1.6	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.0	42.6	68.0	5.4	63.7	9.0
Queue Length 50th (ft)	30	551	106	38	199	0
Queue Length 95th (ft)	m37	m#707	#163	50	#282	62
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3052	1155	365	3887	631	454
Starvation Cap Reductn	0	22	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.95	0.76	0.14	0.84	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 6.8:

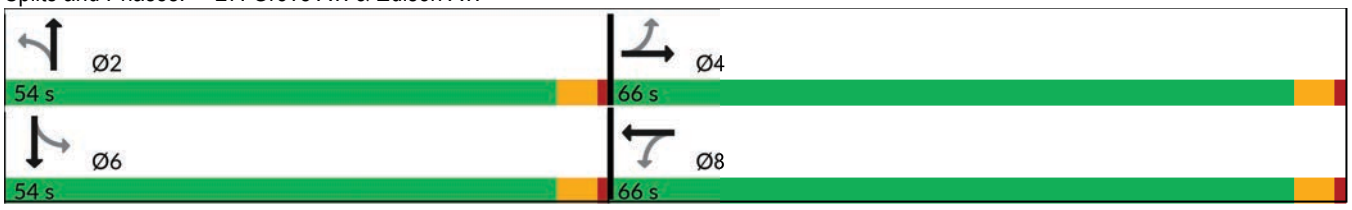
OPENING YEAR (2031) WITHOUT PROJECT INTERSECTION ANALYSIS WITH IMPROVEMENTS

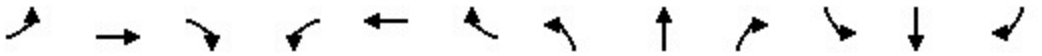
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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	66	192	40	427	18	218	79	235
Future Volume (vph)	66	192	40	427	18	218	79	235
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	66.0	66.0	66.0	66.0	54.0	54.0	54.0	54.0
Total Split (%)	55.0%	55.0%	55.0%	55.0%	45.0%	45.0%	45.0%	45.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	26.6	26.6	26.6	26.6		22.5		22.5
Actuated g/C Ratio	0.45	0.45	0.45	0.45		0.38		0.38
v/c Ratio	0.30	0.28	0.09	0.69		0.44		0.65
Control Delay (s/veh)	16.0	12.0	11.3	18.9		17.4		22.5
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	16.0	12.0	11.3	18.9		17.4		22.5
LOS	B	B	B	B		B		C
Approach Delay (s/veh)		13.0		18.3		17.4		22.5
Approach LOS		B		B		B		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 59.4	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay (s/veh): 18.2	Intersection LOS: B
Intersection Capacity Utilization 87.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 27: Grove Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	192	15	40	427	78	18	218	26	79	235	42
Future Volume (veh/h)	66	192	15	40	427	78	18	218	26	79	235	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	72	209	16	43	464	85	20	237	28	86	255	46
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	344	714	55	604	640	117	120	488	55	200	383	63
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	872	1651	126	1174	1480	271	53	1518	171	254	1192	195
Grp Volume(v), veh/h	72	0	225	43	0	549	285	0	0	387	0	0
Grp Sat Flow(s),veh/h/ln	872	0	1777	1174	0	1751	1742	0	0	1641	0	0
Q Serve(g_s), s	2.8	0.0	3.1	0.9	0.0	9.7	0.0	0.0	0.0	2.7	0.0	0.0
Cycle Q Clear(g_c), s	12.5	0.0	3.1	4.0	0.0	9.7	4.9	0.0	0.0	7.5	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.15	0.07		0.10	0.22		0.12
Lane Grp Cap(c), veh/h	344	0	768	604	0	757	663	0	0	645	0	0
V/C Ratio(X)	0.21	0.00	0.29	0.07	0.00	0.73	0.43	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	1401	0	2923	2027	0	2880	2360	0	0	2206	0	0
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	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.9	0.0	6.9	8.2	0.0	8.8	10.3	0.0	0.0	11.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.0	0.0	1.3	0.4	0.0	0.0	0.9	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(50%),veh/ln	0.4	0.0	0.6	0.2	0.0	2.3	1.3	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.2	0.0	7.1	8.2	0.0	10.1	10.7	0.0	0.0	12.0	0.0	0.0
LnGrp LOS	B		A	A		B	B			B		
Approach Vol, veh/h		297			592			285			387	
Approach Delay, s/veh		8.8			10.0			10.7			12.0	
Approach LOS		A			A			B			B	

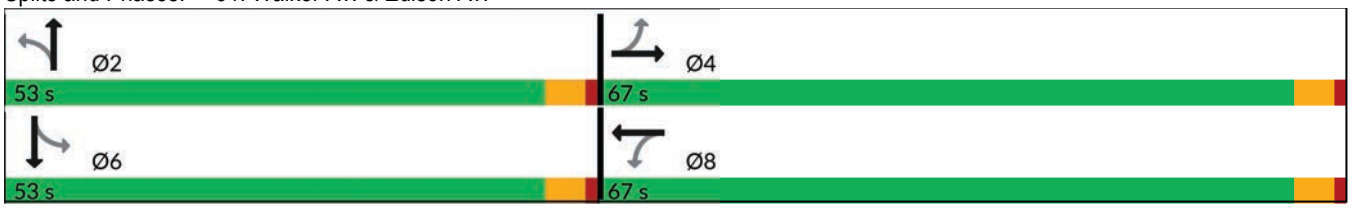
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.6		20.7		16.6		20.7				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		49.4		61.4		49.4		61.4				
Max Q Clear Time (g_c+I1), s		6.9		14.5		9.5		11.7				
Green Ext Time (p_c), s		1.7		1.7		2.5		4.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			10.4									
HCM 7th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	35	226	44	434	32	249	111	136
Future Volume (vph)	35	226	44	434	32	249	111	136
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	67.0	67.0	67.0	67.0	53.0	53.0	53.0	53.0
Total Split (%)	55.8%	55.8%	55.8%	55.8%	44.2%	44.2%	44.2%	44.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		40.2		40.2		30.5		30.5
Actuated g/C Ratio		0.50		0.50		0.38		0.38
v/c Ratio		0.39		0.83		0.56		0.74
Control Delay (s/veh)		15.5		28.1		25.6		34.6
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		15.5		28.1		25.6		34.6
LOS		B		C		C		C
Approach Delay (s/veh)		15.5		28.1		25.6		34.6
Approach LOS		B		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 81.2	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 26.6	Intersection LOS: C
Intersection Capacity Utilization 89.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	226	14	44	434	142	32	249	37	111	136	61
Future Volume (veh/h)	35	226	14	44	434	142	32	249	37	111	136	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	39	251	16	49	482	158	36	277	41	123	151	68
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	145	754	45	119	622	195	117	422	59	236	227	88
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	108	1500	89	66	1237	388	98	1439	201	435	773	300
Grp Volume(v), veh/h	306	0	0	689	0	0	354	0	0	342	0	0
Grp Sat Flow(s),veh/h/ln	1697	0	0	1691	0	0	1738	0	0	1508	0	0
Q Serve(g_s), s	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Cycle Q Clear(g_c), s	4.6	0.0	0.0	15.2	0.0	0.0	8.0	0.0	0.0	9.0	0.0	0.0
Prop In Lane	0.13		0.05	0.07		0.23	0.10		0.12	0.36		0.20
Lane Grp Cap(c), veh/h	944	0	0	936	0	0	597	0	0	550	0	0
V/C Ratio(X)	0.32	0.00	0.00	0.74	0.00	0.00	0.59	0.00	0.00	0.62	0.00	0.00
Avail Cap(c_a), veh/h	2302	0	0	2401	0	0	1902	0	0	1651	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.7	0.0	0.0	9.3	0.0	0.0	14.1	0.0	0.0	14.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.1	0.0	0.0	0.9	0.0	0.0	1.2	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(50%),veh/ln	1.1	0.0	0.0	3.6	0.0	0.0	2.3	0.0	0.0	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.9	0.0	0.0	10.4	0.0	0.0	15.0	0.0	0.0	15.5	0.0	0.0
LnGrp LOS	A			B			B			B		
Approach Vol, veh/h		306			689			354			342	
Approach Delay, s/veh		6.9			10.4			15.0			15.5	
Approach LOS		A			B			B			B	

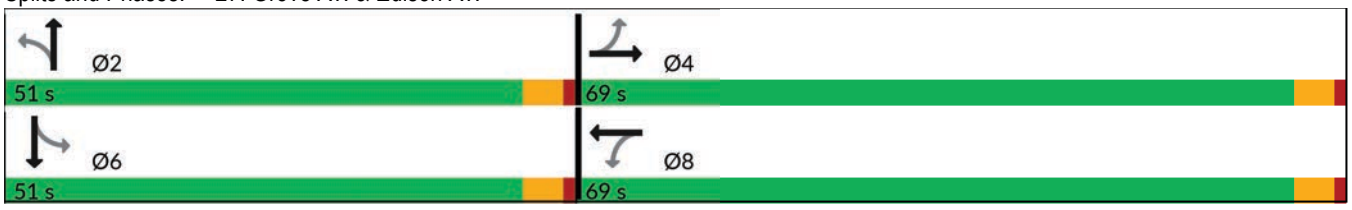
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.8		27.3		17.8		27.3				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		48.4		62.4		48.4		62.4				
Max Q Clear Time (g_c+I1), s		10.0		6.6		11.0		17.2				
Green Ext Time (p_c), s		2.0		2.1		2.1		5.5				

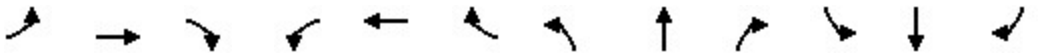
Intersection Summary												
HCM 7th Control Delay, s/veh			11.8									
HCM 7th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	59	443	4	280	14	196	72	192
Future Volume (vph)	59	443	4	280	14	196	72	192
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	69.0	69.0	69.0	69.0	51.0	51.0	51.0	51.0
Total Split (%)	57.5%	57.5%	57.5%	57.5%	42.5%	42.5%	42.5%	42.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	21.4	21.4	21.4	21.4		16.9		16.9
Actuated g/C Ratio	0.44	0.44	0.44	0.44		0.35		0.35
v/c Ratio	0.16	0.63	0.01	0.46		0.38		0.59
Control Delay (s/veh)	10.0	14.8	8.8	11.6		15.2		19.0
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	10.0	14.8	8.8	11.6		15.2		19.0
LOS	B	B	A	B		B		B
Approach Delay (s/veh)		14.3		11.6		15.2		19.0
Approach LOS		B		B		B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 48.2	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay (s/veh): 14.8	Intersection LOS: B
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 27: Grove Av. & Edison Av.



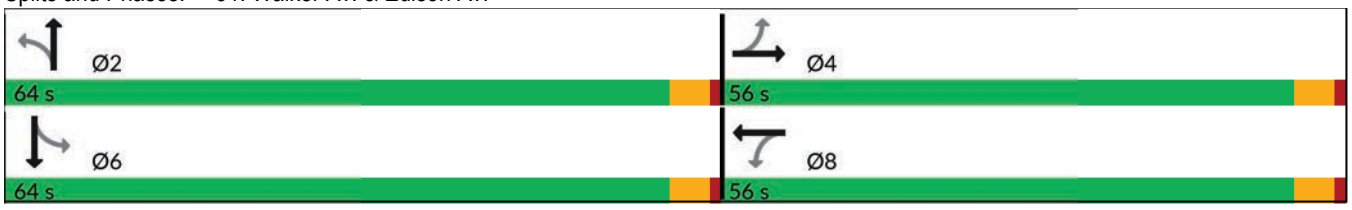


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	443	15	4	280	51	14	196	1	72	192	31
Future Volume (veh/h)	59	443	15	4	280	51	14	196	1	72	192	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	64	482	16	4	304	55	15	213	1	78	209	34
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	482	696	23	381	596	108	134	535	2	222	372	54
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1039	1732	57	913	1483	268	47	1717	8	267	1195	173
Grp Volume(v), veh/h	64	0	498	4	0	359	229	0	0	321	0	0
Grp Sat Flow(s),veh/h/ln	1039	0	1789	913	0	1752	1772	0	0	1635	0	0
Q Serve(g_s), s	1.6	0.0	7.4	0.1	0.0	4.9	0.0	0.0	0.0	1.9	0.0	0.0
Cycle Q Clear(g_c), s	6.5	0.0	7.4	7.5	0.0	4.9	3.2	0.0	0.0	5.2	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.15	0.07		0.00	0.24		0.11
Lane Grp Cap(c), veh/h	482	0	719	381	0	704	671	0	0	649	0	0
V/C Ratio(X)	0.13	0.00	0.69	0.01	0.00	0.51	0.34	0.00	0.00	0.49	0.00	0.00
Avail Cap(c_a), veh/h	2147	0	3589	1845	0	3513	2638	0	0	2431	0	0
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	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.7	0.0	8.0	11.1	0.0	7.2	8.7	0.0	0.0	9.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.2	0.0	0.0	0.6	0.3	0.0	0.0	0.6	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(50%),veh/ln	0.2	0.0	1.4	0.0	0.0	1.0	0.7	0.0	0.0	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.8	0.0	9.2	11.1	0.0	7.8	9.0	0.0	0.0	9.9	0.0	0.0
LnGrp LOS	A		A	B		A	A			A		
Approach Vol, veh/h		562			363			229			321	
Approach Delay, s/veh		9.2			7.8			9.0			9.9	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		17.5		14.6		17.5				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		46.4		64.4		46.4		64.4				
Max Q Clear Time (g_c+I1), s		5.2		9.4		7.2		9.5				
Green Ext Time (p_c), s		1.3		3.5		1.9		2.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			9.0									
HCM 7th LOS			A									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	21	475	48	307	18	162	222	128
Future Volume (vph)	21	475	48	307	18	162	222	128
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	56.0	56.0	56.0	56.0	64.0	64.0	64.0	64.0
Total Split (%)	46.7%	46.7%	46.7%	46.7%	53.3%	53.3%	53.3%	53.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		32.3		32.3		36.0		36.0
Actuated g/C Ratio		0.41		0.41		0.46		0.46
v/c Ratio		0.78		0.76		0.38		0.77
Control Delay (s/veh)		30.8		30.0		15.2		31.1
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		30.8		30.0		15.2		31.1
LOS		C		C		B		C
Approach Delay (s/veh)		30.8		30.0		15.2		31.1
Approach LOS		C		C		B		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 78.8	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay (s/veh): 28.0	Intersection LOS: C
Intersection Capacity Utilization 91.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	475	10	48	307	93	18	162	85	222	128	12
Future Volume (veh/h)	21	475	10	48	307	93	18	162	85	222	128	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	23	522	11	53	337	102	20	178	93	244	141	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	107	703	14	143	510	144	115	392	192	434	202	17
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	31	1702	35	103	1234	350	49	1104	542	809	570	47
Grp Volume(v), veh/h	556	0	0	492	0	0	291	0	0	398	0	0
Grp Sat Flow(s),veh/h/ln	1767	0	0	1687	0	0	1695	0	0	1426	0	0
Q Serve(g_s), s	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
Cycle Q Clear(g_c), s	10.5	0.0	0.0	9.1	0.0	0.0	5.3	0.0	0.0	9.4	0.0	0.0
Prop In Lane	0.04		0.02	0.11		0.21	0.07		0.32	0.61		0.03
Lane Grp Cap(c), veh/h	824	0	0	797	0	0	698	0	0	652	0	0
V/C Ratio(X)	0.67	0.00	0.00	0.62	0.00	0.00	0.42	0.00	0.00	0.61	0.00	0.00
Avail Cap(c_a), veh/h	2359	0	0	2186	0	0	2596	0	0	2155	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.9	0.0	0.0	9.5	0.0	0.0	9.9	0.0	0.0	11.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.8	0.0	0.0	0.4	0.0	0.0	0.9	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(50%),veh/ln	2.7	0.0	0.0	2.3	0.0	0.0	1.2	0.0	0.0	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.9	0.0	0.0	10.3	0.0	0.0	10.3	0.0	0.0	12.0	0.0	0.0
LnGrp LOS	B			B			B			B		
Approach Vol, veh/h		556			492			291			398	
Approach Delay, s/veh		10.9			10.3			10.3			12.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		18.6		20.9		18.6		20.9				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		59.4		51.4		59.4		51.4				
Max Q Clear Time (g_c+I1), s		7.3		12.5		11.4		11.1				
Green Ext Time (p_c), s		1.6		3.8		2.7		3.6				

Intersection Summary	
HCM 7th Control Delay, s/veh	10.9
HCM 7th LOS	B

APPENDIX 6.9:

OPENING YEAR (2031) WITH PROJECT INTERSECTION ANALYSIS WITH IMPROVEMENTS

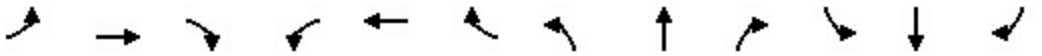
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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	65	110	3	169	62	390	22	456
Future Volume (vph)	65	110	3	169	62	390	22	456
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	29.0	29.0	29.0	29.0	19.0	77.0	14.0	72.0
Total Split (%)	24.2%	24.2%	24.2%	24.2%	15.8%	64.2%	11.7%	60.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.9	12.9	12.9	12.9	8.8	26.7	7.2	23.3
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.16	0.50	0.13	0.43
v/c Ratio	0.29	0.19	0.01	0.29	0.26	0.50	0.11	0.68
Control Delay (s/veh)	26.9	19.2	23.7	20.2	28.8	11.9	30.6	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.9	19.2	23.7	20.2	28.8	11.9	30.6	18.4
LOS	C	B	C	C	C	B	C	B
Approach Delay (s/veh)		21.6		20.3		14.2		19.0
Approach LOS		C		C		B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 53.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay (s/veh): 18.0	Intersection LOS: B
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 25: Grove Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	110	31	3	169	46	62	390	9	22	456	16
Future Volume (veh/h)	65	110	31	3	169	46	62	390	9	22	456	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	72	122	34	3	188	51	69	433	10	24	507	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	355	617	166	396	617	163	106	733	17	47	659	23
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.07	0.42	0.42	0.03	0.38	0.38
Sat Flow, veh/h	1095	2663	718	1181	2664	701	1619	1752	40	1619	1726	61
Grp Volume(v), veh/h	72	77	79	3	119	120	69	0	443	24	0	525
Grp Sat Flow(s),veh/h/ln	1095	1710	1671	1181	1710	1655	1619	0	1793	1619	0	1787
Q Serve(g_s), s	2.5	1.6	1.6	0.1	2.5	2.6	1.8	0.0	8.2	0.6	0.0	11.0
Cycle Q Clear(g_c), s	5.1	1.6	1.6	1.7	2.5	2.6	1.8	0.0	8.2	0.6	0.0	11.0
Prop In Lane	1.00		0.43	1.00		0.42	1.00		0.02	1.00		0.03
Lane Grp Cap(c), veh/h	355	396	387	396	396	384	106	0	750	47	0	683
V/C Ratio(X)	0.20	0.19	0.20	0.01	0.30	0.31	0.65	0.00	0.59	0.51	0.00	0.77
Avail Cap(c_a), veh/h	723	970	948	792	970	939	542	0	3019	354	0	2802
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.8	13.3	13.3	14.0	13.6	13.7	19.6	0.0	9.7	20.6	0.0	11.6
Incr Delay (d2), s/veh	0.3	0.2	0.3	0.0	0.4	0.5	6.6	0.0	0.7	8.4	0.0	1.9
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(50%),veh/ln	0.5	0.5	0.5	0.0	0.7	0.7	0.7	0.0	2.2	0.3	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.1	13.5	13.6	14.0	14.1	14.1	26.3	0.0	10.4	28.9	0.0	13.5
LnGrp LOS	B	B	B	B	B	B	C		B	C		B
Approach Vol, veh/h		228			242			512			549	
Approach Delay, s/veh		14.3			14.1			12.5			14.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	22.6		14.6	7.4	21.0		14.6				
Change Period (Y+Rc), s	4.6	4.6		4.6	4.6	4.6		4.6				
Max Green Setting (Gmax), s	9.4	72.4		24.4	14.4	67.4		24.4				
Max Q Clear Time (g_c+I1), s	2.6	10.2		7.1	3.8	13.0		4.6				
Green Ext Time (p_c), s	0.0	2.7		0.9	0.1	3.4		1.0				

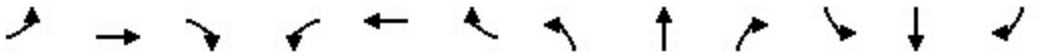
Intersection Summary		
HCM 7th Control Delay, s/veh	13.6	
HCM 7th LOS	B	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	39	112	18	163	25	401	30	446
Future Volume (vph)	39	112	18	163	25	401	30	446
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	39.0	39.0	39.0	39.0	81.0	81.0	81.0	81.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	67.5%	67.5%	67.5%	67.5%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		13.0		13.0		22.8		22.8
Actuated g/C Ratio		0.27		0.27		0.48		0.48
v/c Ratio		0.49		0.46		0.58		0.69
Control Delay (s/veh)		20.3		20.1		12.4		14.8
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		20.3		20.1		12.4		14.8
LOS		C		C		B		B
Approach Delay (s/veh)		20.3		20.1		12.4		14.8
Approach LOS		C		C		B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 48	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay (s/veh): 15.6	Intersection LOS: B
Intersection Capacity Utilization 66.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 26: Grove Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	112	40	18	163	11	25	401	6	30	446	35
Future Volume (veh/h)	39	112	40	18	163	11	25	401	6	30	446	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	43	123	44	20	179	12	27	441	7	33	490	38
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	172	270	85	130	385	24	125	724	11	127	674	50
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	203	1098	345	80	1566	99	43	1689	26	48	1572	118
Grp Volume(v), veh/h	210	0	0	211	0	0	475	0	0	561	0	0
Grp Sat Flow(s),veh/h/ln	1647	0	0	1746	0	0	1758	0	0	1737	0	0
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear(g_c), s	3.7	0.0	0.0	3.6	0.0	0.0	7.3	0.0	0.0	9.5	0.0	0.0
Prop In Lane	0.20		0.21	0.09		0.06	0.06		0.01	0.06		0.07
Lane Grp Cap(c), veh/h	526	0	0	540	0	0	861	0	0	852	0	0
V/C Ratio(X)	0.40	0.00	0.00	0.39	0.00	0.00	0.55	0.00	0.00	0.66	0.00	0.00
Avail Cap(c_a), veh/h	1611	0	0	1711	0	0	3712	0	0	3695	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.5	0.0	0.0	11.5	0.0	0.0	7.9	0.0	0.0	8.5	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.0	0.9	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(50%),veh/ln	1.0	0.0	0.0	1.0	0.0	0.0	1.5	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.0	0.0	0.0	12.0	0.0	0.0	8.5	0.0	0.0	9.4	0.0	0.0
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h		210			211			475			561	
Approach Delay, s/veh		12.0			12.0			8.5			9.4	
Approach LOS		B			B			A			A	

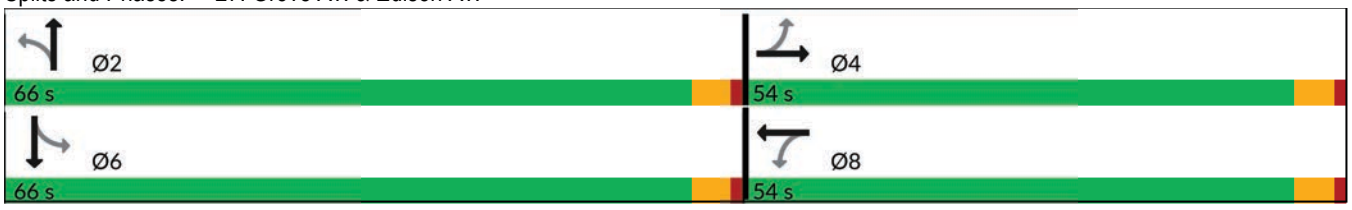
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	21.1	14.6	21.1	14.6
Change Period (Y+Rc), s	5.8	5.8	5.8	5.8
Max Green Setting (Gmax), s	75.2	33.2	75.2	33.2
Max Q Clear Time (g_c+I1), s	9.3	5.7	11.5	5.6
Green Ext Time (p_c), s	3.1	1.1	3.9	1.1

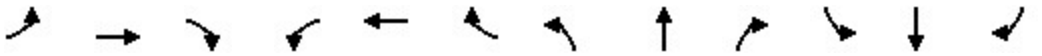
Intersection Summary	
HCM 7th Control Delay, s/veh	9.8
HCM 7th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	46	122	12	325	14	230	41	320
Future Volume (vph)	46	122	12	325	14	230	41	320
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	54.0	54.0	54.0	54.0	66.0	66.0	66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%	45.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	19.0	19.0	19.0	19.0		21.7		21.7
Actuated g/C Ratio	0.37	0.37	0.37	0.37		0.43		0.43
v/c Ratio	0.19	0.24	0.03	0.63		0.36		0.64
Control Delay (s/veh)	14.9	12.7	12.4	18.8		12.1		16.6
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	14.9	12.7	12.4	18.8		12.1		16.6
LOS	B	B	B	B		B		B
Approach Delay (s/veh)		13.2		18.6		12.1		16.6
Approach LOS		B		B		B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 50.8	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay (s/veh): 15.9	Intersection LOS: B
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 27: Grove Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	122	23	12	325	63	14	230	3	41	320	65
Future Volume (veh/h)	46	122	23	12	325	63	14	230	3	41	320	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	50	133	25	13	353	68	15	250	3	45	348	71
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	352	511	96	567	509	98	127	648	7	151	511	98
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	981	1473	277	1248	1467	283	36	1710	20	88	1348	260
Grp Volume(v), veh/h	50	0	158	13	0	421	268	0	0	464	0	0
Grp Sat Flow(s),veh/h/ln	981	0	1750	1248	0	1749	1766	0	0	1696	0	0
Q Serve(g_s), s	1.6	0.0	2.2	0.3	0.0	6.9	0.0	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	8.5	0.0	2.2	2.4	0.0	6.9	3.7	0.0	0.0	7.7	0.0	0.0
Prop In Lane	1.00		0.16	1.00		0.16	0.06		0.01	0.10		0.15
Lane Grp Cap(c), veh/h	352	0	607	567	0	607	782	0	0	760	0	0
V/C Ratio(X)	0.14	0.00	0.26	0.02	0.00	0.69	0.34	0.00	0.00	0.61	0.00	0.00
Avail Cap(c_a), veh/h	1455	0	2575	1970	0	2574	3272	0	0	3161	0	0
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	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.1	0.0	7.9	8.7	0.0	9.4	7.6	0.0	0.0	8.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.0	0.0	1.4	0.3	0.0	0.0	0.8	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(50%),veh/ln	0.3	0.0	0.5	0.0	0.0	1.8	0.8	0.0	0.0	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.3	0.0	8.1	8.8	0.0	10.9	7.9	0.0	0.0	9.6	0.0	0.0
LnGrp LOS	B		A	A		B	A			A		
Approach Vol, veh/h		208			434			268			464	
Approach Delay, s/veh		9.3			10.8			7.9			9.6	
Approach LOS		A			B			A			A	

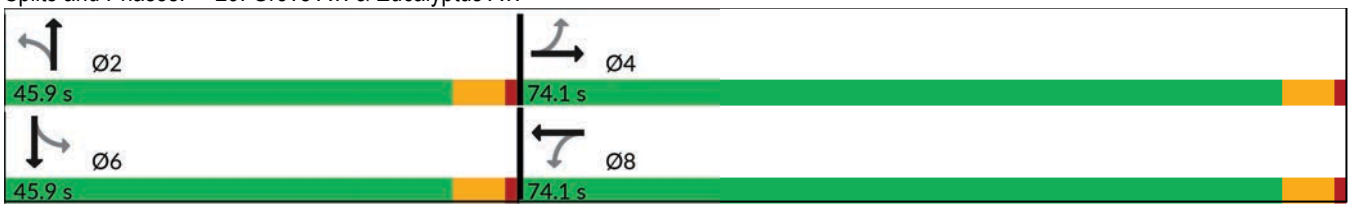
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.3		16.3		17.3		16.3				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		61.4		49.4		61.4		49.4				
Max Q Clear Time (g_c+I1), s		5.7		10.5		9.7		8.9				
Green Ext Time (p_c), s		1.5		1.1		3.0		2.7				

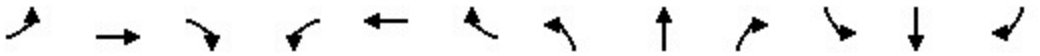
Intersection Summary	
HCM 7th Control Delay, s/veh	9.6
HCM 7th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	253	8	562	50	21	336	12
Future Volume (vph)	45	253	8	562	50	21	336	12
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	74.1	74.1	74.1	74.1	45.9	45.9	45.9	45.9
Total Split (%)	61.8%	61.8%	61.8%	61.8%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8		5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	25.6	25.6	25.6	25.6		20.5	23.9	23.9
Actuated g/C Ratio	0.41	0.41	0.41	0.41		0.33	0.39	0.39
v/c Ratio	0.30	0.21	0.02	0.65		0.19	0.74	0.07
Control Delay (s/veh)	20.0	12.3	13.0	15.1		14.0	27.7	5.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	20.0	12.3	13.0	15.1		14.0	27.7	5.1
LOS	C	B	B	B		B	C	A
Approach Delay (s/veh)		13.4		15.1		14.0		23.4
Approach LOS		B		B		B		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 61.9	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay (s/veh): 16.7	Intersection LOS: B
Intersection Capacity Utilization 75.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 29: Grove Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	253	24	8	562	311	50	21	16	336	12	66
Future Volume (veh/h)	45	253	24	8	562	311	50	21	16	336	12	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	48	269	26	9	598	331	53	22	17	357	13	70
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	290	1356	130	579	913	505	358	142	84	602	523	466
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	612	3153	302	1101	2123	1175	749	466	275	1390	1710	1525
Grp Volume(v), veh/h	48	145	150	9	482	447	92	0	0	357	13	70
Grp Sat Flow(s),veh/h/ln	612	1710	1746	1101	1710	1588	1490	0	0	1390	1710	1525
Q Serve(g_s), s	3.0	2.3	2.4	0.2	9.8	9.8	0.3	0.0	0.0	8.2	0.2	1.5
Cycle Q Clear(g_c), s	12.8	2.3	2.4	2.6	9.8	9.8	1.7	0.0	0.0	10.0	0.2	1.5
Prop In Lane	1.00		0.17	1.00		0.74	0.58		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	290	735	751	579	735	683	585	0	0	602	523	466
V/C Ratio(X)	0.17	0.20	0.20	0.02	0.65	0.65	0.16	0.00	0.00	0.59	0.02	0.15
Avail Cap(c_a), veh/h	979	2661	2717	1819	2661	2472	1472	0	0	1447	1562	1394
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	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	7.8	7.8	8.6	9.9	9.9	11.2	0.0	0.0	13.9	10.7	11.1
Incr Delay (d2), s/veh	0.3	0.1	0.1	0.0	1.0	1.1	0.1	0.0	0.0	0.9	0.0	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(50%),veh/ln	0.3	0.6	0.6	0.0	2.6	2.5	0.5	0.0	0.0	2.5	0.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.3	7.9	7.9	8.6	10.9	11.0	11.3	0.0	0.0	14.8	10.7	11.2
LnGrp LOS	B	A	A	A	B	B	B			B	B	B
Approach Vol, veh/h		343			938			92			440	
Approach Delay, s/veh		8.9			10.9			11.3			14.1	
Approach LOS		A			B			B			B	

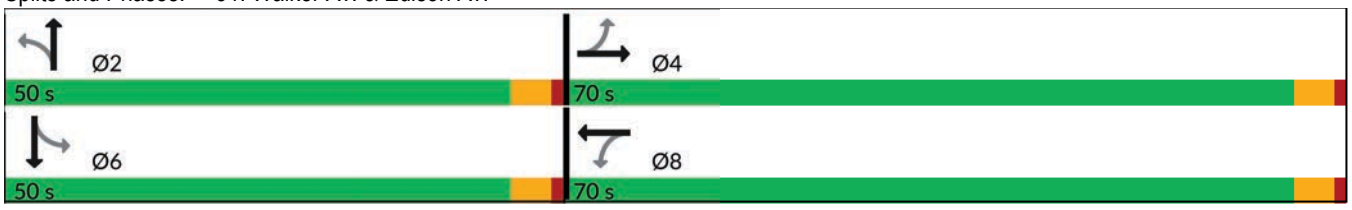
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		19.2		24.7		19.2		24.7				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		40.1		68.3		40.1		68.3				
Max Q Clear Time (g_c+I1), s		3.7		14.8		12.0		11.8				
Green Ext Time (p_c), s		0.5		2.1		1.5		7.1				

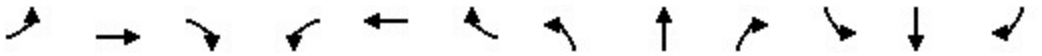
Intersection Summary												
HCM 7th Control Delay, s/veh			11.4									
HCM 7th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	17	144	298	341	25	232	116	182
Future Volume (vph)	17	144	298	341	25	232	116	182
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	70.0	70.0	70.0	70.0	50.0	50.0	50.0	50.0
Total Split (%)	58.3%	58.3%	58.3%	58.3%	41.7%	41.7%	41.7%	41.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		65.4		65.4		45.4		45.4
Actuated g/C Ratio		0.55		0.55		0.38		0.38
v/c Ratio		0.21		1.14		0.78		1.07
Control Delay (s/veh)		14.7		104.1		40.4		104.6
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		14.7		104.1		40.4		104.6
LOS		B		F		D		F
Approach Delay (s/veh)		14.7		104.1		40.4		104.6
Approach LOS		B		F		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 79.4	Intersection LOS: E
Intersection Capacity Utilization 116.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	144	2	298	341	142	25	232	188	116	182	46
Future Volume (veh/h)	17	144	2	298	341	142	25	232	188	116	182	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	19	160	2	331	379	158	28	258	209	129	202	51
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	99	799	10	351	355	148	53	338	262	141	200	46
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	121	1466	18	569	651	271	56	892	693	267	528	123
Grp Volume(v), veh/h	181	0	0	868	0	0	495	0	0	382	0	0
Grp Sat Flow(s),veh/h/ln	1604	0	0	1491	0	0	1641	0	0	918	0	0
Q Serve(g_s), s	0.0	0.0	0.0	59.3	0.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0
Cycle Q Clear(g_c), s	6.1	0.0	0.0	65.4	0.0	0.0	32.1	0.0	0.0	45.4	0.0	0.0
Prop In Lane	0.10		0.01	0.38		0.18	0.06		0.42	0.34		0.13
Lane Grp Cap(c), veh/h	907	0	0	854	0	0	653	0	0	387	0	0
V/C Ratio(X)	0.20	0.00	0.00	1.02	0.00	0.00	0.76	0.00	0.00	0.99	0.00	0.00
Avail Cap(c_a), veh/h	907	0	0	854	0	0	653	0	0	387	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.8	0.0	0.0	29.0	0.0	0.0	33.1	0.0	0.0	41.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	34.9	0.0	0.0	5.1	0.0	0.0	41.8	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(50%),veh/ln	2.4	0.0	0.0	31.9	0.0	0.0	12.8	0.0	0.0	15.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.9	0.0	0.0	63.9	0.0	0.0	38.3	0.0	0.0	82.9	0.0	0.0
LnGrp LOS	B			F			D			F		
Approach Vol, veh/h		181			868			495			382	
Approach Delay, s/veh		13.9			63.9			38.3			82.9	
Approach LOS		B			E			D			F	

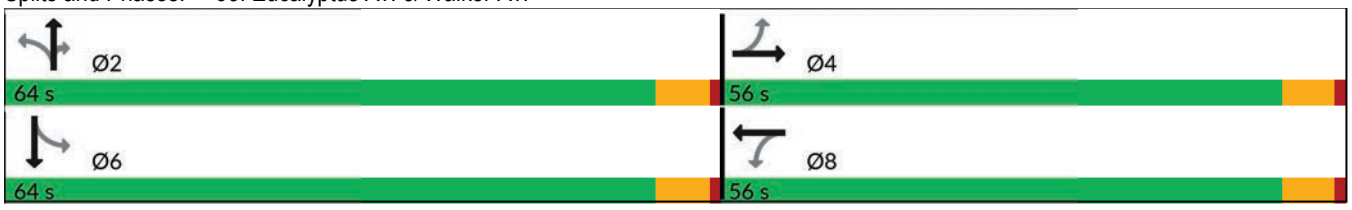
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		50.0		70.0		50.0		70.0				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		45.4		65.4		45.4		65.4				
Max Q Clear Time (g_c+I1), s		34.1		8.1		47.4		67.4				
Green Ext Time (p_c), s		2.2		1.1		0.0		0.0				

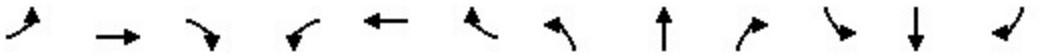
Intersection Summary	
HCM 7th Control Delay, s/veh	56.4
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	163	251	3	347	159	179	2	69	77
Future Volume (vph)	163	251	3	347	159	179	2	69	77
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases		4		8		2			6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	56.0	56.0	56.0	56.0	64.0	64.0	64.0	64.0	64.0
Total Split (%)	46.7%	46.7%	46.7%	46.7%	53.3%	53.3%	53.3%	53.3%	53.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	25.3	25.3	25.3	25.3	28.0	28.0	28.0	28.0	28.0
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.41	0.41	0.41	0.41	0.41
v/c Ratio	0.64	0.29	0.01	0.40	0.71	0.28	0.00	0.17	0.58
Control Delay (s/veh)	31.3	15.2	17.3	16.6	34.2	15.2	0.0	15.0	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.3	15.2	17.3	16.6	34.2	15.2	0.0	15.0	10.8
LOS	C	B	B	B	C	B	A	B	B
Approach Delay (s/veh)		20.7		16.6		24.0			11.4
Approach LOS		C		B		C			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 67.5	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay (s/veh): 17.8	Intersection LOS: B
Intersection Capacity Utilization 76.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 33: Eucalyptus Av. & Walker Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	251	65	3	347	83	159	179	2	69	77	313
Future Volume (veh/h)	163	251	65	3	347	83	159	179	2	69	77	313
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1800	1800	1800	1800	1800	1800	1700	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	192	295	76	4	408	98	187	211	2	81	91	368
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	336	1017	258	402	1028	244	321	847	717	570	147	593
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	907	2701	684	1026	2729	648	895	1800	1525	1187	312	1261
Grp Volume(v), veh/h	192	185	186	4	254	252	187	211	2	81	0	459
Grp Sat Flow(s),veh/h/ln	907	1710	1675	1026	1710	1667	895	1800	1525	1187	0	1573
Q Serve(g_s), s	14.9	5.7	5.9	0.2	8.2	8.4	15.0	5.3	0.1	3.3	0.0	16.6
Cycle Q Clear(g_c), s	23.4	5.7	5.9	6.1	8.2	8.4	31.5	5.3	0.1	8.7	0.0	16.6
Prop In Lane	1.00		0.41	1.00		0.39	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	336	644	631	402	644	628	321	847	717	570	0	740
V/C Ratio(X)	0.57	0.29	0.29	0.01	0.39	0.40	0.58	0.25	0.00	0.14	0.00	0.62
Avail Cap(c_a), veh/h	595	1132	1108	694	1132	1103	586	1381	1171	922	0	1207
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.9	16.5	16.6	18.7	17.3	17.4	26.8	12.1	10.7	14.7	0.0	15.0
Incr Delay (d2), s/veh	1.5	0.2	0.3	0.0	0.4	0.4	1.7	0.2	0.0	0.1	0.0	0.9
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(50%),veh/ln	3.1	2.1	2.1	0.0	3.0	3.0	3.0	1.8	0.0	0.8	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.5	16.8	16.8	18.7	17.7	17.8	28.5	12.2	10.7	14.8	0.0	15.9
LnGrp LOS	C	B	B	B	B	B	C	B	B	B		B
Approach Vol, veh/h		563			510			400			540	
Approach Delay, s/veh		20.4			17.7			19.8			15.7	
Approach LOS		C			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.5		34.4		41.5		34.4				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		58.2		50.2		58.2		50.2				
Max Q Clear Time (g_c+I1), s		33.5		25.4		18.6		10.4				
Green Ext Time (p_c), s		2.1		3.2		3.2		3.1				

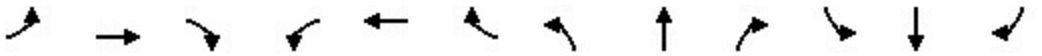
Intersection Summary												
HCM 7th Control Delay, s/veh			18.4									
HCM 7th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	99	194	8	109	24	503	19	362
Future Volume (vph)	99	194	8	109	24	503	19	362
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	32.0	32.0	32.0	32.0	14.0	75.0	13.0	74.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	11.7%	62.5%	10.8%	61.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	11.4	11.4	11.4	11.4	7.3	21.8	7.1	19.8
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.16	0.48	0.16	0.44
v/c Ratio	0.37	0.33	0.03	0.17	0.10	0.63	0.08	0.50
Control Delay (s/veh)	22.8	15.5	19.5	14.9	25.8	13.3	26.0	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.8	15.5	19.5	14.9	25.8	13.3	26.0	13.2
LOS	C	B	B	B	C	B	C	B
Approach Delay (s/veh)		17.5		15.1		13.8		13.8
Approach LOS		B		B		B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 45.3	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay (s/veh): 14.9	Intersection LOS: B
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 25: Grove Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	194	74	8	109	33	24	503	18	19	362	16
Future Volume (veh/h)	99	194	74	8	109	33	24	503	18	19	362	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	103	202	77	8	114	34	25	524	19	20	377	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	394	513	189	332	553	159	49	697	25	41	682	31
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.03	0.40	0.40	0.03	0.40	0.40
Sat Flow, veh/h	1189	2432	893	1056	2620	754	1619	1725	63	1619	1709	77
Grp Volume(v), veh/h	103	140	139	8	73	75	25	0	543	20	0	394
Grp Sat Flow(s),veh/h/ln	1189	1710	1616	1056	1710	1664	1619	0	1787	1619	0	1786
Q Serve(g_s), s	3.0	2.7	2.9	0.3	1.3	1.4	0.6	0.0	10.0	0.5	0.0	6.5
Cycle Q Clear(g_c), s	4.4	2.7	2.9	3.1	1.3	1.4	0.6	0.0	10.0	0.5	0.0	6.5
Prop In Lane	1.00		0.55	1.00		0.45	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	394	361	341	332	361	351	49	0	723	41	0	712
V/C Ratio(X)	0.26	0.39	0.41	0.02	0.20	0.21	0.51	0.00	0.75	0.49	0.00	0.55
Avail Cap(c_a), veh/h	993	1221	1154	863	1221	1188	397	0	3279	354	0	3230
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	13.0	13.1	14.4	12.5	12.5	18.3	0.0	9.8	18.5	0.0	8.9
Incr Delay (d2), s/veh	0.3	0.7	0.8	0.0	0.3	0.3	7.8	0.0	1.6	9.0	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.8	0.8	0.0	0.4	0.4	0.3	0.0	2.5	0.2	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.7	13.7	13.9	14.4	12.7	12.8	26.1	0.0	11.4	27.5	0.0	9.6
LnGrp LOS	B	B	B	B	B	B	C		B	C		A
Approach Vol, veh/h		382			156			568			414	
Approach Delay, s/veh		14.0			12.9			12.0			10.4	
Approach LOS		B			B			B			B	

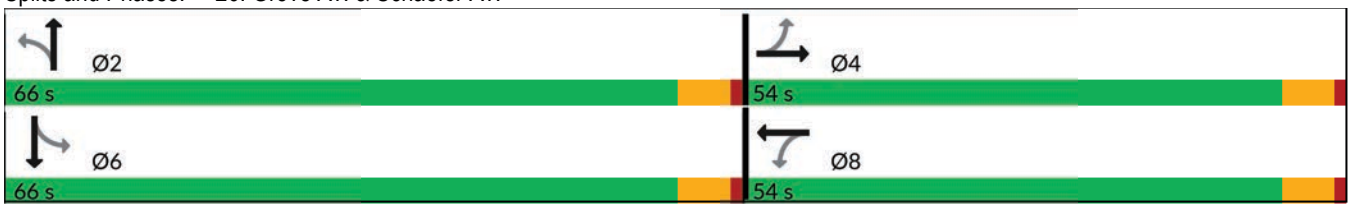
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	20.1		12.7	5.8	19.9		12.7				
Change Period (Y+Rc), s	4.6	4.6		4.6	4.6	4.6		4.6				
Max Green Setting (Gmax), s	8.4	70.4		27.4	9.4	69.4		27.4				
Max Q Clear Time (g_c+I1), s	2.5	12.0		6.4	2.6	8.5		5.1				
Green Ext Time (p_c), s	0.0	3.5		1.7	0.0	2.4		0.6				

Intersection Summary	
HCM 7th Control Delay, s/veh	12.2
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	83	243	7	76	21	426	24	365
Future Volume (vph)	83	243	7	76	21	426	24	365
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	54.0	54.0	54.0	54.0	66.0	66.0	66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%	45.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		20.7		20.2		24.2		24.2
Actuated g/C Ratio		0.36		0.35		0.42		0.42
v/c Ratio		0.67		0.22		0.68		0.66
Control Delay (s/veh)		23.5		13.4		19.6		18.9
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		23.5		13.4		19.6		18.9
LOS		C		B		B		B
Approach Delay (s/veh)		23.5		13.4		19.6		18.9
Approach LOS		C		B		B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 57.5	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay (s/veh): 19.8	Intersection LOS: B
Intersection Capacity Utilization 67.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 26: Grove Av. & Schaefer Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	243	22	7	76	35	21	426	0	24	365	34
Future Volume (veh/h)	83	243	22	7	76	35	21	426	0	24	365	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	92	270	24	8	84	39	23	473	0	27	406	38
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	209	405	33	112	365	159	114	651	0	118	584	53
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.37	0.37	0.00	0.37	0.37	0.37
Sat Flow, veh/h	285	1279	104	34	1152	503	35	1737	0	45	1558	141
Grp Volume(v), veh/h	386	0	0	131	0	0	496	0	0	471	0	0
Grp Sat Flow(s),veh/h/ln	1668	0	0	1688	0	0	1772	0	0	1744	0	0
Q Serve(g_s), s	4.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.6	0.0	0.0	2.1	0.0	0.0	9.0	0.0	0.0	8.5	0.0	0.0
Prop In Lane	0.24		0.06	0.06		0.30	0.05		0.00	0.06		0.08
Lane Grp Cap(c), veh/h	646	0	0	636	0	0	764	0	0	755	0	0
V/C Ratio(X)	0.60	0.00	0.00	0.21	0.00	0.00	0.65	0.00	0.00	0.62	0.00	0.00
Avail Cap(c_a), veh/h	2220	0	0	2229	0	0	2889	0	0	2826	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.3	0.0	0.0	9.5	0.0	0.0	10.1	0.0	0.0	10.0	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.2	0.0	0.0	0.9	0.0	0.0	0.9	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(50%),veh/ln	1.9	0.0	0.0	0.5	0.0	0.0	2.2	0.0	0.0	2.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.2	0.0	0.0	9.7	0.0	0.0	11.1	0.0	0.0	10.8	0.0	0.0
LnGrp LOS	B			A			B			B		
Approach Vol, veh/h		386			131			496			471	
Approach Delay, s/veh		12.2			9.7			11.1			10.8	
Approach LOS		B			A			B			B	

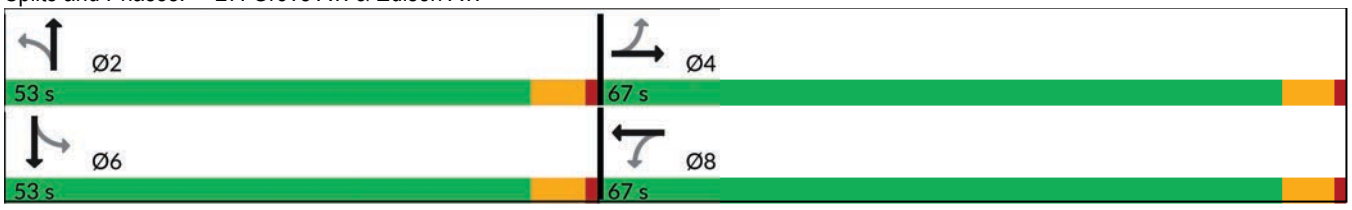
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		19.9		17.7		19.9		17.7				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		60.2		48.2		60.2		48.2				
Max Q Clear Time (g_c+I1), s		11.0		9.6		10.5		4.1				
Green Ext Time (p_c), s		3.2		2.3		3.1		0.7				

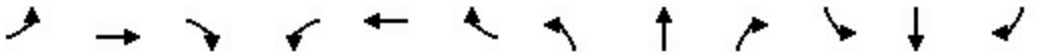
Intersection Summary												
HCM 7th Control Delay, s/veh			11.2									
HCM 7th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	94	453	5	262	27	290	69	238
Future Volume (vph)	94	453	5	262	27	290	69	238
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	67.0	67.0	67.0	67.0	53.0	53.0	53.0	53.0
Total Split (%)	55.8%	55.8%	55.8%	55.8%	44.2%	44.2%	44.2%	44.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	25.7	25.7	25.7	25.7		22.4		22.4
Actuated g/C Ratio	0.42	0.42	0.42	0.42		0.37		0.37
v/c Ratio	0.26	0.67	0.02	0.44		0.57		0.67
Control Delay (s/veh)	14.6	19.9	12.2	15.0		20.6		24.0
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	14.6	19.9	12.2	15.0		20.6		24.0
LOS	B	B	B	B		C		C
Approach Delay (s/veh)		19.0		14.9		20.6		24.0
Approach LOS		B		B		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 60.9	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay (s/veh): 19.7	Intersection LOS: B
Intersection Capacity Utilization 85.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 27: Grove Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	453	15	5	262	44	27	290	10	69	238	44
Future Volume (veh/h)	94	453	15	5	262	44	27	290	10	69	238	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	102	492	16	5	285	48	29	315	11	75	259	48
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	453	678	22	324	587	99	124	498	17	181	379	64
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1064	1733	56	905	1502	253	72	1632	54	224	1242	211
Grp Volume(v), veh/h	102	0	508	5	0	333	355	0	0	382	0	0
Grp Sat Flow(s),veh/h/ln	1064	0	1790	905	0	1754	1758	0	0	1677	0	0
Q Serve(g_s), s	3.0	0.0	9.2	0.2	0.0	5.5	0.0	0.0	0.0	0.9	0.0	0.0
Cycle Q Clear(g_c), s	8.5	0.0	9.2	9.4	0.0	5.5	6.6	0.0	0.0	7.4	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.14	0.08		0.03	0.20		0.13
Lane Grp Cap(c), veh/h	453	0	700	324	0	686	639	0	0	625	0	0
V/C Ratio(X)	0.23	0.00	0.73	0.02	0.00	0.49	0.56	0.00	0.00	0.61	0.00	0.00
Avail Cap(c_a), veh/h	1740	0	2866	1419	0	2810	2219	0	0	2072	0	0
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	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.9	0.0	9.9	13.9	0.0	8.7	11.5	0.0	0.0	11.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	1.5	0.0	0.0	0.5	0.8	0.0	0.0	1.0	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(50%),veh/ln	0.5	0.0	2.3	0.0	0.0	1.4	1.8	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.2	0.0	11.3	13.9	0.0	9.3	12.3	0.0	0.0	12.7	0.0	0.0
LnGrp LOS	B		B	B		A	B			B		
Approach Vol, veh/h		610			338			355			382	
Approach Delay, s/veh		11.5			9.3			12.3			12.7	
Approach LOS		B			A			B			B	

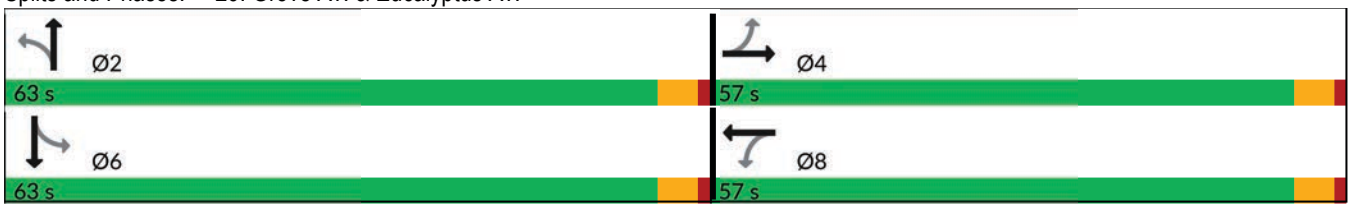
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	17.5	20.7	17.5	20.7
Change Period (Y+Rc), s	5.8	5.8	5.8	5.8
Max Green Setting (Gmax), s	47.2	61.2	47.2	61.2
Max Q Clear Time (g_c+I1), s	8.6	11.2	9.4	11.4
Green Ext Time (p_c), s	2.1	3.7	2.4	2.1

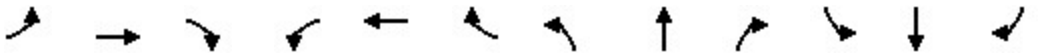
Intersection Summary	
HCM 7th Control Delay, s/veh	11.5
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	69	498	19	277	35	22	373	29
Future Volume (vph)	69	498	19	277	35	22	373	29
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	57.0	57.0	57.0	57.0	63.0	63.0	63.0	63.0
Total Split (%)	47.5%	47.5%	47.5%	47.5%	52.5%	52.5%	52.5%	52.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	14.3	14.3	14.3	14.3		13.8	13.8	13.8
Actuated g/C Ratio	0.38	0.38	0.38	0.38		0.37	0.37	0.37
v/c Ratio	0.29	0.49	0.08	0.45		0.15	0.51	0.35
Control Delay (s/veh)	12.5	10.7	9.7	6.6		8.8	14.9	9.4
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	12.5	10.7	9.7	6.6		8.8	14.9	9.4
LOS	B	B	A	A		A	B	A
Approach Delay (s/veh)		10.9		6.7		8.8		11.7
Approach LOS		B		A		A		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 37.8	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay (s/veh): 9.7	Intersection LOS: A
Intersection Capacity Utilization 50.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 29: Grove Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	498	56	19	277	259	35	22	10	373	29	53
Future Volume (veh/h)	69	498	56	19	277	259	35	22	10	373	29	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	79	572	64	22	318	298	40	25	11	429	33	61
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	480	1334	149	483	735	656	343	185	58	1233	148	273
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	819	3101	346	804	1710	1525	609	708	223	2788	566	1046
Grp Volume(v), veh/h	79	315	321	22	318	298	76	0	0	429	0	94
Grp Sat Flow(s),veh/h/ln	819	1710	1738	804	1710	1525	1540	0	0	1394	0	1612
Q Serve(g_s), s	2.3	3.8	3.9	0.6	3.9	4.1	0.0	0.0	0.0	2.7	0.0	1.4
Cycle Q Clear(g_c), s	6.4	3.8	3.9	4.4	3.9	4.1	1.0	0.0	0.0	3.7	0.0	1.4
Prop In Lane	1.00		0.20	1.00		1.00	0.53		0.14	1.00		0.65
Lane Grp Cap(c), veh/h	480	735	747	483	735	656	587	0	0	1233	0	421
V/C Ratio(X)	0.16	0.43	0.43	0.05	0.43	0.45	0.13	0.00	0.00	0.35	0.00	0.22
Avail Cap(c_a), veh/h	1568	3004	3053	1551	3004	2680	3098	0	0	5963	0	3156
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	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	5.9	5.9	7.5	5.9	6.0	8.5	0.0	0.0	9.4	0.0	8.6
Incr Delay (d2), s/veh	0.2	0.4	0.4	0.0	0.4	0.5	0.1	0.0	0.0	0.2	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.5	0.1	0.6	0.6	0.2	0.0	0.0	0.7	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.4	6.3	6.3	7.5	6.4	6.5	8.6	0.0	0.0	9.6	0.0	8.9
LnGrp LOS	A	A	A	A	A	A	A			A		A
Approach Vol, veh/h		715			638			76			523	
Approach Delay, s/veh		6.6			6.5			8.6			9.5	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		12.4		17.4		12.4		17.4				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		58.4		52.4		58.4		52.4				
Max Q Clear Time (g_c+I1), s		3.0		8.4		5.7		6.4				
Green Ext Time (p_c), s		0.4		4.4		2.1		4.3				

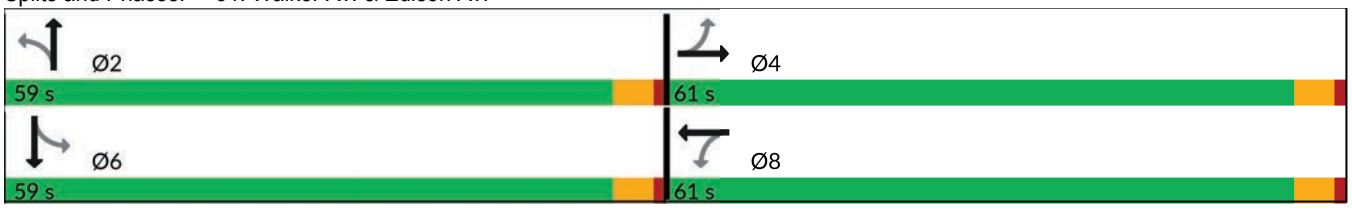
Intersection Summary	
HCM 7th Control Delay, s/veh	7.4
HCM 7th LOS	A

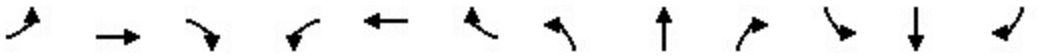
Notes
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	20	486	143	279	17	173	222	131
Future Volume (vph)	20	486	143	279	17	173	222	131
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	61.0	61.0	61.0	61.0	59.0	59.0	59.0	59.0
Total Split (%)	50.8%	50.8%	50.8%	50.8%	49.2%	49.2%	49.2%	49.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		56.4		56.4		54.4		54.4
Actuated g/C Ratio		0.47		0.47		0.45		0.45
v/c Ratio		0.69		1.15		0.59		1.05
Control Delay (s/veh)		30.4		120.3		24.4		91.9
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		30.4		120.3		24.4		91.9
LOS		C		F		C		F
Approach Delay (s/veh)		30.4		120.3		24.4		91.9
Approach LOS		C		F		C		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay (s/veh): 67.2	Intersection LOS: E
Intersection Capacity Utilization 120.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	486	8	143	279	98	17	173	223	222	131	13
Future Volume (veh/h)	20	486	8	143	279	98	17	173	223	222	131	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	22	534	9	157	307	108	19	190	245	244	144	14
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	48	776	13	165	282	95	48	337	415	278	138	13
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	35	1652	27	270	601	203	38	744	916	507	305	29
Grp Volume(v), veh/h	565	0	0	572	0	0	454	0	0	402	0	0
Grp Sat Flow(s),veh/h/ln	1714	0	0	1073	0	0	1698	0	0	841	0	0
Q Serve(g_s), s	0.0	0.0	0.0	26.7	0.0	0.0	0.0	0.0	0.0	29.3	0.0	0.0
Cycle Q Clear(g_c), s	29.7	0.0	0.0	56.4	0.0	0.0	25.1	0.0	0.0	54.4	0.0	0.0
Prop In Lane	0.04		0.02	0.27		0.19	0.04		0.54	0.61		0.03
Lane Grp Cap(c), veh/h	837	0	0	542	0	0	801	0	0	430	0	0
V/C Ratio(X)	0.68	0.00	0.00	1.05	0.00	0.00	0.57	0.00	0.00	0.94	0.00	0.00
Avail Cap(c_a), veh/h	837	0	0	542	0	0	801	0	0	430	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.6	0.0	0.0	36.5	0.0	0.0	24.8	0.0	0.0	39.7	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	53.8	0.0	0.0	0.9	0.0	0.0	27.9	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(50%),veh/ln	12.3	0.0	0.0	24.0	0.0	0.0	9.1	0.0	0.0	14.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.8	0.0	0.0	90.3	0.0	0.0	25.7	0.0	0.0	67.6	0.0	0.0
LnGrp LOS	C			F			C			E		
Approach Vol, veh/h		565			572			454			402	
Approach Delay, s/veh		26.8			90.3			25.7			67.6	
Approach LOS		C			F			C			E	

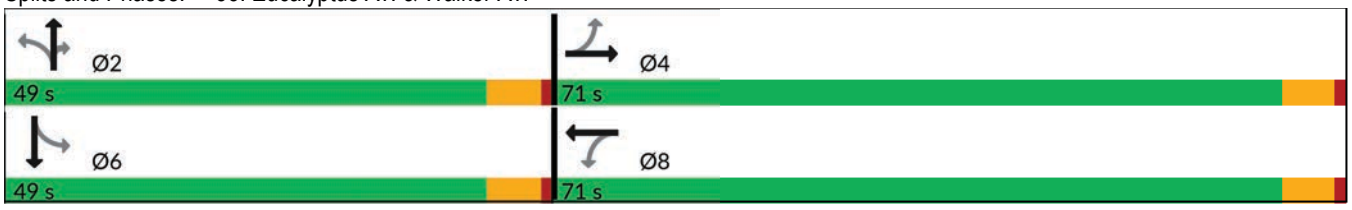
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		61.0		59.0		61.0				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		54.4		56.4		54.4		56.4				
Max Q Clear Time (g_c+I1), s		27.1		31.7		56.4		58.4				
Green Ext Time (p_c), s		2.7		3.6		0.0		0.0				

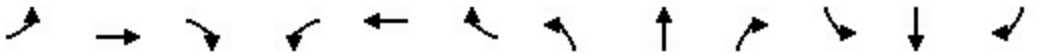
Intersection Summary	
HCM 7th Control Delay, s/veh	53.0
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	149	411	2	266	73	117	8	108	73
Future Volume (vph)	149	411	2	266	73	117	8	108	73
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases		4		8		2			6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	71.0	71.0	71.0	71.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.6	15.6	15.6	15.6	11.9	11.9	11.9	11.9	11.9
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.30	0.30	0.30	0.30	0.30
v/c Ratio	0.49	0.45	0.01	0.32	0.27	0.26	0.02	0.35	0.42
Control Delay (s/veh)	14.5	9.3	7.5	7.5	14.9	13.4	2.6	15.6	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.5	9.3	7.5	7.5	14.9	13.4	2.6	15.6	11.2
LOS	B	A	A	A	B	B	A	B	B
Approach Delay (s/veh)		10.5		7.5		13.5			12.8
Approach LOS		B		A		B			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 39.6	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay (s/veh): 10.6	Intersection LOS: B
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 33: Eucalyptus Av. & Walker Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	411	101	2	266	97	73	117	8	108	73	123
Future Volume (veh/h)	149	411	101	2	266	97	73	117	8	108	73	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1800	1800	1800	1800	1800	1700	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	175	484	119	2	313	114	86	138	9	127	86	145
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	522	1145	280	439	1038	371	352	476	404	452	159	269
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	976	2724	666	829	2469	882	1103	1800	1525	1260	602	1015
Grp Volume(v), veh/h	175	303	300	2	215	212	86	138	9	127	0	231
Grp Sat Flow(s),veh/h/ln	976	1710	1680	829	1710	1641	1103	1800	1525	1260	0	1617
Q Serve(g_s), s	5.4	4.6	4.6	0.1	3.1	3.2	2.7	2.2	0.2	3.3	0.0	4.5
Cycle Q Clear(g_c), s	8.5	4.6	4.6	4.7	3.1	3.2	7.2	2.2	0.2	5.5	0.0	4.5
Prop In Lane	1.00		0.40	1.00		0.54	1.00		1.00	1.00		0.63
Lane Grp Cap(c), veh/h	522	719	706	439	719	690	352	476	404	452	0	428
V/C Ratio(X)	0.34	0.42	0.43	0.00	0.30	0.31	0.24	0.29	0.02	0.28	0.00	0.54
Avail Cap(c_a), veh/h	1840	3029	2976	1560	3029	2907	1355	2112	1790	1598	0	1898
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.9	7.5	7.5	9.2	7.1	7.1	14.7	10.8	10.0	13.0	0.0	11.6
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.0	0.2	0.3	0.4	0.3	0.0	0.3	0.0	1.1
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(50%),veh/ln	0.8	1.0	1.0	0.0	0.7	0.7	0.5	0.6	0.0	0.6	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.3	7.9	7.9	9.2	7.3	7.4	15.0	11.1	10.0	13.3	0.0	12.7
LnGrp LOS	B	A	A	A	A	A	B	B	B	B		B
Approach Vol, veh/h		778			429			233			358	
Approach Delay, s/veh		8.5			7.3			12.5			12.9	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.5		21.3		15.5		21.3				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		43.2		65.2		43.2		65.2				
Max Q Clear Time (g_c+I1), s		9.2		10.5		7.5		6.7				
Green Ext Time (p_c), s		1.1		4.9		1.7		2.6				

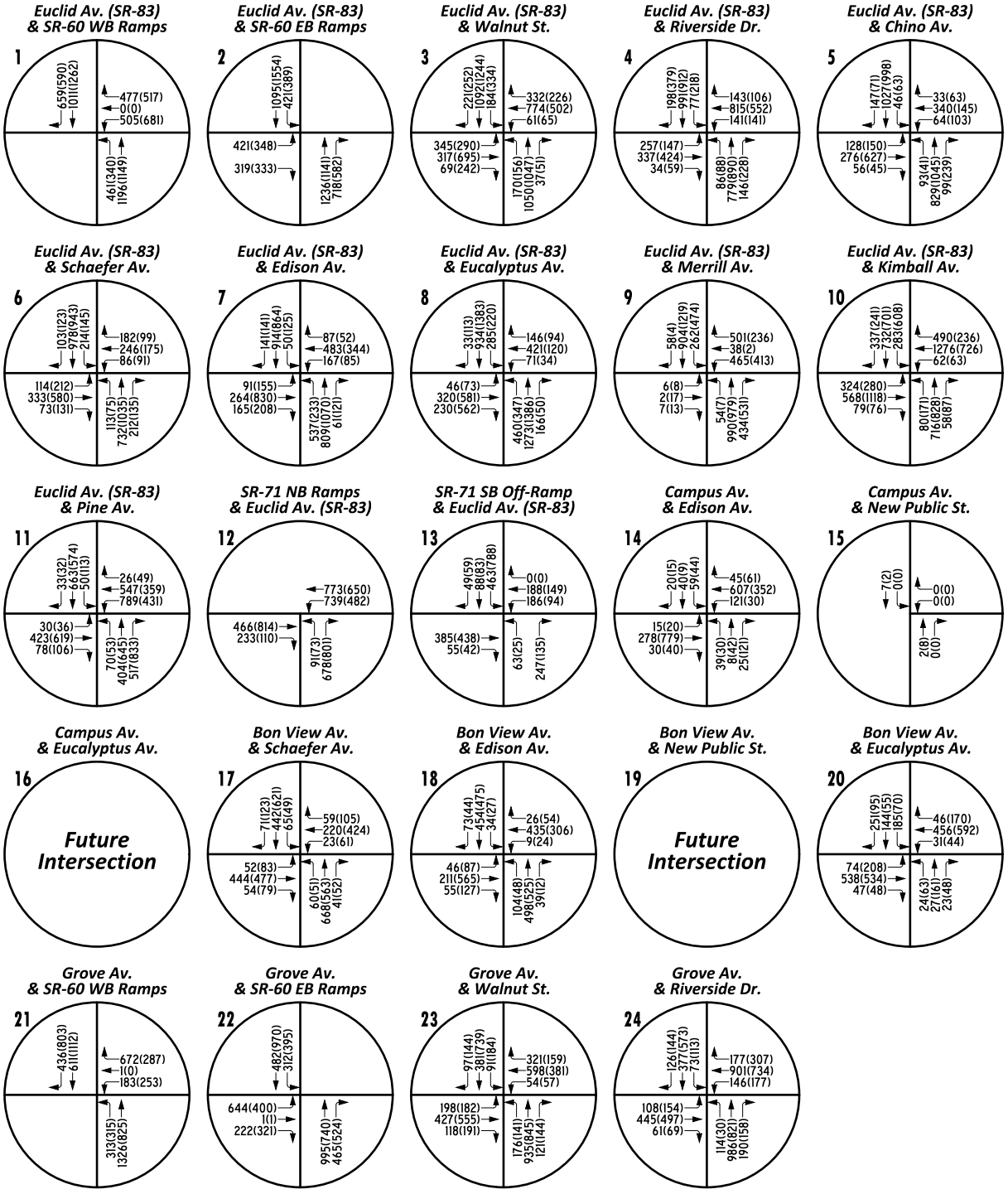
Intersection Summary	
HCM 7th Control Delay, s/veh	9.6
HCM 7th LOS	A

APPENDIX 7.1:

HORIZON YEAR (2050) VOLUME EXHIBITS

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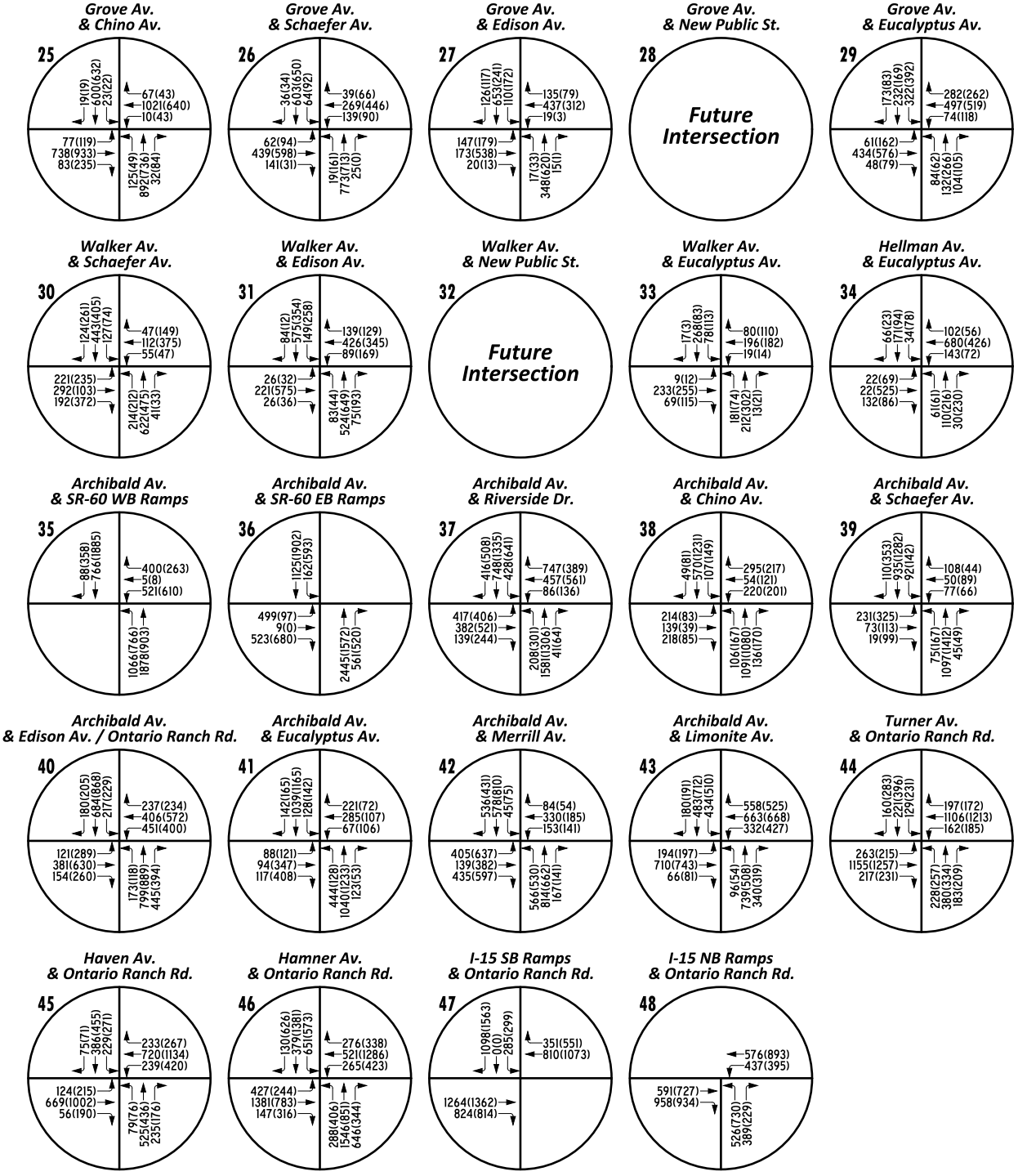
EXHIBIT 7-1 : HORIZON YEAR (2050) WITHOUT PROJECT INTERSECTION VOLUMES (ACTUAL VEHICLES) (1 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

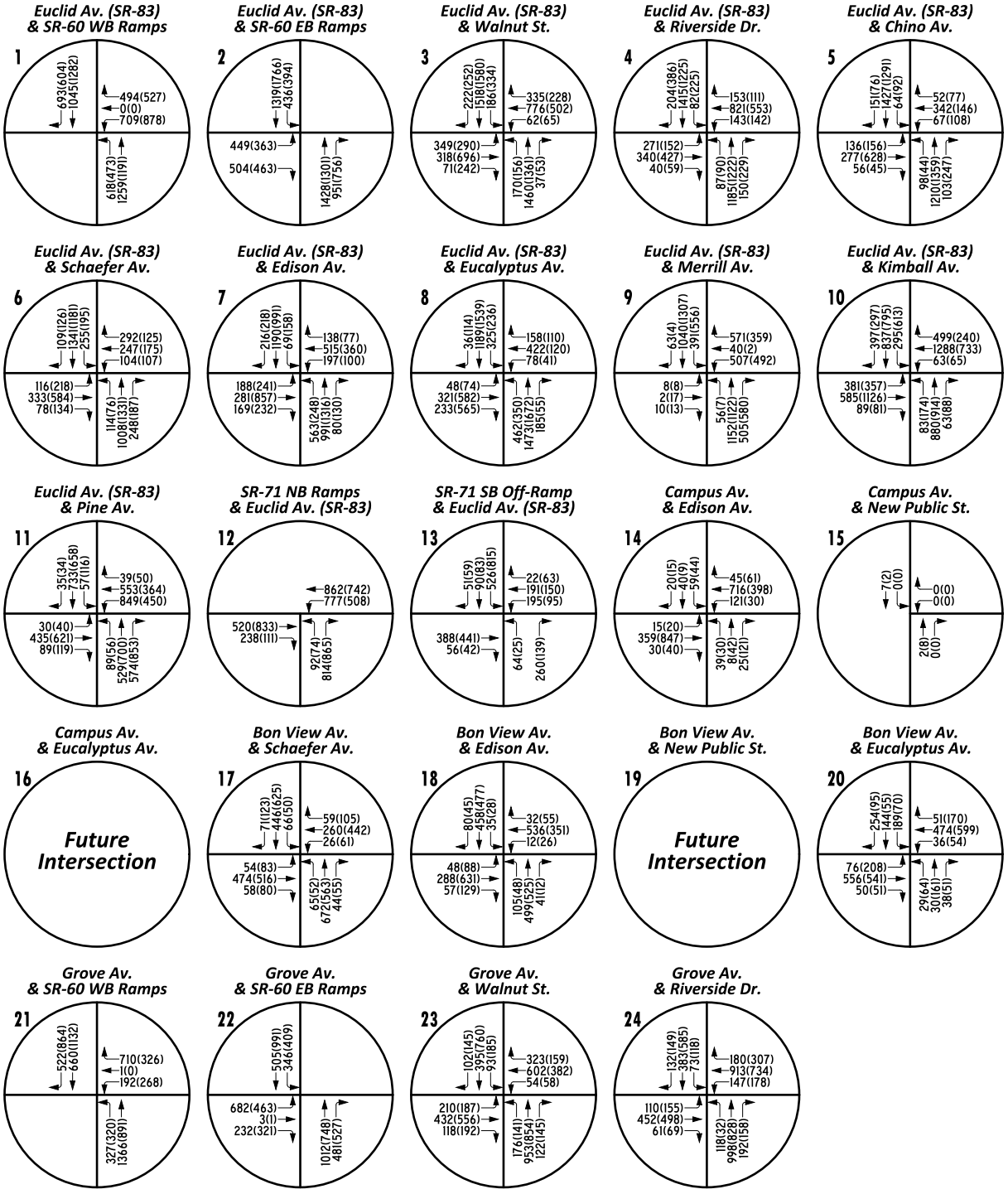
EXHIBIT 7-1 : HORIZON YEAR (2050) WITHOUT PROJECT INTERSECTION VOLUMES (ACTUAL VEHICLES) (2 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

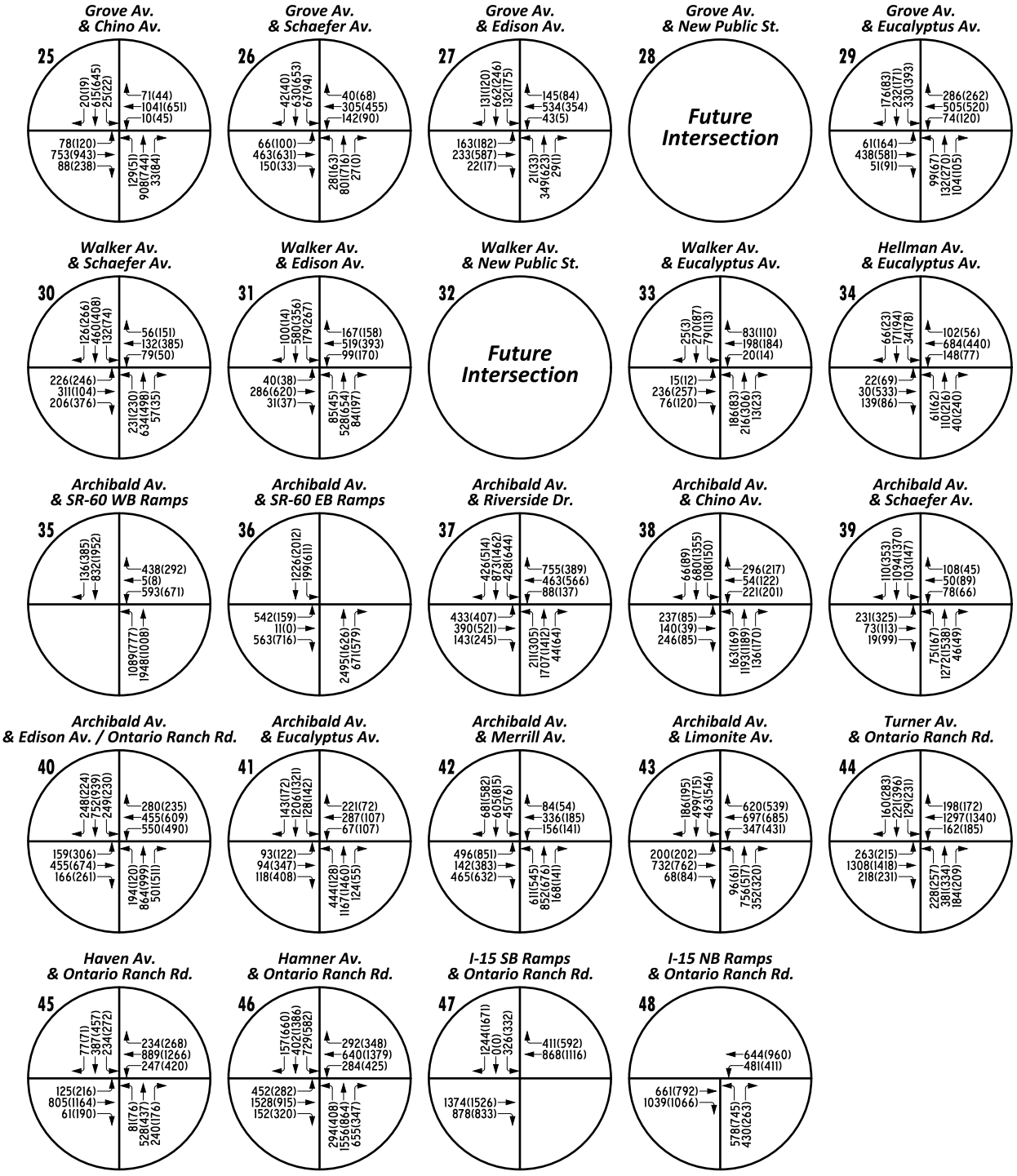
EXHIBIT 7-2 : HORIZON YEAR (2050) WITHOUT PROJECT INTERSECTION VOLUMES (PCE) (1 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

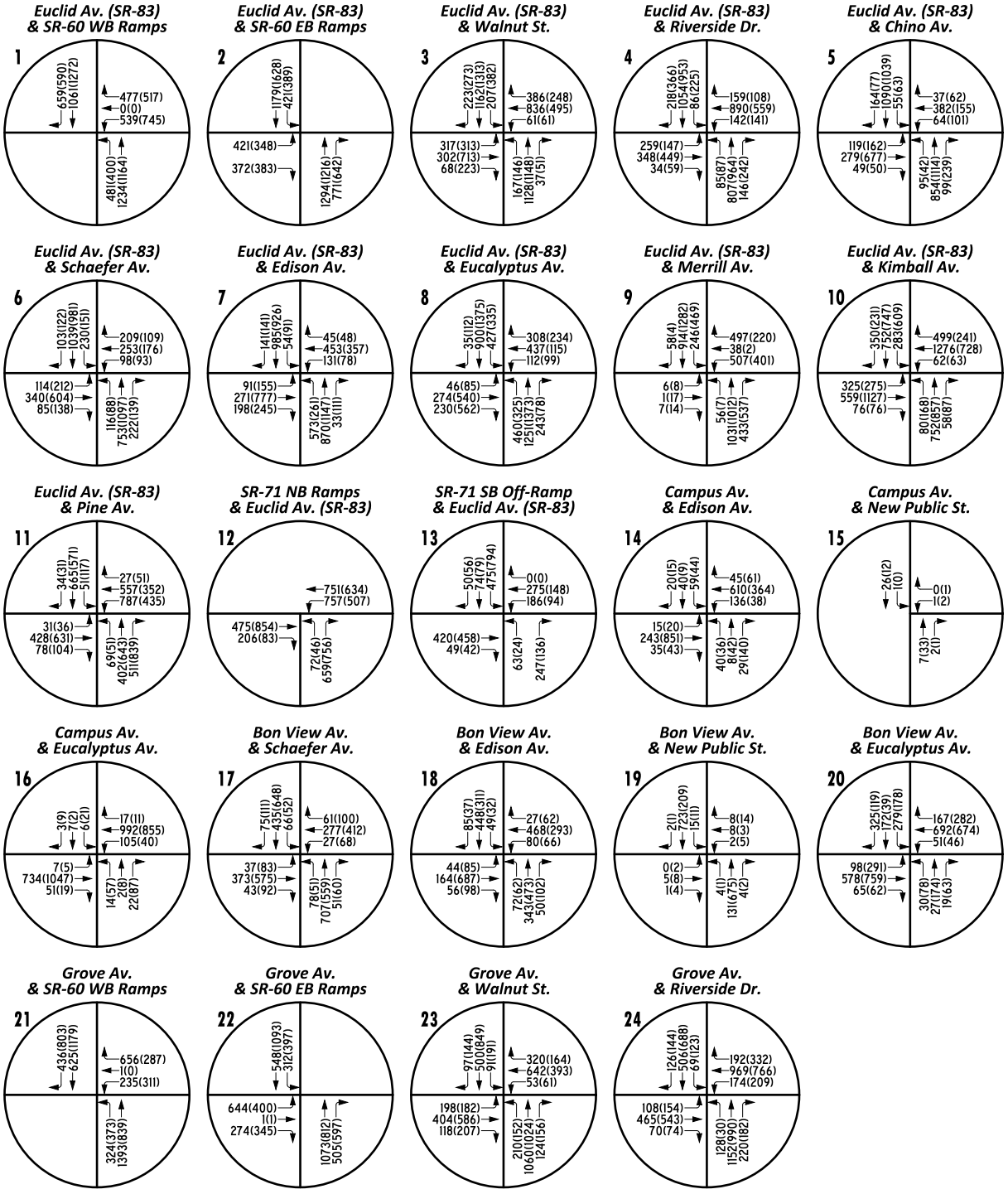
EXHIBIT 7-2 : HORIZON YEAR (2050) WITHOUT PROJECT INTERSECTION VOLUMES (PCE) (2 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

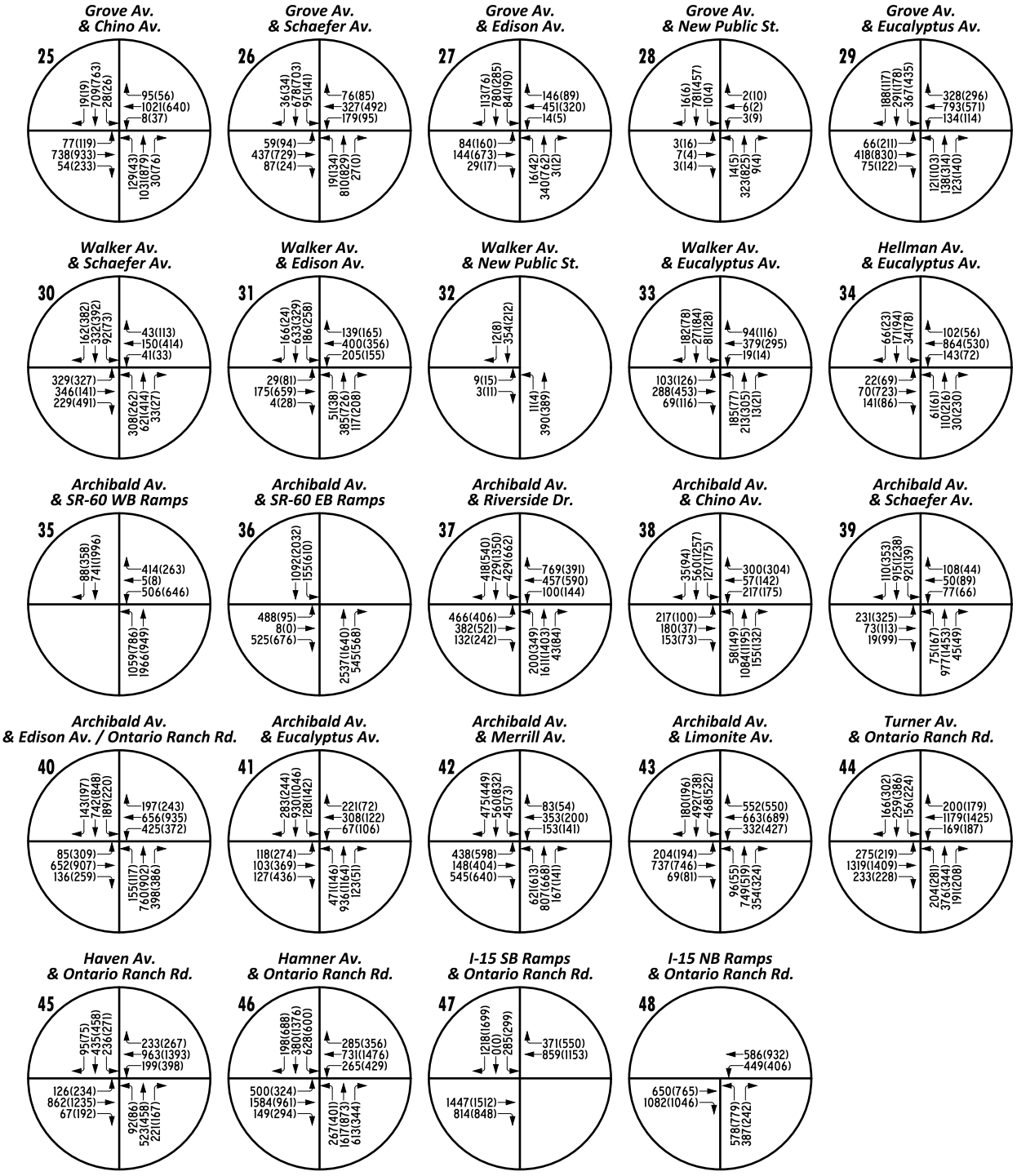
EXHIBIT 7-3 : HORIZON YEAR (2050) WITH PROJECT INTERSECTION VOLUMES (ACTUAL VEHICLES) (1 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

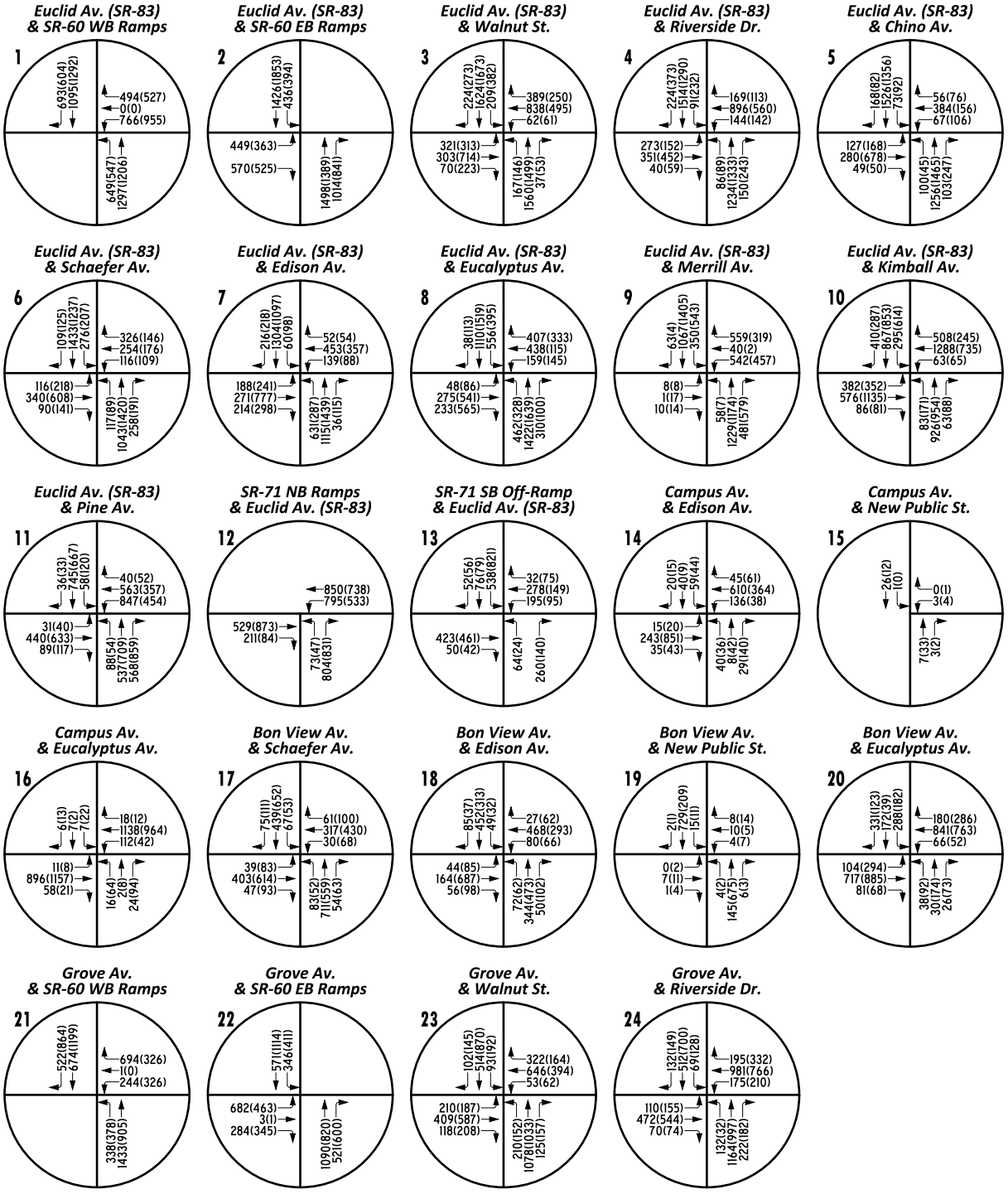
EXHIBIT 7-3 : HORIZON YEAR (2050) WITH PROJECT INTERSECTION VOLUMES (ACTUAL VEHICLES) (2 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

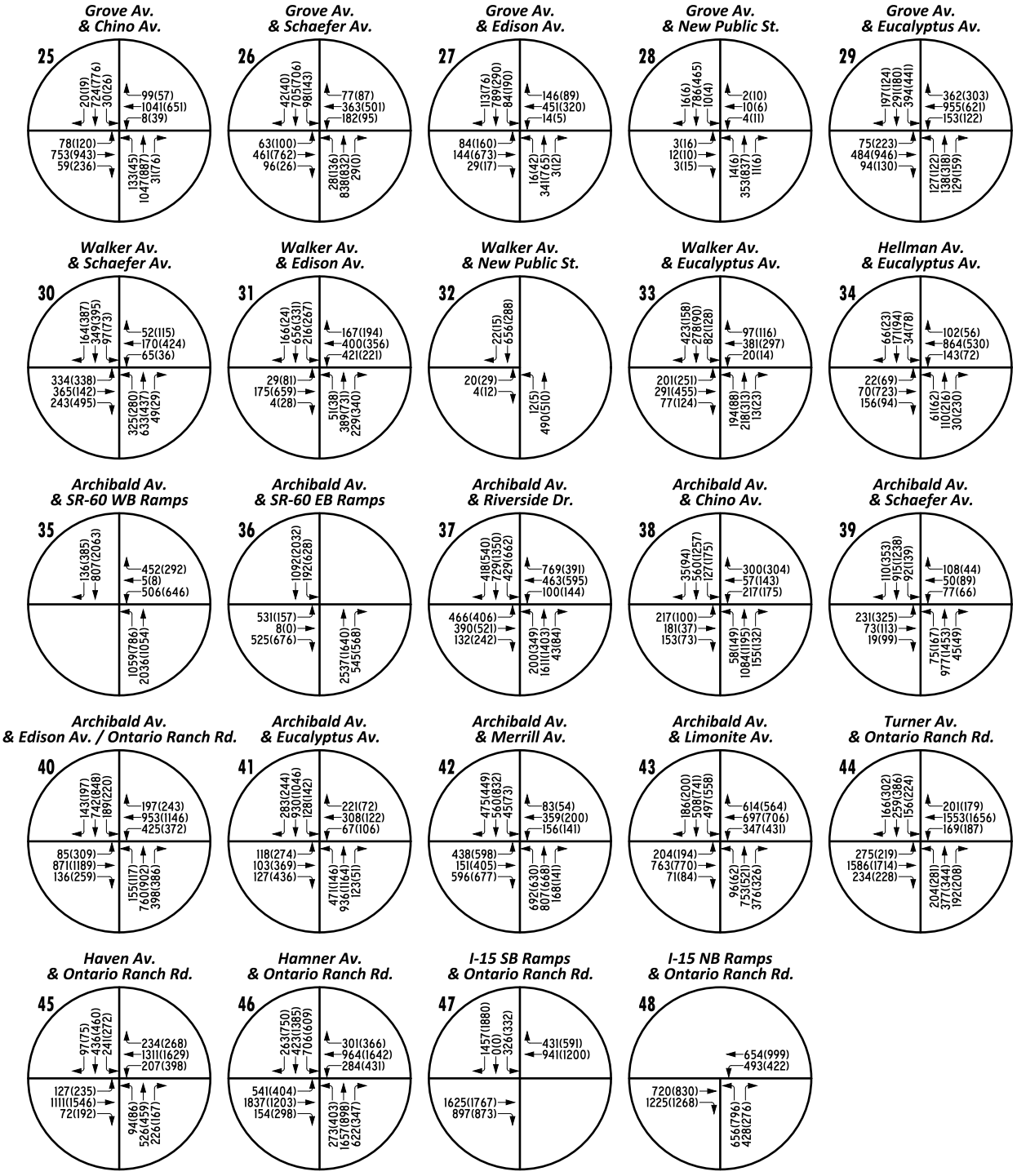
EXHIBIT 7-4 : HORIZON YEAR (2050) WITH PROJECT INTERSECTION VOLUMES (PCE) (1 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

EXHIBIT 7-4 : HORIZON YEAR (2050) WITH PROJECT INTERSECTION VOLUMES (PCE) (2 OF 2)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

EXHIBIT 7-5 : HORIZON YEAR (2050) WITH PROJECT DRIVEWAY VOLUMES (ACTUAL VEHICLES)

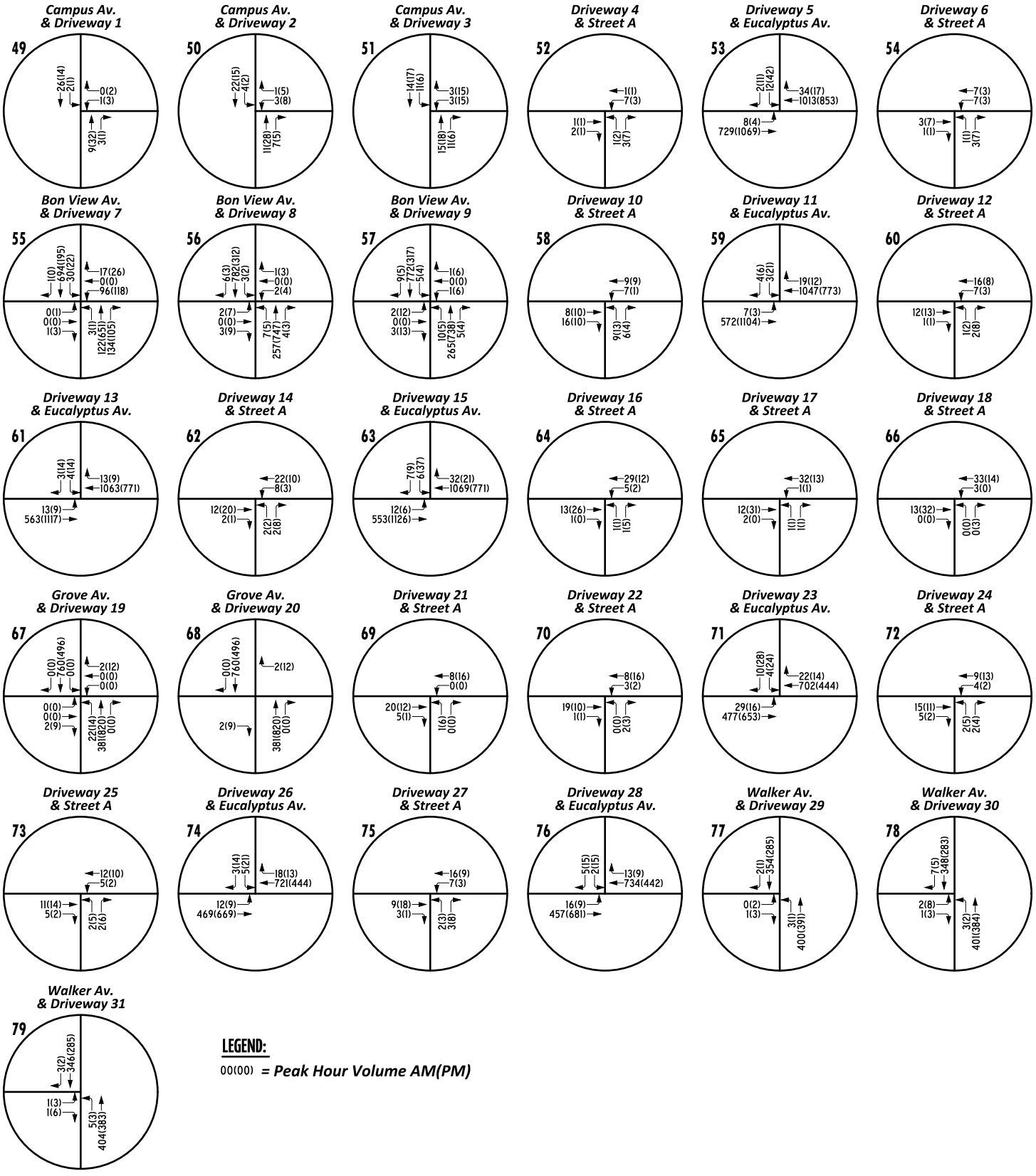
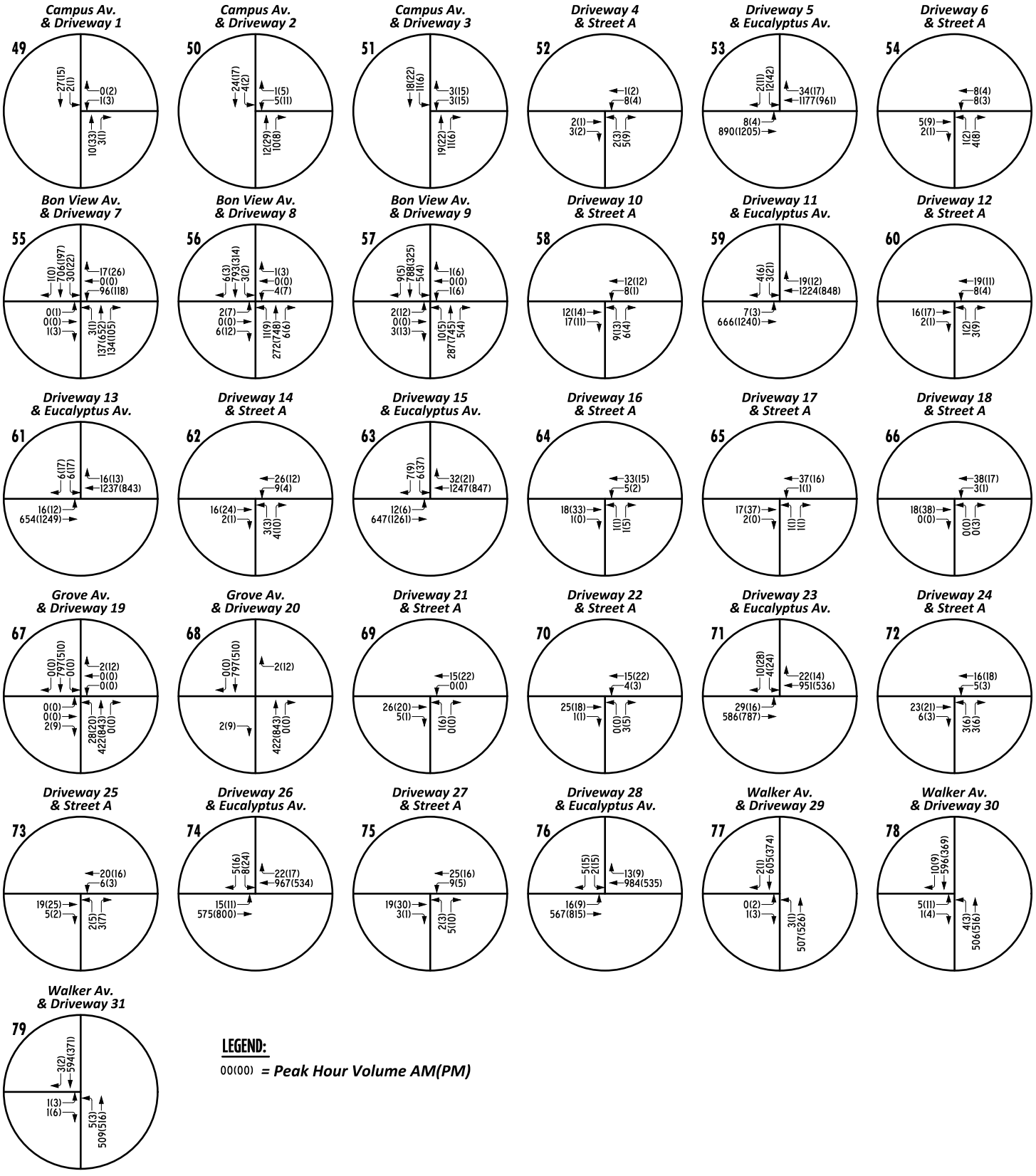


EXHIBIT 7-6 : HORIZON YEAR (2050) WITH PROJECT DRIVEWAY VOLUMES (PCE)



LEGEND:

00(00) = *Peak Hour Volume AM(PM)*

APPENDIX 7.2:

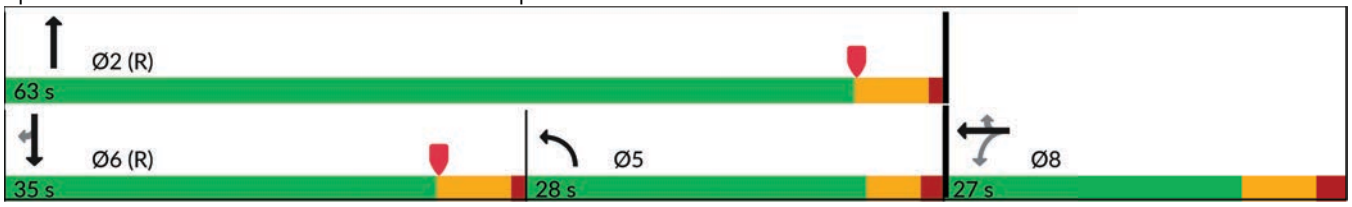
HORIZON YEAR (2050) WITHOUT PROJECT INTERSECTION ANALYSIS

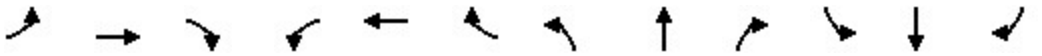
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Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	709	0	494	618	1259	1045	693
Future Volume (vph)	709	0	494	618	1259	1045	693
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.0	17.0	17.0	15.2	28.0	27.0	27.0
Total Split (s)	27.0	27.0	27.0	28.0	63.0	35.0	35.0
Total Split (%)	30.0%	30.0%	30.0%	31.1%	70.0%	38.9%	38.9%
Yellow Time (s)	5.0	5.0	5.0	3.7	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	1.5	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	5.2	6.0	6.0	6.0
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	20.0	20.0	20.0	22.8	57.0	29.0	29.0
Actuated g/C Ratio	0.22	0.22	0.22	0.25	0.63	0.32	0.32
v/c Ratio	1.22	0.98	0.93	1.50	0.58	0.95	0.84
Control Delay (s/veh)	155.4	66.7	55.8	254.8	4.0	47.0	18.0
Queue Delay	0.0	1.5	0.0	0.0	5.6	33.8	0.0
Total Delay (s/veh)	155.4	68.2	55.8	254.8	9.5	80.8	18.0
LOS	F	E	E	F	A	F	B
Approach Delay (s/veh)		94.6			90.4	55.8	
Approach LOS		F			F	E	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36.8 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.50	
Intersection Signal Delay (s/veh): 78.9	Intersection LOS: E
Intersection Capacity Utilization 127.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: Euclid Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	709	0	494	618	1259	0	0	1045	693
Future Volume (veh/h)	0	0	0	709	0	494	618	1259	0	0	1045	693
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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				1800	1900	1900	1800	1900	0	0	1900	1900
Adj Flow Rate, veh/h				866	0	257	651	1325	0	0	1100	496
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				762	0	358	732	2946	0	0	1163	504
Arrive On Green				0.22	0.00	0.22	0.85	1.00	0.00	0.00	0.32	0.32
Sat Flow, veh/h				3429	0	1610	1714	3705	0	0	3705	1564
Grp Volume(v), veh/h				866	0	257	651	1325	0	0	1100	496
Grp Sat Flow(s),veh/h/ln				1714	0	1610	1714	1805	0	0	1805	1564
Q Serve(g_s), s				20.0	0.0	13.3	20.7	0.0	0.0	0.0	26.7	28.3
Cycle Q Clear(g_c), s				20.0	0.0	13.3	20.7	0.0	0.0	0.0	26.7	28.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				762	0	358	732	2946	0	0	1163	504
V/C Ratio(X)				1.14	0.00	0.72	0.89	0.45	0.00	0.00	0.95	0.98
Avail Cap(c_a), veh/h				762	0	358	732	2946	0	0	1163	504
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	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.0	0.0	32.4	5.3	0.0	0.0	0.0	29.7	30.3
Incr Delay (d2), s/veh				77.1	0.0	7.4	1.4	0.0	0.0	0.0	16.2	36.4
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				16.3	0.0	5.8	2.3	0.0	0.0	0.0	13.2	14.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				112.1	0.0	39.8	6.7	0.0	0.0	0.0	45.9	66.7
LnGrp LOS				F		D	A	A			D	E
Approach Vol, veh/h					1123			1976			1596	
Approach Delay, s/veh					95.6			2.2			52.4	
Approach LOS					F			A			D	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		80.2			45.2	35.0		27.0				
Change Period (Y+Rc), s		6.0			6.0	* 6		7.0				
Max Green Setting (Gmax), s		57.0			22.8	* 29		20.0				
Max Q Clear Time (g_c+I1), s		2.0			22.7	30.3		22.0				
Green Ext Time (p_c), s		19.6			0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	41.6	
HCM 7th LOS	D	

Notes

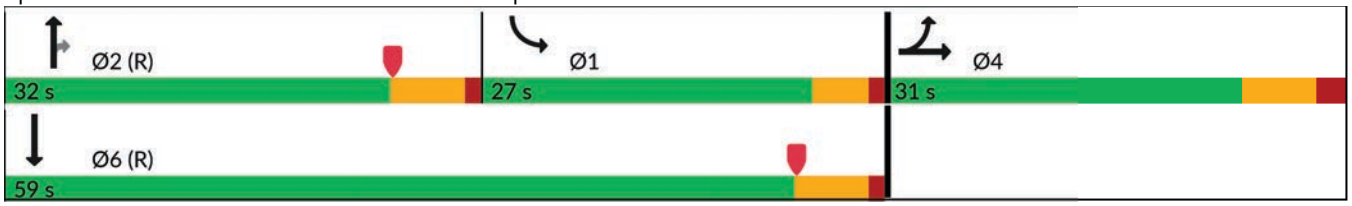
User approved volume balancing among the lanes for turning movement.

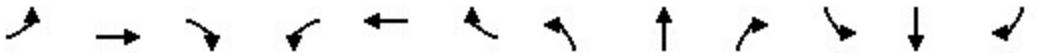
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	449	7	1428	951	436	1319
Future Volume (vph)	449	7	1428	951	436	1319
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	27.7	27.7	26.0	26.0	14.7	24.0
Total Split (s)	31.0	31.0	32.0	32.0	27.0	59.0
Total Split (%)	34.4%	34.4%	35.6%	35.6%	30.0%	65.6%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.7	5.0
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	24.0	24.0	26.0	26.0	22.3	53.0
Actuated g/C Ratio	0.27	0.27	0.29	0.29	0.25	0.59
v/c Ratio	0.98	1.31	1.44	1.12	1.09	0.65
Control Delay (s/veh)	74.3	182.6	232.7	81.7	79.3	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	23.5
Total Delay (s/veh)	74.3	182.6	232.7	81.7	79.3	35.1
LOS	E	F	F	F	E	D
Approach Delay (s/veh)		137.0	172.3			46.1
Approach LOS		F	F			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36.6 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay (s/veh): 122.2	Intersection LOS: F
Intersection Capacity Utilization 127.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	7	504	0	0	0	0	1428	951	436	1319	0
Future Volume (veh/h)	449	7	504	0	0	0	0	1428	951	436	1319	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	473	7	469				0	1503	775	459	1388	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	457	6	424				0	1043	465	548	2437	0
Arrive On Green	0.27	0.27	0.27				0.00	0.29	0.29	0.64	1.00	0.00
Sat Flow, veh/h	1714	24	1590				0	3705	1610	1714	3705	0
Grp Volume(v), veh/h	473	0	476				0	1503	775	459	1388	0
Grp Sat Flow(s),veh/h/ln	1714	0	1614				0	1805	1610	1714	1805	0
Q Serve(g_s), s	24.0	0.0	24.0				0.0	26.0	26.0	18.7	0.0	0.0
Cycle Q Clear(g_c), s	24.0	0.0	24.0				0.0	26.0	26.0	18.7	0.0	0.0
Prop In Lane	1.00		0.99				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	457	0	430				0	1043	465	548	2437	0
V/C Ratio(X)	1.03	0.00	1.11				0.00	1.44	1.67	0.84	0.57	0.00
Avail Cap(c_a), veh/h	457	0	430				0	1043	465	548	2437	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	0.09	0.09	0.09	0.09	0.00
Uniform Delay (d), s/veh	33.0	0.0	33.0				0.0	32.0	32.0	14.4	0.0	0.0
Incr Delay (d2), s/veh	51.3	0.0	75.4				0.0	199.0	300.6	1.1	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(50%),veh/ln	16.1	0.0	18.1				0.0	39.2	48.1	4.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	84.3	0.0	108.4				0.0	231.0	332.6	15.6	0.1	0.0
LnGrp LOS	F		F					F	F	B	A	
Approach Vol, veh/h		949						2278			1847	
Approach Delay, s/veh		96.4						265.6			3.9	
Approach LOS		F						F			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	34.8	32.0		31.0		66.8
Change Period (Y+Rc), s	6.0	* 6		7.0		6.0
Max Green Setting (Gmax), s	22.3	* 26		24.0		53.0
Max Q Clear Time (g_c+I1), s	20.7	28.0		26.0		2.0
Green Ext Time (p_c), s	0.3	0.0		0.0		20.6

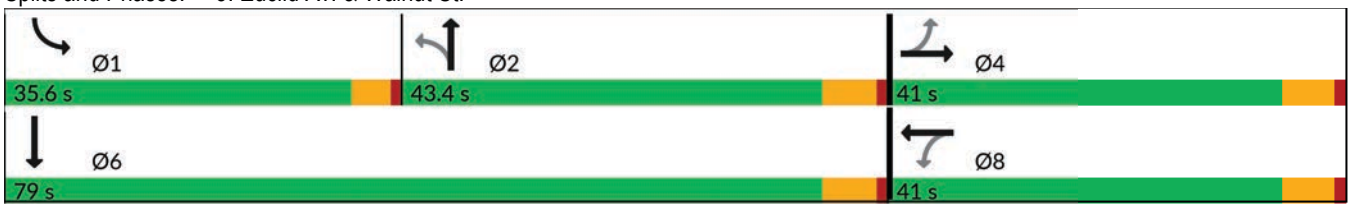
Intersection Summary	
HCM 7th Control Delay, s/veh	138.7
HCM 7th LOS	F

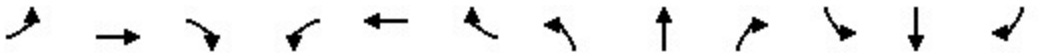
Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	349	318	62	776	170	1460	186	1518
Future Volume (vph)	349	318	62	776	170	1460	186	1518
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	41.0	41.0	41.0	41.0	43.4	43.4	35.6	79.0
Total Split (%)	34.2%	34.2%	34.2%	34.2%	36.2%	36.2%	29.7%	65.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	35.2	35.2	35.2	35.2	38.4	38.4	10.6	53.6
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.38	0.38	0.11	0.53
v/c Ratio	5.17	0.33	0.22	0.94	2.52	0.80	0.59	0.67
Control Delay (s/veh)	Error	24.0	26.8	46.6	746.6	31.5	50.7	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	Error	24.0	26.8	46.6	746.6	31.5	50.7	18.2
LOS	F	C	C	D	F	C	D	B
Approach Delay (s/veh)		912.2		45.5		104.4		21.3
Approach LOS		F		D		F		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.5	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 5.17	
Intersection Signal Delay (s/veh): 171.1	Intersection LOS: F
Intersection Capacity Utilization 116.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	349	318	71	62	776	335	170	1460	37	186	1518	222
Future Volume (veh/h)	349	318	71	62	776	335	170	1460	37	186	1518	222
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	367	335	58	65	817	352	179	1537	19	196	1598	215
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	94	1114	191	344	890	382	139	2043	25	265	2394	321
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.39	0.39	0.39	0.08	0.52	0.52
Sat Flow, veh/h	462	3076	527	954	2456	1055	249	5281	65	3141	4617	619
Grp Volume(v), veh/h	367	195	198	65	600	569	179	1006	550	196	1196	617
Grp Sat Flow(s),veh/h/ln	462	1805	1797	954	1805	1706	249	1729	1888	1570	1729	1779
Q Serve(g_s), s	4.2	7.5	7.7	5.1	30.8	31.0	25.5	24.5	24.5	5.9	24.7	24.9
Cycle Q Clear(g_c), s	35.2	7.5	7.7	12.8	30.8	31.0	37.6	24.5	24.5	5.9	24.7	24.9
Prop In Lane	1.00		0.29	1.00		0.62	1.00		0.03	1.00		0.35
Lane Grp Cap(c), veh/h	94	654	651	344	654	618	139	1338	730	265	1793	922
V/C Ratio(X)	3.91	0.30	0.30	0.19	0.92	0.92	1.28	0.75	0.75	0.74	0.67	0.67
Avail Cap(c_a), veh/h	94	654	651	344	654	618	139	1338	730	1002	2604	1340
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	22.2	22.2	26.8	29.6	29.7	42.6	25.8	25.8	43.5	17.2	17.3
Incr Delay (d2), s/veh	1335.1	0.3	0.3	0.3	18.0	19.3	171.4	2.4	4.4	1.5	0.4	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	37.0	3.0	3.1	1.1	15.5	15.0	9.9	9.7	11.0	2.3	8.7	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	1383.2	22.4	22.5	27.1	47.6	49.0	214.1	28.2	30.2	45.0	17.7	18.1
LnGrp LOS	F	C	C	C	D	D	F	C	C	D	B	B
Approach Vol, veh/h		760			1234			1735			2009	
Approach Delay, s/veh		679.6			47.2			48.0			20.5	
Approach LOS		F			D			D			C	

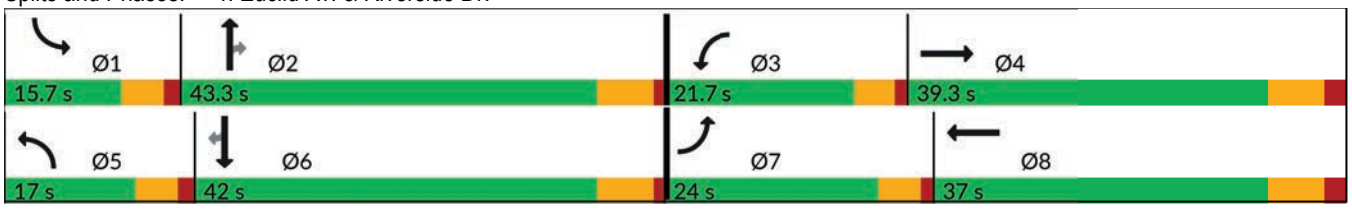
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.8	43.4		41.0		56.2		41.0				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	37.6		35.2		73.2		35.2				
Max Q Clear Time (g_c+I1), s	7.9	39.6		37.2		26.9		33.0				
Green Ext Time (p_c), s	0.3	0.0		0.0		18.3		1.5				

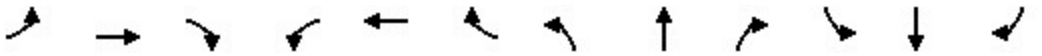
Intersection Summary			
HCM 7th Control Delay, s/veh		121.8	
HCM 7th LOS		F	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	271	340	143	821	87	1185	150	82	1415	204
Future Volume (vph)	271	340	143	821	87	1185	150	82	1415	204
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	33.0	15.2	36.0	36.0
Total Split (s)	24.0	39.3	21.7	37.0	17.0	43.3	43.3	15.7	42.0	42.0
Total Split (%)	20.0%	32.8%	18.1%	30.8%	14.2%	36.1%	36.1%	13.1%	35.0%	35.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	5.0	3.7	5.0	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	6.0	5.2	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.3	34.6	14.6	30.0	11.1	40.1	40.1	10.3	36.2	36.2
Actuated g/C Ratio	0.16	0.29	0.12	0.25	0.09	0.34	0.34	0.09	0.30	0.30
v/c Ratio	1.03	0.74	0.72	1.15	0.58	1.03	0.26	0.59	1.36	0.38
Control Delay (s/veh)	112.1	47.8	69.9	118.9	67.2	73.7	9.5	69.4	202.2	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	112.1	47.8	69.9	118.9	67.2	73.7	9.5	69.4	202.2	15.3
LOS	F	D	E	F	E	E	A	E	F	B
Approach Delay (s/veh)		74.5		112.6		66.5			173.4	
Approach LOS		E		F		E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.36	
Intersection Signal Delay (s/veh): 115.3	Intersection LOS: F
Intersection Capacity Utilization 110.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	340	40	143	821	153	87	1185	150	82	1415	204
Future Volume (veh/h)	271	340	40	143	821	153	87	1185	150	82	1415	204
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	285	358	19	151	864	119	92	1247	117	86	1489	149
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	278	556	30	177	802	111	137	1132	504	136	1129	497
Arrive On Green	0.16	0.31	0.31	0.10	0.25	0.25	0.08	0.31	0.31	0.08	0.31	0.31
Sat Flow, veh/h	1714	1787	95	1714	3181	438	1714	3610	1608	1714	3610	1589
Grp Volume(v), veh/h	285	0	377	151	490	493	92	1247	117	86	1489	149
Grp Sat Flow(s),veh/h/ln	1714	0	1881	1714	1805	1814	1714	1805	1608	1714	1805	1589
Q Serve(g_s), s	19.3	0.0	20.5	10.3	30.0	30.0	6.2	37.3	6.4	5.8	37.2	8.5
Cycle Q Clear(g_c), s	19.3	0.0	20.5	10.3	30.0	30.0	6.2	37.3	6.4	5.8	37.2	8.5
Prop In Lane	1.00		0.05	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	0	586	177	455	458	137	1132	504	136	1129	497
V/C Ratio(X)	1.02	0.00	0.64	0.85	1.08	1.08	0.67	1.10	0.23	0.63	1.32	0.30
Avail Cap(c_a), veh/h	278	0	586	245	455	458	170	1132	504	151	1129	497
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	0.0	35.3	52.4	44.5	44.5	53.2	40.8	30.2	53.1	40.9	31.0
Incr Delay (d2), s/veh	60.4	0.0	2.8	14.2	64.3	64.2	7.1	58.9	0.2	7.1	149.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	0.0	9.5	5.0	21.0	21.1	2.8	24.7	2.4	2.7	39.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	110.2	0.0	38.0	66.6	108.8	108.7	60.3	99.7	30.4	60.2	190.6	31.3
LnGrp LOS	F		D	E	F	F	E	F	C	E	F	C
Approach Vol, veh/h		662			1134			1456			1724	
Approach Delay, s/veh		69.1			103.1			91.7			170.3	
Approach LOS		E			F			F			F	

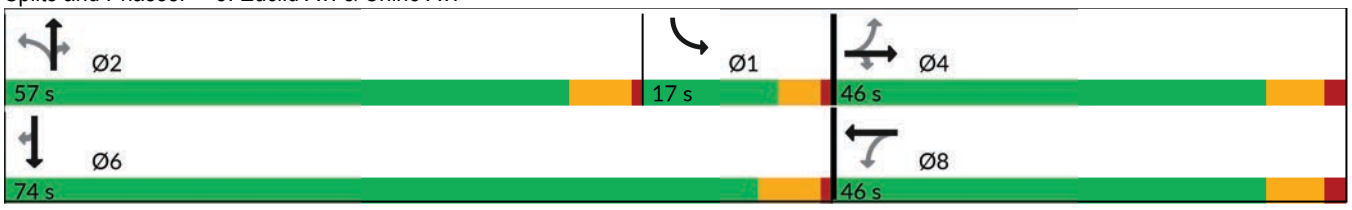
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	43.3	17.0	44.0	14.7	43.2	24.0	37.0
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	10.5	37.3	17.0	32.3	11.8	36.0	19.3	30.0
Max Q Clear Time (g_c+I1), s	7.8	39.3	12.3	22.5	8.2	39.2	21.3	32.0
Green Ext Time (p_c), s	0.0	0.0	0.1	1.9	0.1	0.0	0.0	0.0

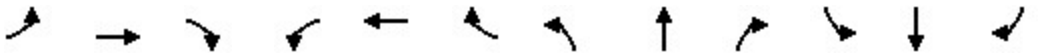
Intersection Summary	
HCM 7th Control Delay, s/veh	118.5
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	136	277	56	67	342	98	1210	103	64	1427	151
Future Volume (vph)	136	277	56	67	342	98	1210	103	64	1427	151
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	46.0	46.0	46.0	46.0	46.0	57.0	57.0	57.0	17.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	47.5%	47.5%	47.5%	14.2%	61.7%	61.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2		7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	38.9	38.9	38.9		38.9	50.6	50.6	50.6	10.6	62.7	62.7
Actuated g/C Ratio	0.34	0.34	0.34		0.34	0.44	0.44	0.44	0.09	0.54	0.54
v/c Ratio	0.69	0.46	0.10		1.01	1.66	0.80	0.14	0.43	0.77	0.17
Control Delay (s/veh)	54.0	33.7	2.4		82.2	390.1	33.7	5.7	59.8	23.6	4.3
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	54.0	33.7	2.4		82.2	390.1	33.7	5.7	59.8	23.6	4.3
LOS	D	C	A		F	F	C	A	E	C	A
Approach Delay (s/veh)		35.9			82.2		56.4			23.2	
Approach LOS		D			F		E			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.66	
Intersection Signal Delay (s/veh): 43.3	Intersection LOS: D
Intersection Capacity Utilization 110.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	277	56	67	342	52	98	1210	103	64	1427	151
Future Volume (veh/h)	136	277	56	67	342	52	98	1210	103	64	1427	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1800	1900	1900	1900	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	143	292	38	71	360	48	103	1274	92	67	1502	128
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	167	623	528	86	357	45	94	1540	687	129	2009	896
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.43	0.43	0.43	0.08	0.56	0.56
Sat Flow, veh/h	941	1900	1610	156	1090	139	297	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	143	292	38	479	0	0	103	1274	92	67	1502	128
Grp Sat Flow(s),veh/h/ln	941	1900	1610	1384	0	0	297	1805	1610	1714	1805	1610
Q Serve(g_s), s	0.0	14.5	1.9	24.3	0.0	0.0	13.1	37.0	4.1	4.5	37.4	4.5
Cycle Q Clear(g_c), s	38.8	14.5	1.9	38.8	0.0	0.0	50.5	37.0	4.1	4.5	37.4	4.5
Prop In Lane	1.00		1.00	0.15		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	623	528	489	0	0	94	1540	687	129	2009	896
V/C Ratio(X)	0.86	0.47	0.07	0.98	0.00	0.00	1.10	0.83	0.13	0.52	0.75	0.14
Avail Cap(c_a), veh/h	167	623	528	489	0	0	94	1540	687	178	2058	918
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	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	31.6	27.4	42.4	0.0	0.0	56.9	30.1	20.6	52.7	19.9	12.6
Incr Delay (d2), s/veh	32.8	0.6	0.1	35.6	0.0	0.0	122.5	3.9	0.1	1.2	1.5	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(50%),veh/ln	5.7	6.6	0.7	18.5	0.0	0.0	5.9	15.4	1.5	1.9	14.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	77.6	32.2	27.5	77.9	0.0	0.0	179.4	34.0	20.7	53.9	21.4	12.7
LnGrp LOS	E	C	C	E			F	C	C	D	C	B
Approach Vol, veh/h		473			479			1469			1697	
Approach Delay, s/veh		45.5			77.9			43.3			22.1	
Approach LOS		D			E			D			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.4	57.0		46.0		72.4		46.0				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	12.3	* 51		38.8		67.5		38.8				
Max Q Clear Time (g_c+I1), s	6.5	52.5		40.8		39.4		40.8				
Green Ext Time (p_c), s	0.0	0.0		0.0		12.5		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	38.8	
HCM 7th LOS	D	

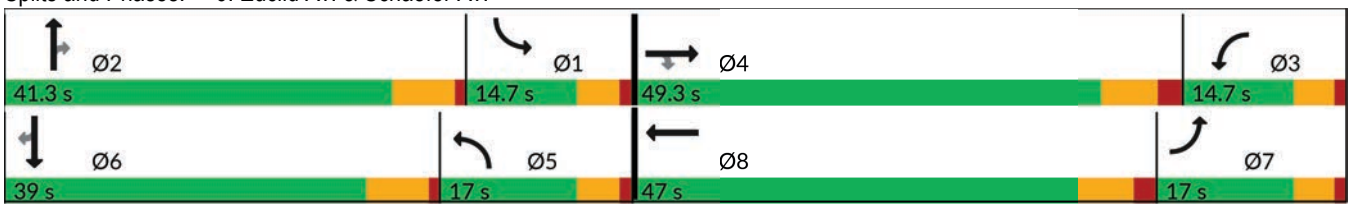
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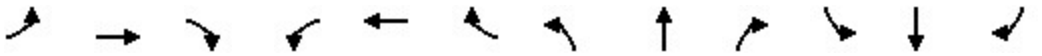
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	116	333	78	104	247	114	1008	248	255	1341	109
Future Volume (vph)	116	333	78	104	247	114	1008	248	255	1341	109
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	29.5	14.7	37.5	37.5
Total Split (s)	17.0	49.3	49.3	14.7	47.0	17.0	41.3	41.3	14.7	39.0	39.0
Total Split (%)	14.2%	41.1%	41.1%	12.3%	39.2%	14.2%	34.4%	34.4%	12.3%	32.5%	32.5%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	11.6	27.2	27.2	21.8	37.5	12.3	34.9	34.9	10.0	32.6	32.6
Actuated g/C Ratio	0.10	0.23	0.23	0.19	0.32	0.11	0.30	0.30	0.09	0.28	0.28
v/c Ratio	0.72	0.79	0.18	0.34	0.95	0.67	0.99	0.47	1.84	1.40	0.22
Control Delay (s/veh)	75.9	55.2	2.9	47.4	62.4	70.0	65.8	21.0	431.0	221.7	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.9	55.2	2.9	47.4	62.4	70.0	65.8	21.0	431.0	221.7	6.3
LOS	E	E	A	D	E	E	E	C	F	F	A
Approach Delay (s/veh)		52.0			60.0		58.0			239.2	
Approach LOS		D			E		E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.84	
Intersection Signal Delay (s/veh): 130.3	Intersection LOS: F
Intersection Capacity Utilization 103.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	333	78	104	247	292	114	1008	248	255	1341	109
Future Volume (veh/h)	116	333	78	104	247	292	114	1008	248	255	1341	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	122	351	45	109	260	288	120	1061	243	268	1412	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	398	337	356	273	302	182	1082	481	148	1010	450
Arrive On Green	0.09	0.21	0.21	0.21	0.33	0.33	0.11	0.30	0.30	0.09	0.28	0.28
Sat Flow, veh/h	1714	1900	1610	1714	824	912	1714	3610	1605	1714	3610	1607
Grp Volume(v), veh/h	122	351	45	109	0	548	120	1061	243	268	1412	61
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	0	1736	1714	1805	1605	1714	1805	1607
Q Serve(g_s), s	8.1	20.8	2.6	6.2	0.0	35.8	7.8	33.9	14.5	10.0	32.5	3.3
Cycle Q Clear(g_c), s	8.1	20.8	2.6	6.2	0.0	35.8	7.8	33.9	14.5	10.0	32.5	3.3
Prop In Lane	1.00		1.00	1.00		0.53	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	398	337	356	0	575	182	1082	481	148	1010	450
V/C Ratio(X)	0.83	0.88	0.13	0.31	0.00	0.95	0.66	0.98	0.51	1.82	1.40	0.14
Avail Cap(c_a), veh/h	182	692	586	356	0	598	182	1082	481	148	1010	450
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	44.5	37.3	38.9	0.0	37.9	49.9	40.3	33.6	53.1	41.8	31.3
Incr Delay (d2), s/veh	18.9	5.3	0.1	0.2	0.0	25.0	7.0	22.7	0.9	392.4	185.0	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(50%),veh/ln	4.2	10.0	1.0	2.6	0.0	18.4	3.6	17.4	5.6	20.2	39.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	71.2	49.8	37.5	39.1	0.0	63.0	56.9	63.1	34.4	445.5	226.8	31.4
LnGrp LOS	E	D	D	D		E	E	E	C	F	F	C
Approach Vol, veh/h		518			657			1424			1741	
Approach Delay, s/veh		53.8			59.0			57.6			253.6	
Approach LOS		D			E			E			F	

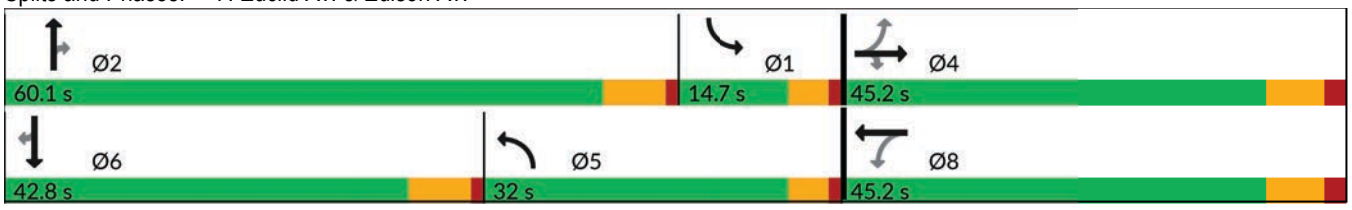
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	41.3	28.8	31.3	17.0	39.0	14.7	45.5
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	10.0	34.8	10.0	42.3	12.3	32.5	12.3	40.0
Max Q Clear Time (g_c+I1), s	12.0	35.9	8.2	22.8	9.8	34.5	10.1	37.8
Green Ext Time (p_c), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.6

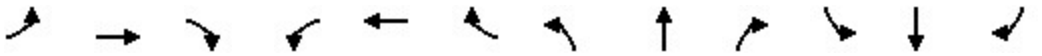
Intersection Summary	
HCM 7th Control Delay, s/veh	136.0
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	188	281	169	197	515	563	991	80	69	1190	216
Future Volume (vph)	188	281	169	197	515	563	991	80	69	1190	216
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	44.2	44.2	44.2	45.2	45.2	14.7	26.5	26.5	14.7	37.5	37.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	32.0	60.1	60.1	14.7	42.8	42.8
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	26.7%	50.1%	50.1%	12.3%	35.7%	35.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	38.0	38.0	38.0	38.0	38.0	24.5	46.9	46.9	17.0	36.3	36.3
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.21	0.40	0.40	0.14	0.31	0.31
v/c Ratio	3.25	0.48	0.28	0.79	1.14	0.88	0.69	0.12	0.29	1.07	0.38
Control Delay (s/veh)	Error	35.5	5.5	60.0	118.8	60.1	33.1	5.7	49.0	84.9	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	Error	35.5	5.5	60.0	118.8	60.1	33.1	5.7	49.0	84.9	14.7
LOS	F	D	A	E	F	E	C	A	D	F	B
Approach Delay (s/veh)		334.7			105.2		41.1			72.9	
Approach LOS		F			F		D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 3.25	
Intersection Signal Delay (s/veh): 103.9	Intersection LOS: F
Intersection Capacity Utilization 118.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Euclid Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	281	169	197	515	138	563	991	80	69	1190	216
Future Volume (veh/h)	188	281	169	197	515	138	563	991	80	69	1190	216
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	198	296	138	207	542	136	593	1043	73	73	1253	206
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	62	624	528	269	481	121	646	1219	505	329	1191	505
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.30	0.48	0.48	0.29	0.47	0.47
Sat Flow, veh/h	733	1900	1610	919	1465	368	3238	3800	1576	1714	3800	1610
Grp Volume(v), veh/h	198	296	138	207	0	678	593	1043	73	73	1253	206
Grp Sat Flow(s),veh/h/ln	733	1900	1610	919	0	1833	1619	1900	1576	1714	1900	1610
Q Serve(g_s), s	0.0	12.0	5.8	26.0	0.0	38.0	20.5	28.0	3.0	3.7	36.3	9.7
Cycle Q Clear(g_c), s	38.0	12.0	5.8	38.0	0.0	38.0	20.5	28.0	3.0	3.7	36.3	9.7
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	624	528	269	0	602	646	1219	505	329	1191	505
V/C Ratio(X)	3.18	0.47	0.26	0.77	0.00	1.13	0.92	0.86	0.14	0.22	1.05	0.41
Avail Cap(c_a), veh/h	62	624	528	269	0	602	763	1759	730	329	1191	505
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	22.8	21.2	35.4	0.0	29.4	39.7	27.7	21.2	34.6	30.7	23.6
Incr Delay (d2), s/veh	1023.4	0.6	0.3	12.8	0.0	76.9	13.5	3.0	0.1	0.1	40.8	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(50%),veh/ln	19.3	4.7	2.1	6.0	0.0	25.9	8.0	10.0	1.0	1.5	19.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	1071.8	23.3	21.5	48.2	0.0	106.3	53.2	30.7	21.3	34.7	71.5	24.2
LnGrp LOS	F	C	C	D		F	D	C	C	C	F	C
Approach Vol, veh/h		632			885			1709			1532	
Approach Delay, s/veh		351.4			92.7			38.1			63.4	
Approach LOS		F			F			D			E	

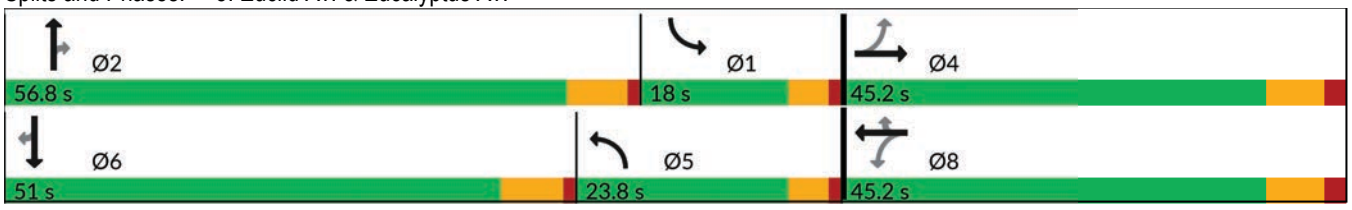
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.0	43.6		45.2	27.8	42.8		45.2				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.0	53.6		38.0	27.3	36.3		38.0				
Max Q Clear Time (g_c+I1), s	5.7	30.0		40.0	22.5	38.3		40.0				
Green Ext Time (p_c), s	0.0	7.1		0.0	0.6	0.0		0.0				

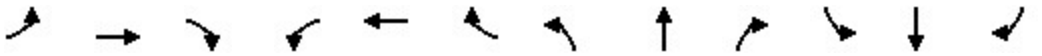
Intersection Summary		
HCM 7th Control Delay, s/veh	98.0	
HCM 7th LOS	F	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	48	321	78	422	158	462	1473	185	325	1189	36
Future Volume (vph)	48	321	78	422	158	462	1473	185	325	1189	36
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	45.2	45.2	44.2	44.2	44.2	14.7	28.5	28.5	14.7	35.5	35.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	23.8	56.8	56.8	18.0	51.0	51.0
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	19.8%	47.3%	47.3%	15.0%	42.5%	42.5%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	30.3	30.3	30.3	30.3	30.3	21.4	49.2	49.2	13.4	41.2	41.2
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.27	0.19	0.44	0.44	0.12	0.37	0.37
v/c Ratio	0.57	0.56	0.53	0.86	0.31	0.78	0.92	0.26	0.88	0.89	0.06
Control Delay (s/veh)	61.7	26.6	47.7	55.7	6.1	54.7	40.6	13.1	74.0	42.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.7	26.6	47.7	55.7	6.1	54.7	40.6	13.1	74.0	42.5	0.2
LOS	E	C	D	E	A	D	D	B	E	D	A
Approach Delay (s/veh)		29.4		42.9			41.3			48.1	
Approach LOS		C		D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 111.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay (s/veh): 42.2	Intersection LOS: D
Intersection Capacity Utilization 111.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Euclid Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	321	233	78	422	158	462	1473	185	325	1189	36
Future Volume (veh/h)	48	321	233	78	422	158	462	1473	185	325	1189	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	0.99		0.91	0.97		0.97	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	51	338	204	82	444	146	486	1551	172	342	1252	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	158	680	397	222	597	492	575	1595	673	362	1345	565
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.27	0.63	0.63	0.17	0.53	0.53
Sat Flow, veh/h	789	2166	1263	803	1900	1566	3238	3800	1602	3238	3800	1597
Grp Volume(v), veh/h	51	295	247	82	444	146	486	1551	172	342	1252	27
Grp Sat Flow(s),veh/h/ln	789	1900	1529	803	1900	1566	1619	1900	1602	1619	1900	1597
Q Serve(g_s), s	6.9	12.8	13.4	10.0	22.7	6.8	16.9	46.4	5.6	12.4	36.4	1.0
Cycle Q Clear(g_c), s	29.6	12.8	13.4	23.4	22.7	6.8	16.9	46.4	5.6	12.4	36.4	1.0
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	597	480	222	597	492	575	1595	673	362	1345	565
V/C Ratio(X)	0.32	0.49	0.51	0.37	0.74	0.30	0.85	0.97	0.26	0.95	0.93	0.05
Avail Cap(c_a), veh/h	162	607	488	226	607	500	575	1606	677	362	1421	597
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	25.0	25.2	33.3	27.6	23.4	42.1	21.4	13.8	49.2	26.6	18.3
Incr Delay (d2), s/veh	0.9	0.5	0.7	0.8	4.6	0.2	10.9	16.3	0.2	33.2	10.9	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(50%),veh/ln	1.3	5.0	4.2	1.7	8.8	2.3	6.7	16.1	1.8	6.2	13.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.5	25.4	25.8	34.1	32.2	23.7	53.0	37.7	14.0	82.4	37.5	18.3
LnGrp LOS	D	C	C	C	C	C	D	D	B	F	D	B
Approach Vol, veh/h		593			672			2209			1621	
Approach Delay, s/veh		26.9			30.6			39.2			46.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	56.5		44.6	25.8	48.6		44.6				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	13.3	50.3		38.0	19.1	44.5		38.0				
Max Q Clear Time (g_c+I1), s	14.4	48.4		31.6	18.9	38.4		25.4				
Green Ext Time (p_c), s	0.0	1.6		1.6	0.0	3.7		2.3				

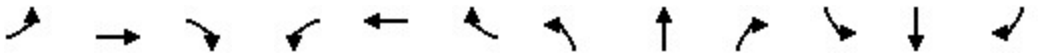
Intersection Summary		
HCM 7th Control Delay, s/veh		39.0
HCM 7th LOS		D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	8	2	507	40	571	56	1152	505	391	1040
Future Volume (vph)	8	2	507	40	571	56	1152	505	391	1040
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		4		8		5	2		1	6
Permitted Phases	4		8		8			2		
Detector Phase	4	4	8	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	47.2	47.2	47.2	14.7	28.5	28.5	14.7	28.5
Total Split (s)	52.0	52.0	52.0	52.0	52.0	14.7	47.8	47.8	20.2	53.3
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	12.3%	39.8%	39.8%	16.8%	44.4%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		44.8	44.8	44.8	44.8	10.8	41.3	41.3	15.5	48.9
Actuated g/C Ratio		0.37	0.37	0.37	0.37	0.09	0.34	0.34	0.13	0.41
v/c Ratio		0.03	1.07	0.06	0.82	0.38	0.98	0.80	1.02	0.80
Control Delay (s/veh)		15.7	97.2	24.5	31.8	59.5	59.7	32.4	101.5	36.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		15.7	97.2	24.5	31.8	59.5	59.7	32.4	101.5	36.8
LOS		B	F	C	C	E	E	C	F	D
Approach Delay (s/veh)		15.7		61.2			51.6			53.8
Approach LOS		B		E			D			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay (s/veh): 54.7	Intersection LOS: D
Intersection Capacity Utilization 96.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: Euclid Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	2	10	507	40	571	56	1152	505	391	1040	63
Future Volume (veh/h)	8	2	10	507	40	571	56	1152	505	391	1040	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	8	2	10	534	42	445	59	1213	511	412	1095	65
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	217	66	240	566	709	594	208	1242	542	406	1218	72
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.12	0.34	0.34	0.13	0.35	0.35
Sat Flow, veh/h	469	176	644	1350	1900	1590	1714	3610	1576	3141	3457	205
Grp Volume(v), veh/h	20	0	0	534	42	445	59	1213	511	412	571	589
Grp Sat Flow(s),veh/h/ln	1288	0	0	1350	1900	1590	1714	1805	1576	1570	1805	1857
Q Serve(g_s), s	0.0	0.0	0.0	43.9	1.7	29.2	3.8	39.8	37.8	15.5	36.0	36.1
Cycle Q Clear(g_c), s	0.9	0.0	0.0	44.8	1.7	29.2	3.8	39.8	37.8	15.5	36.0	36.1
Prop In Lane	0.40		0.50	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	523	0	0	566	709	594	208	1242	542	406	636	654
V/C Ratio(X)	0.04	0.00	0.00	0.94	0.06	0.75	0.28	0.98	0.94	1.02	0.90	0.90
Avail Cap(c_a), veh/h	523	0	0	566	709	594	208	1242	542	406	704	724
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	0.0	0.0	38.6	24.1	32.7	48.0	38.9	38.2	52.2	36.8	36.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	24.1	0.0	4.7	0.3	20.0	25.0	48.7	13.6	13.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	18.9	0.7	11.3	1.6	19.8	17.3	8.6	17.1	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.8	0.0	0.0	62.8	24.1	37.4	48.3	58.9	63.2	100.9	50.5	50.3
LnGrp LOS	C			E	C	D	D	E	E	F	D	D
Approach Vol, veh/h		20			1021			1783			1572	
Approach Delay, s/veh		23.8			50.1			59.8			63.6	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.2	47.8		52.0	19.2	48.8		52.0				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	15.5	41.3		44.8	10.0	46.8		44.8				
Max Q Clear Time (g_c+I1), s	17.5	41.8		2.9	5.8	38.1		46.8				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	4.2		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	58.7	
HCM 7th LOS	E	

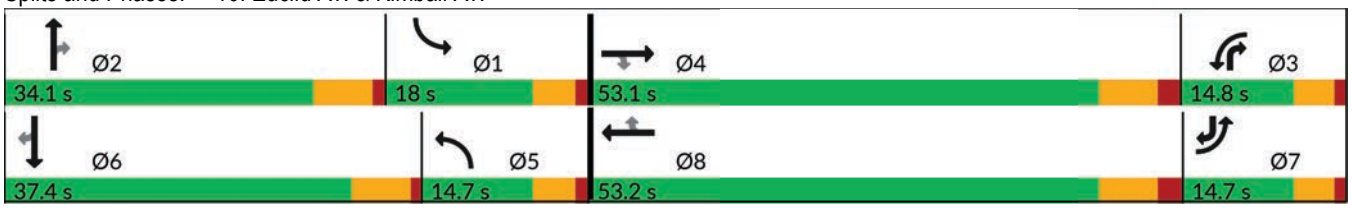
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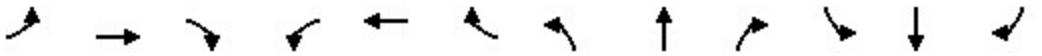
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	381	585	89	63	1288	499	83	880	63	295	837	397
Future Volume (vph)	381	585	89	63	1288	499	83	880	63	295	837	397
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	14.7	37.4	14.7
Total Split (s)	14.7	53.1	53.1	14.8	53.2	53.2	14.7	34.1	14.8	18.0	37.4	14.7
Total Split (%)	12.3%	44.3%	44.3%	12.3%	44.3%	44.3%	12.3%	28.4%	12.3%	15.0%	31.2%	12.3%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	3.7	5.4	3.7
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	4.7	6.4	4.7
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.0	36.6	36.6	22.4	46.0	46.0	10.0	27.6	55.5	13.2	30.9	42.6
Actuated g/C Ratio	0.08	0.31	0.31	0.19	0.38	0.38	0.08	0.23	0.46	0.11	0.26	0.36
v/c Ratio	1.54	0.56	0.17	0.21	0.98	0.70	0.61	1.11	0.08	0.90	0.95	0.67
Control Delay (s/veh)	296.1	39.0	3.6	43.0	56.6	22.3	71.8	110.4	3.2	82.1	63.5	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	296.1	39.0	3.6	43.0	56.6	22.3	71.8	110.4	3.2	82.1	63.5	30.9
LOS	F	D	A	D	E	C	E	F	A	F	E	C
Approach Delay (s/veh)		128.8			46.9			100.8			58.6	
Approach LOS		F			D			F			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.54	
Intersection Signal Delay (s/veh): 76.1	Intersection LOS: E
Intersection Capacity Utilization 100.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	381	585	89	63	1288	499	83	880	63	295	837	397
Future Volume (veh/h)	381	585	89	63	1288	499	83	880	63	295	837	397
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1700	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	401	616	75	66	1356	356	87	926	34	311	881	364
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	262	772	344	434	1384	609	144	830	778	348	930	543
Arrive On Green	0.08	0.21	0.21	0.25	0.38	0.38	0.08	0.23	0.23	0.11	0.26	0.26
Sat Flow, veh/h	3141	3610	1608	1714	3610	1588	1714	3610	1610	3141	3610	1588
Grp Volume(v), veh/h	401	616	75	66	1356	356	87	926	34	311	881	364
Grp Sat Flow(s),veh/h/ln	1570	1805	1608	1714	1805	1588	1714	1805	1610	1570	1805	1588
Q Serve(g_s), s	10.0	19.4	4.6	3.6	44.5	21.4	5.9	27.6	0.0	11.7	28.8	13.3
Cycle Q Clear(g_c), s	10.0	19.4	4.6	3.6	44.5	21.4	5.9	27.6	0.0	11.7	28.8	13.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	772	344	434	1384	609	144	830	778	348	930	543
V/C Ratio(X)	1.53	0.80	0.22	0.15	0.98	0.58	0.60	1.12	0.04	0.89	0.95	0.67
Avail Cap(c_a), veh/h	262	1381	615	434	1384	609	144	830	778	348	933	544
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.0	44.7	38.9	34.8	36.5	29.4	53.0	46.2	16.4	52.7	43.7	33.7
Incr Delay (d2), s/veh	257.8	2.0	0.3	0.2	19.4	1.0	5.1	67.9	0.0	23.4	18.0	3.2
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(50%),veh/ln	13.2	8.5	1.8	1.5	21.9	7.9	2.6	19.5	0.5	5.6	14.4	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	312.8	46.7	39.2	35.0	56.0	30.4	58.1	114.1	16.4	76.1	61.7	36.9
LnGrp LOS	F	D	D	C	E	C	E	F	B	E	E	D
Approach Vol, veh/h		1092			1778			1047			1556	
Approach Delay, s/veh		143.9			50.1			106.3			58.8	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	34.1	35.1	32.8	14.8	37.3	14.7	53.2
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	13.3	27.6	10.1	45.9	10.0	31.0	10.0	46.0
Max Q Clear Time (g_c+I1), s	13.7	29.6	5.6	21.4	7.9	30.8	12.0	46.5
Green Ext Time (p_c), s	0.0	0.0	0.0	4.0	0.0	0.2	0.0	0.0

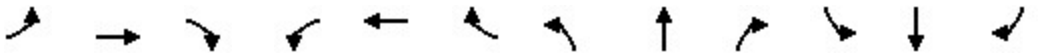
Intersection Summary	
HCM 7th Control Delay, s/veh	82.0
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	435	849	553	89	529	574	57	733
Future Volume (vph)	30	435	849	553	89	529	574	57	733
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	15.7	41.7	25.0	51.0	15.0	38.6	25.0	14.7	38.3
Total Split (%)	13.1%	34.8%	20.8%	42.5%	12.5%	32.2%	20.8%	12.3%	31.9%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.0	34.7	19.3	50.6	10.2	31.5	57.3	10.0	28.2
Actuated g/C Ratio	0.09	0.30	0.17	0.43	0.09	0.27	0.49	0.09	0.24
v/c Ratio	0.22	0.99	1.67	0.76	0.63	0.54	0.67	0.41	0.88
Control Delay (s/veh)	55.0	76.5	340.8	37.8	71.6	39.3	19.4	60.6	54.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.0	76.5	340.8	37.8	71.6	39.3	19.4	60.6	54.4
LOS	D	E	F	D	E	D	B	E	D
Approach Delay (s/veh)		75.3		216.4		32.1			54.8
Approach LOS		E		F		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.67	
Intersection Signal Delay (s/veh): 108.9	Intersection LOS: F
Intersection Capacity Utilization 105.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	435	89	849	553	39	89	529	574	57	733	35
Future Volume (veh/h)	30	435	89	849	553	39	89	529	574	57	733	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	32	458	0	894	582	40	94	557	604	60	772	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	96	499		550	662	45	143	1073	728	128	989	42
Arrive On Green	0.08	0.39	0.00	0.25	0.57	0.57	0.13	0.42	0.42	0.11	0.41	0.41
Sat Flow, veh/h	1714	1900	0	3238	1757	121	1714	3800	1610	1714	3614	154
Grp Volume(v), veh/h	32	458	0	894	0	622	94	557	604	60	406	399
Grp Sat Flow(s),veh/h/ln	1714	1900	0	1619	0	1878	1714	1900	1610	1714	1900	1868
Q Serve(g_s), s	2.0	26.0	0.0	19.3	0.0	32.5	5.9	12.3	32.1	3.7	21.1	21.1
Cycle Q Clear(g_c), s	2.0	26.0	0.0	19.3	0.0	32.5	5.9	12.3	32.1	3.7	21.1	21.1
Prop In Lane	1.00		0.00	1.00		0.06	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	96	499		550	0	708	143	1073	728	128	520	511
V/C Ratio(X)	0.33	0.92		1.63	0.00	0.88	0.66	0.52	0.83	0.47	0.78	0.78
Avail Cap(c_a), veh/h	151	580		550	0	727	155	1073	728	151	532	523
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	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	50.1	33.3	0.0	42.4	0.0	22.5	48.2	27.1	22.9	48.3	30.5	30.5
Incr Delay (d2), s/veh	0.8	18.8	0.0	290.0	0.0	12.1	6.3	0.2	7.5	1.0	6.5	6.6
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(50%),veh/ln	0.8	12.5	0.0	28.7	0.0	12.3	2.6	4.8	12.9	1.5	8.5	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.8	52.0	0.0	332.4	0.0	34.6	54.5	27.3	30.4	49.3	37.1	37.2
LnGrp LOS	D	D		F		C	D	C	C	D	D	D
Approach Vol, veh/h		490			1516			1255			865	
Approach Delay, s/veh		52.0			210.2			30.8			38.0	
Approach LOS		D			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	38.6	25.0	36.9	14.2	37.6	12.1	49.8
Change Period (Y+Rc), s	4.7	6.5	5.7	7.0	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.0	32.1	19.3	34.7	10.3	31.8	10.0	44.0
Max Q Clear Time (g_c+I1), s	5.7	34.1	21.3	28.0	7.9	23.1	4.0	34.5
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	1.9	0.0	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	100.7
HCM 7th LOS	F

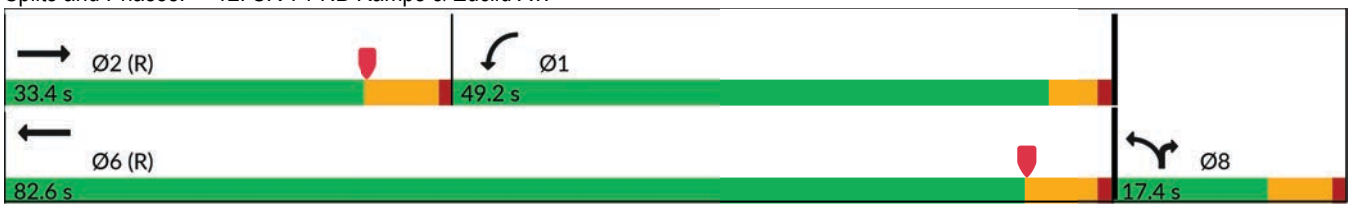
Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	520	777	862	92	814
Future Volume (vph)	520	777	862	92	814
Turn Type	NA	Prot	NA	Prot	Prot
Protected Phases	2	1	6	8	8
Permitted Phases					
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	31.5	12.7	14.5	13.8	13.8
Total Split (s)	33.4	49.2	82.6	17.4	17.4
Total Split (%)	33.4%	49.2%	82.6%	17.4%	17.4%
Yellow Time (s)	5.5	3.7	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.7	6.5	5.8	5.8
Lead/Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	None
Act Effct Green (s)	25.2	46.2	76.1	11.6	11.6
Actuated g/C Ratio	0.25	0.46	0.76	0.12	0.12
v/c Ratio	0.87	1.04	0.33	0.27	1.07
Control Delay (s/veh)	37.8	70.2	4.2	42.5	61.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.8	70.2	4.2	42.5	61.2
LOS	D	E	A	D	E
Approach Delay (s/veh)	37.8		35.5	59.3	
Approach LOS	D		D	E	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay (s/veh): 42.6	Intersection LOS: D
Intersection Capacity Utilization 88.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: SR-71 NB Ramps & Euclid Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	520	238	777	862	92	814
Future Volume (veh/h)	520	238	777	862	92	814
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1900	1900	1800	1900	1700	1900
Adj Flow Rate, veh/h	547	0	818	907	97	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	659		951	2897	234	
Arrive On Green	0.24	0.00	0.55	0.80	0.07	0.00
Sat Flow, veh/h	3800	0	1714	3705	3141	1610
Grp Volume(v), veh/h	547	0	818	907	97	0
Grp Sat Flow(s),veh/h/ln	1805	0	1714	1805	1570	1610
Q Serve(g_s), s	14.4	0.0	40.6	6.6	2.9	0.0
Cycle Q Clear(g_c), s	14.4	0.0	40.6	6.6	2.9	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	659		951	2897	234	
V/C Ratio(X)	0.83		0.86	0.31	0.41	
Avail Cap(c_a), veh/h	971		951	2897	364	
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	36.4	0.0	19.0	2.6	44.2	0.0
Incr Delay (d2), s/veh	8.8	0.0	7.7	0.3	1.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	15.1	1.0	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	45.2	0.0	26.6	2.9	45.4	0.0
LnGrp LOS	D		C	A	D	
Approach Vol, veh/h	547			1725	97	
Approach Delay, s/veh	45.2			14.2	45.4	
Approach LOS	D			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	62.0	24.8				86.7	13.3
Change Period (Y+Rc), s	6.5	* 6.5				6.5	5.8
Max Green Setting (Gmax), s	44.5	* 27				76.1	11.6
Max Q Clear Time (g_c+I1), s	42.6	16.4				8.6	4.9
Green Ext Time (p_c), s	0.4	1.9				5.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	22.6
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

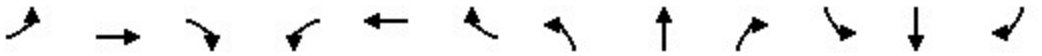
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	388	195	191	64	260	526	90	51
Future Volume (vph)	388	195	191	64	260	526	90	51
Turn Type	NA	Prot	NA	Prot	Prot	Split	NA	Perm
Protected Phases	2	1	6	3	3	4	4	
Permitted Phases								4
Detector Phase	2	1	6	3	3	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	25.2	12.7	27.2	13.5	13.5	34.8	34.8	34.8
Total Split (s)	28.7	18.2	46.9	18.1	18.1	35.0	35.0	35.0
Total Split (%)	28.7%	18.2%	46.9%	18.1%	18.1%	35.0%	35.0%	35.0%
Yellow Time (s)	5.2	3.7	5.2	4.5	4.5	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	4.7	6.2	5.5	5.5	5.8	5.8	5.8
Lead/Lag	Lead	Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	28.0	15.6	48.3	9.7	9.7	24.5	24.5	24.5
Actuated g/C Ratio	0.28	0.16	0.48	0.10	0.10	0.25	0.25	0.25
v/c Ratio	0.47	0.77	0.13	0.40	0.68	0.81	0.77	0.10
Control Delay (s/veh)	32.5	56.2	13.2	49.3	14.4	51.0	47.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.5	56.2	13.2	49.3	14.4	51.0	47.0	0.4
LOS	C	E	B	D	B	D	D	A
Approach Delay (s/veh)	32.5		33.7				45.3	
Approach LOS	C		C				D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 35.4	Intersection LOS: D
Intersection Capacity Utilization 61.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Euclid Av. & SR-71 SB Off-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	388	56	195	191	22	64	0	260	526	90	51
Future Volume (veh/h)	0	388	56	195	191	22	64	0	260	526	90	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	0	1900	1900	1800	1900	1900	1800	0	1900	1800	1900	1900
Adj Flow Rate, veh/h	0	408	44	205	201	0	67	0	169	622	0	35
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	497	53	784	2420		0	0	0	719	0	338
Arrive On Green	0.00	0.15	0.15	0.76	1.00	0.00	0.00	0.00	0.00	0.21	0.00	0.21
Sat Flow, veh/h	0	3384	353	1714	3705	0		0		3429	0	1610
Grp Volume(v), veh/h	0	223	229	205	201	0		0.0		622	0	35
Grp Sat Flow(s),veh/h/ln	0	1805	1836	1714	1805	0				1714	0	1610
Q Serve(g_s), s	0.0	12.0	12.1	3.5	0.0	0.0				17.5	0.0	1.8
Cycle Q Clear(g_c), s	0.0	12.0	12.1	3.5	0.0	0.0				17.5	0.0	1.8
Prop In Lane	0.00		0.19	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	273	277	784	2420					719	0	338
V/C Ratio(X)	0.00	0.82	0.83	0.26	0.08					0.87	0.00	0.10
Avail Cap(c_a), veh/h	0	406	413	784	2420					1001	0	470
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	41.1	41.2	6.8	0.0	0.0				38.2	0.0	31.9
Incr Delay (d2), s/veh	0.0	23.1	23.6	0.1	0.1	0.0				5.4	0.0	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	0.0	6.8	7.1	1.1	0.0	0.0				7.8	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	64.2	64.8	6.9	0.1	0.0				43.5	0.0	32.0
LnGrp LOS		E	E	A	A					D		C
Approach Vol, veh/h		452			406						657	
Approach Delay, s/veh		64.5			3.5						42.9	
Approach LOS		E			A						D	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	51.9	21.3		26.8		73.2						
Change Period (Y+Rc), s	6.2	* 6.2		5.8		6.2						
Max Green Setting (Gmax), s	13.5	* 23		29.2		40.7						
Max Q Clear Time (g_c+I1), s	5.5	14.1		19.5		2.0						
Green Ext Time (p_c), s	0.2	1.0		1.4		0.7						

Intersection Summary	
HCM 7th Control Delay, s/veh	38.8
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	30.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	359	30	121	716	45	39	8	25	59	40	20
Future Vol, veh/h	15	359	30	121	716	45	39	8	25	59	40	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	378	32	127	754	47	41	8	26	62	42	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	801	0	0	409	0	0	1455	1481	394	1446	1473	777
Stage 1	-	-	-	-	-	-	425	425	-	1032	1032	-
Stage 2	-	-	-	-	-	-	1029	1056	-	414	441	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	831	-	-	1160	-	-	109	127	660	111	128	400
Stage 1	-	-	-	-	-	-	611	590	-	283	313	-
Stage 2	-	-	-	-	-	-	284	305	-	620	580	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	831	-	-	1160	-	-	51	99	660	77	100	400
Mov Cap-2 Maneuver	-	-	-	-	-	-	51	99	-	77	100	-
Stage 1	-	-	-	-	-	-	596	575	-	227	250	-
Stage 2	-	-	-	-	-	-	179	244	-	572	566	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.35	1.16	167.84	262.38
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	82	66	-	-	244	-	-	98
HCM Lane V/C Ratio	0.924	0.019	-	-	0.11	-	-	1.278
HCM Ctrl Dly (s/v)	167.8	9.4	0	-	8.5	0	-	262.4
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	5	0.1	-	-	0.4	-	-	8.8

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	681	47	102	753	0	13	2	24	0	7	0
Future Vol, veh/h	0	681	47	102	753	0	13	2	24	0	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	717	49	107	793	0	14	2	25	0	7	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	793	0	0	766	0	0	1753	1749	742	1725	1774	793
Stage 1	-	-	-	-	-	-	742	742	-	1007	1007	-
Stage 2	-	-	-	-	-	-	1011	1007	-	718	766	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	837	-	-	856	-	-	68	87	419	71	84	392
Stage 1	-	-	-	-	-	-	411	426	-	293	321	-
Stage 2	-	-	-	-	-	-	291	321	-	423	415	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	837	-	-	856	-	-	48	67	419	50	65	392
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	67	-	50	65	-
Stage 1	-	-	-	-	-	-	411	426	-	227	249	-
Stage 2	-	-	-	-	-	-	219	249	-	396	415	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	1.17	57.11	67.32
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	108	837	-	-	215	-	-	65
HCM Lane V/C Ratio	0.378	-	-	-	0.125	-	-	0.113
HCM Ctrl Dly (s/v)	57.1	0	-	-	9.8	0	-	67.3
HCM Lane LOS	F	A	-	-	A	A	-	F
HCM 95th %tile Q(veh)	1.5	0	-	-	0.4	-	-	0.4

Intersection	
Intersection Delay, s/veh	374.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	474	58	26	260	59	65	672	44	66	446	71
Future Vol, veh/h	54	474	58	26	260	59	65	672	44	66	446	71
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	57	499	61	27	274	62	68	707	46	69	469	75
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	329.6	101.1	564	328
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	9%	8%	11%
Vol Thru, %	86%	81%	75%	77%
Vol Right, %	6%	10%	17%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	781	586	345	583
LT Vol	65	54	26	66
Through Vol	672	474	260	446
RT Vol	44	58	59	71
Lane Flow Rate	822	617	363	614
Geometry Grp	1	1	1	1
Degree of Util (X)	2.164	1.619	0.959	1.609
Departure Headway (Hd)	13.4	14.415	18.195	15.274
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	280	259	203	245
Service Time	11.4	12.415	16.195	13.274
HCM Lane V/C Ratio	2.936	2.382	1.788	2.506
HCM Control Delay, s/veh	564	329.6	101.1	328
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	44	25.3	7.9	23.9

Intersection	
Intersection Delay, s/veh	316.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	288	57	12	536	32	105	499	41	35	458	80
Future Vol, veh/h	48	288	57	12	536	32	105	499	41	35	458	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	51	303	60	13	564	34	111	525	43	37	482	84
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	134.8	330.4	409.8	320.6
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	12%	2%	6%
Vol Thru, %	77%	73%	92%	80%
Vol Right, %	6%	15%	6%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	645	393	580	573
LT Vol	105	48	12	35
Through Vol	499	288	536	458
RT Vol	41	57	32	80
Lane Flow Rate	679	414	611	603
Geometry Grp	1	1	1	1
Degree of Util (X)	1.809	1.096	1.623	1.596
Departure Headway (Hd)	13.931	16.752	14.114	14.652
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	272	219	263	253
Service Time	11.931	14.752	12.114	12.652
HCM Lane V/C Ratio	2.496	1.89	2.323	2.383
HCM Control Delay, s/veh	409.8	134.8	330.4	320.6
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	31.7	10.8	25.9	24.3

Intersection	
Intersection Delay, s/veh	197.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	556	50	36	474	51	29	30	38	189	144	254
Future Vol, veh/h	76	556	50	36	474	51	29	30	38	189	144	254
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	80	585	53	38	499	54	31	32	40	199	152	267
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

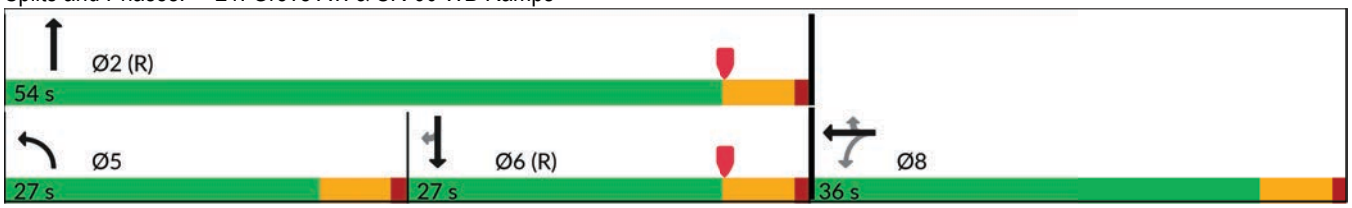
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	273.2	162.4	20.4	172.1
HCM LOS	F	F	C	F

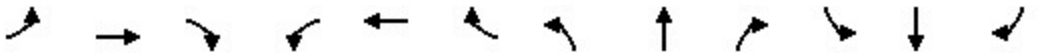
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	30%	11%	6%	32%
Vol Thru, %	31%	82%	84%	25%
Vol Right, %	39%	7%	9%	43%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	682	561	587
LT Vol	29	76	36	189
Through Vol	30	556	474	144
RT Vol	38	50	51	254
Lane Flow Rate	102	718	591	618
Geometry Grp	1	1	1	1
Degree of Util (X)	0.267	1.528	1.254	1.285
Departure Headway (Hd)	12.827	8.988	9.471	8.861
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	282	409	390	414
Service Time	10.827	6.988	7.471	6.861
HCM Lane V/C Ratio	0.362	1.756	1.515	1.493
HCM Control Delay, s/veh	20.4	273.2	162.4	172.1
HCM Lane LOS	C	F	F	F
HCM 95th-tile Q	1	33.3	20.7	23

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	710	327	1366	660	522
Future Volume (vph)	1	710	327	1366	660	522
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	15.8	24.8	15.8	15.8
Total Split (s)	36.0	36.0	27.0	54.0	27.0	27.0
Total Split (%)	40.0%	40.0%	30.0%	60.0%	30.0%	30.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	31.0	31.0	20.1	47.4	21.5	21.5
Actuated g/C Ratio	0.34	0.34	0.22	0.53	0.24	0.24
v/c Ratio	0.33	1.20	0.90	0.76	0.81	0.69
Control Delay (s/veh)	24.0	129.3	48.3	17.7	41.0	8.0
Queue Delay	0.0	0.0	0.0	2.4	0.0	0.0
Total Delay (s/veh)	24.0	129.3	48.3	20.1	41.0	8.0
LOS	C	F	D	C	D	A
Approach Delay (s/veh)	106.8			25.6	26.4	
Approach LOS	F			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay (s/veh): 45.2	Intersection LOS: D
Intersection Capacity Utilization 116.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 21: Grove Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	192	1	710	327	1366	0	0	660	522
Future Volume (veh/h)	0	0	0	192	1	710	327	1366	0	0	660	522
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
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	1900	1900	1800	1900	0	0	1900	1900
Adj Flow Rate, veh/h				202	1	668	344	1438	0	0	695	472
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				604	3	540	368	1933	0	0	925	410
Arrive On Green				0.34	0.34	0.34	0.43	1.00	0.00	0.00	0.26	0.26
Sat Flow, veh/h				1801	9	1610	1714	3705	0	0	3705	1601
Grp Volume(v), veh/h				203	0	668	344	1438	0	0	695	472
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1714	1805	0	0	1805	1601
Q Serve(g_s), s				7.6	0.0	30.2	17.2	0.0	0.0	0.0	16.0	23.1
Cycle Q Clear(g_c), s				7.6	0.0	30.2	17.2	0.0	0.0	0.0	16.0	23.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				607	0	540	368	1933	0	0	925	410
V/C Ratio(X)				0.33	0.00	1.24	0.93	0.74	0.00	0.00	0.75	1.15
Avail Cap(c_a), veh/h				607	0	540	404	1933	0	0	925	410
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	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.4	0.0	29.9	25.1	0.0	0.0	0.0	30.8	33.5
Incr Delay (d2), s/veh				0.2	0.0	121.6	4.0	0.2	0.0	0.0	5.6	92.2
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				3.0	0.0	28.8	5.1	0.1	0.0	0.0	7.2	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				22.6	0.0	151.5	29.1	0.2	0.0	0.0	36.4	125.7
LnGrp LOS				C		F	C	A			D	F
Approach Vol, veh/h					871			1782			1167	
Approach Delay, s/veh					121.5			5.8			72.5	
Approach LOS					F			A			E	

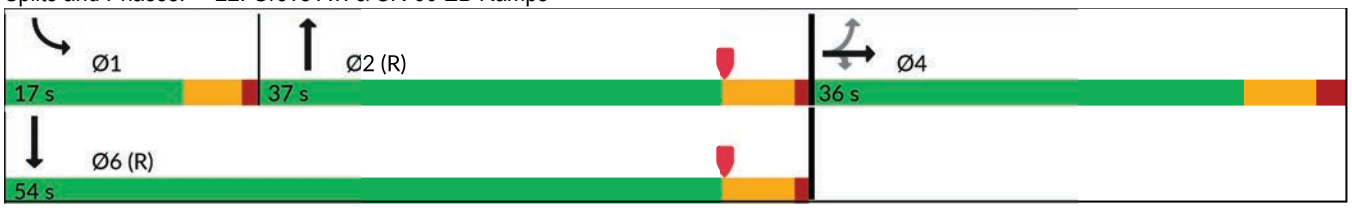
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	54.0		25.1	28.9		36.0						
Change Period (Y+Rc), s	5.8		5.8	5.8		5.8						
Max Green Setting (Gmax), s	48.2		21.2	21.2		30.2						
Max Q Clear Time (g_c+I1), s	2.0		19.2	25.1		32.2						
Green Ext Time (p_c), s	11.0		0.1	0.0		0.0						

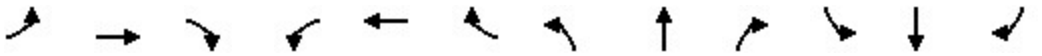
Intersection Summary	
HCM 7th Control Delay, s/veh	52.6
HCM 7th LOS	D

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	3	232	1012	346	505
Future Volume (vph)	3	232	1012	346	505
Turn Type	NA	Perm	NA	Prot	NA
Protected Phases	4		2	1	6
Permitted Phases		4			
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	31.8	15.0	25.8
Total Split (s)	36.0	36.0	37.0	17.0	54.0
Total Split (%)	40.0%	40.0%	41.1%	18.9%	60.0%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	5.8	5.0	5.8
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	29.2	29.2	31.2	12.0	48.2
Actuated g/C Ratio	0.32	0.32	0.35	0.13	0.54
v/c Ratio	1.23	0.35	1.26	1.60	0.28
Control Delay (s/veh)	146.7	4.7	151.3	315.6	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	146.7	4.7	151.3	315.6	12.5
LOS	F	A	F	F	B
Approach Delay (s/veh)	110.8		151.3		135.6
Approach LOS	F		F		F

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.60	
Intersection Signal Delay (s/veh): 135.8	Intersection LOS: F
Intersection Capacity Utilization 116.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	682	3	232	0	0	0	0	1012	481	346	505	0
Future Volume (veh/h)	682	3	232	0	0	0	0	1012	481	346	505	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	718	3	123				0	1065	253	364	532	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	585	2	522				0	1003	237	229	1933	0
Arrive On Green	0.49	0.49	0.49				0.00	0.52	0.52	0.27	1.00	0.00
Sat Flow, veh/h	1802	8	1610				0	2989	684	1714	3705	0
Grp Volume(v), veh/h	721	0	123				0	662	656	364	532	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1805	1773	1714	1805	0
Q Serve(g_s), s	29.2	0.0	4.0				0.0	31.2	31.2	12.0	0.0	0.0
Cycle Q Clear(g_c), s	29.2	0.0	4.0				0.0	31.2	31.2	12.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.39	1.00		0.00
Lane Grp Cap(c), veh/h	587	0	522				0	626	615	229	1933	0
V/C Ratio(X)	1.23	0.00	0.24				0.00	1.06	1.07	1.59	0.28	0.00
Avail Cap(c_a), veh/h	587	0	522				0	626	615	229	1933	0
HCM Platoon Ratio	1.50	1.50	1.50				1.00	1.50	1.50	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.49	0.49	0.00
Uniform Delay (d), s/veh	23.1	0.0	16.6				0.0	21.6	21.6	33.0	0.0	0.0
Incr Delay (d2), s/veh	117.0	0.0	0.1				0.0	52.3	55.5	276.6	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	27.6	0.0	1.3				0.0	17.8	18.0	21.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	140.1	0.0	16.7				0.0	73.9	77.1	309.6	0.2	0.0
LnGrp LOS	F		B					F	F	F	A	
Approach Vol, veh/h		844						1318			896	
Approach Delay, s/veh		122.1						75.5			125.9	
Approach LOS		F						E			F	

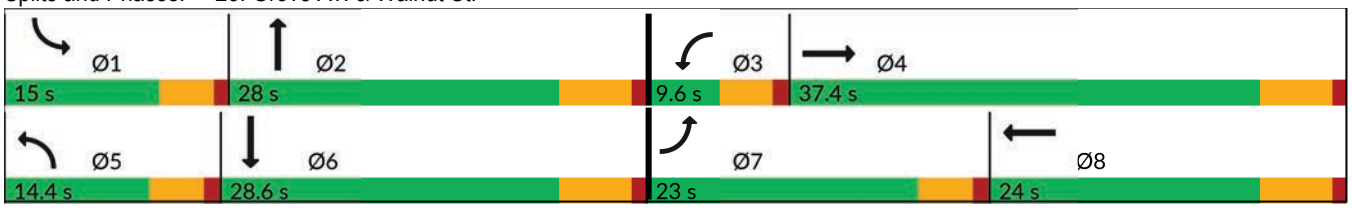
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.0	37.0		36.0		54.0
Change Period (Y+Rc), s	5.0	5.8		6.8		5.8
Max Green Setting (Gmax), s	12.0	31.2		29.2		48.2
Max Q Clear Time (g_c+I1), s	14.0	33.2		31.2		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		2.8

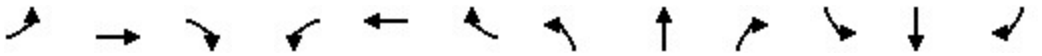
Intersection Summary	
HCM 7th Control Delay, s/veh	103.1
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	210	432	54	602	176	953	93	395
Future Volume (vph)	210	432	54	602	176	953	93	395
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	9.6	23.8
Total Split (s)	23.0	37.4	9.6	24.0	14.4	28.0	15.0	28.6
Total Split (%)	25.6%	41.6%	10.7%	26.7%	16.0%	31.1%	16.7%	31.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.3	30.0	5.1	18.4	9.9	23.3	8.4	19.4
Actuated g/C Ratio	0.17	0.36	0.06	0.22	0.12	0.28	0.10	0.23
v/c Ratio	0.75	0.45	0.55	1.17	0.91	1.13	0.57	0.62
Control Delay (s/veh)	49.7	21.2	61.9	120.4	84.3	100.7	50.3	30.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.7	21.2	61.9	120.4	84.3	100.7	50.3	30.3
LOS	D	C	E	F	F	F	D	C
Approach Delay (s/veh)		29.1		117.1		98.4		33.4
Approach LOS		C		F		F		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 83.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay (s/veh): 78.1	Intersection LOS: E
Intersection Capacity Utilization 92.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 23: Grove Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	432	118	54	602	323	176	953	122	93	395	102
Future Volume (veh/h)	210	432	118	54	602	323	176	953	122	93	395	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	221	455	121	57	634	313	185	1003	123	98	416	89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	260	949	250	77	537	265	213	911	112	124	680	144
Arrive On Green	0.15	0.34	0.34	0.05	0.23	0.23	0.12	0.28	0.28	0.07	0.23	0.23
Sat Flow, veh/h	1714	2815	742	1714	2326	1148	1714	3237	397	1714	2963	629
Grp Volume(v), veh/h	221	290	286	57	492	455	185	559	567	98	252	253
Grp Sat Flow(s),veh/h/ln	1714	1805	1753	1714	1805	1669	1714	1805	1829	1714	1805	1787
Q Serve(g_s), s	9.9	10.0	10.2	2.6	18.2	18.2	8.4	22.2	22.2	4.4	9.9	10.0
Cycle Q Clear(g_c), s	9.9	10.0	10.2	2.6	18.2	18.2	8.4	22.2	22.2	4.4	9.9	10.0
Prop In Lane	1.00		0.42	1.00		0.69	1.00		0.22	1.00		0.35
Lane Grp Cap(c), veh/h	260	609	591	77	416	385	213	508	515	124	414	410
V/C Ratio(X)	0.85	0.48	0.48	0.74	1.18	1.18	0.87	1.10	1.10	0.79	0.61	0.62
Avail Cap(c_a), veh/h	400	723	702	109	416	385	213	508	515	226	522	516
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	20.6	20.7	37.2	30.3	30.3	33.9	28.3	28.3	36.0	27.2	27.3
Incr Delay (d2), s/veh	6.3	0.6	0.6	7.6	103.8	105.3	28.6	70.2	70.4	4.2	1.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	3.9	3.8	1.2	19.2	17.9	4.9	18.5	18.8	1.9	4.1	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.9	21.2	21.3	44.8	134.1	135.7	62.5	98.6	98.7	40.2	28.6	28.8
LnGrp LOS	D	C	C	D	F	F	E	F	F	D	C	C
Approach Vol, veh/h		797			1004			1311			603	
Approach Delay, s/veh		26.2			129.8			93.5			30.6	
Approach LOS		C			F			F			C	

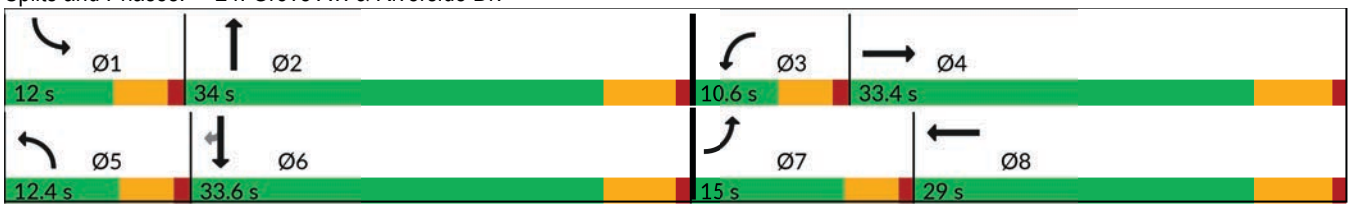
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	28.0	8.2	32.4	14.4	23.9	16.6	24.0
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	10.4	22.2	5.0	31.6	9.8	22.8	18.4	18.2
Max Q Clear Time (g_c+I1), s	6.4	24.2	4.6	12.2	10.4	12.0	11.9	20.2
Green Ext Time (p_c), s	0.0	0.0	0.0	3.0	0.0	2.1	0.2	0.0

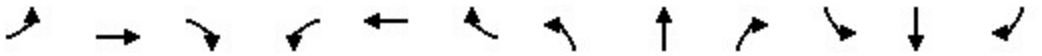
Intersection Summary	
HCM 7th Control Delay, s/veh	78.7
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	110	452	147	913	118	998	73	383	132
Future Volume (vph)	110	452	147	913	118	998	73	383	132
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	15.0	33.4	10.6	29.0	12.4	34.0	12.0	33.6	33.6
Total Split (%)	16.7%	37.1%	11.8%	32.2%	13.8%	37.8%	13.3%	37.3%	37.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.0	26.4	6.0	25.8	7.8	28.4	6.8	25.2	25.2
Actuated g/C Ratio	0.10	0.30	0.07	0.30	0.09	0.33	0.08	0.29	0.29
v/c Ratio	0.65	0.94	1.30	1.08	0.81	2.04	0.57	0.73	0.24
Control Delay (s/veh)	55.9	57.5	220.8	85.2	78.6	495.8	57.7	36.4	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.9	57.5	220.8	85.2	78.6	495.8	57.7	36.4	4.7
LOS	E	E	F	F	E	F	E	D	A
Approach Delay (s/veh)		57.2		101.3		458.2		32.0	
Approach LOS		E		F		F		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 86.7	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.04	
Intersection Signal Delay (s/veh): 207.4	Intersection LOS: F
Intersection Capacity Utilization 123.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	452	61	147	913	180	118	998	192	73	383	132
Future Volume (veh/h)	110	452	61	147	913	180	118	998	192	73	383	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	116	476	61	155	961	178	124	1051	191	77	403	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	145	506	65	118	885	164	153	506	92	98	553	469
Arrive On Green	0.08	0.31	0.31	0.07	0.29	0.29	0.09	0.32	0.32	0.06	0.29	0.29
Sat Flow, veh/h	1714	1646	211	1714	3034	561	1714	1565	284	1714	1900	1610
Grp Volume(v), veh/h	116	0	537	155	571	568	124	0	1242	77	403	100
Grp Sat Flow(s),veh/h/ln	1714	0	1857	1714	1805	1790	1714	0	1849	1714	1900	1610
Q Serve(g_s), s	5.8	0.0	24.6	6.0	25.4	25.4	6.2	0.0	28.2	3.9	16.6	4.1
Cycle Q Clear(g_c), s	5.8	0.0	24.6	6.0	25.4	25.4	6.2	0.0	28.2	3.9	16.6	4.1
Prop In Lane	1.00		0.11	1.00		0.31	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	145	0	571	118	527	522	153	0	598	98	553	469
V/C Ratio(X)	0.80	0.00	0.94	1.31	1.08	1.09	0.81	0.00	2.08	0.79	0.73	0.21
Avail Cap(c_a), veh/h	205	0	580	118	527	522	153	0	598	146	606	514
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	29.4	40.6	30.9	30.9	39.0	0.0	29.5	40.6	27.8	23.3
Incr Delay (d2), s/veh	9.3	0.0	23.6	188.7	64.1	64.9	25.1	0.0	489.9	8.4	4.0	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(50%),veh/ln	2.7	0.0	13.5	8.6	19.3	19.3	3.5	0.0	92.8	1.8	7.6	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.5	0.0	53.0	229.3	95.0	95.7	64.0	0.0	519.4	49.0	31.8	23.6
LnGrp LOS	D		D	F	F	F	E		F	D	C	C
Approach Vol, veh/h		653			1294			1366			580	
Approach Delay, s/veh		52.2			111.4			478.0			32.6	
Approach LOS		D			F			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	34.0	10.6	33.0	12.4	31.2	11.9	31.6
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	7.4	28.2	6.0	27.2	7.8	27.8	10.4	22.8
Max Q Clear Time (g_c+I1), s	5.9	30.2	8.0	26.6	8.2	18.6	7.8	27.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	1.7	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	218.4
HCM 7th LOS	F

Intersection	
Intersection Delay, s/veh	869.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	78	753	88	10	1041	71	129	908	33	25	615	20
Future Vol, veh/h	78	753	88	10	1041	71	129	908	33	25	615	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	82	793	93	11	1096	75	136	956	35	26	647	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	797.9	1038.6	977.5	505.2
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	8%	1%	4%
Vol Thru, %	85%	82%	93%	93%
Vol Right, %	3%	10%	6%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1070	919	1122	660
LT Vol	129	78	10	25
Through Vol	908	753	1041	615
RT Vol	33	88	71	20
Lane Flow Rate	1126	967	1181	695
Geometry Grp	1	1	1	1
Degree of Util (X)	3.004	2.568	3.137	1.85
Departure Headway (Hd)	29.896	35.431	30.739	42.582
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	135	116	130	97
Service Time	27.896	33.431	28.739	40.582
HCM Lane V/C Ratio	8.341	8.336	9.085	7.165
HCM Control Delay, s/veh	977.5	797.9	1038.6	505.2
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	34.1	24	35.2	13.4

Intersection	
Intersection Delay, s/veh	513
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	66	463	150	142	305	40	28	801	27	67	630	42
Future Vol, veh/h	66	463	150	142	305	40	28	801	27	67	630	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	69	487	158	149	321	42	29	843	28	71	663	44
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	457.5	255	680.6	539.9
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	10%	29%	9%
Vol Thru, %	94%	68%	63%	85%
Vol Right, %	3%	22%	8%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	856	679	487	739
LT Vol	28	66	142	67
Through Vol	801	463	305	630
RT Vol	27	150	40	42
Lane Flow Rate	901	715	513	778
Geometry Grp	1	1	1	1
Degree of Util (X)	2.399	1.883	1.368	2.07
Departure Headway (Hd)	18.233	19.404	23.407	19.779
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	207	193	164	194
Service Time	16.233	17.404	21.407	17.779
HCM Lane V/C Ratio	4.353	3.705	3.128	4.01
HCM Control Delay, s/veh	680.6	457.5	255	539.9
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	39.1	25.6	13.1	29.2

Intersection	
Intersection Delay, s/veh	481.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	163	233	22	43	534	145	21	349	29	132	662	131
Future Vol, veh/h	163	233	22	43	534	145	21	349	29	132	662	131
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	172	245	23	45	562	153	22	367	31	139	697	138
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	172.6	498	152.8	749.2
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	39%	6%	14%
Vol Thru, %	87%	56%	74%	72%
Vol Right, %	7%	5%	20%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	399	418	722	925
LT Vol	21	163	43	132
Through Vol	349	233	534	662
RT Vol	29	22	145	131
Lane Flow Rate	420	440	760	974
Geometry Grp	1	1	1	1
Degree of Util (X)	1.116	1.179	2.003	2.581
Departure Headway (Hd)	20.026	19.618	15.17	13.443
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	185	189	251	282
Service Time	18.026	17.618	13.17	11.443
HCM Lane V/C Ratio	2.27	2.328	3.028	3.454
HCM Control Delay, s/veh	152.8	172.6	498	749.2
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	10.1	11.3	34.9	57.4

Intersection	
Intersection Delay, s/veh	450.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	438	51	74	505	286	99	132	104	330	232	176
Future Vol, veh/h	61	438	51	74	505	286	99	132	104	330	232	176
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	64	461	54	78	532	301	104	139	109	347	244	185
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	292.6	641.1	101.9	502.9
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	30%	11%	9%	45%
Vol Thru, %	39%	80%	58%	31%
Vol Right, %	31%	9%	33%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	335	550	865	738
LT Vol	99	61	74	330
Through Vol	132	438	505	232
RT Vol	104	51	286	176
Lane Flow Rate	353	579	911	777
Geometry Grp	1	1	1	1
Degree of Util (X)	0.928	1.508	2.334	2.019
Departure Headway (Hd)	20.716	17.47	14.084	14.392
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	180	214	273	264
Service Time	18.716	15.47	12.084	12.392
HCM Lane V/C Ratio	1.961	2.706	3.337	2.943
HCM Control Delay, s/veh	101.9	292.6	641.1	502.9
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	7	19.2	47.3	37

Intersection	
Intersection Delay, s/veh	489.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	226	311	206	79	132	56	231	634	57	132	460	126
Future Vol, veh/h	226	311	206	79	132	56	231	634	57	132	460	126
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	238	327	217	83	139	59	243	667	60	139	484	133
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	457.8	72	676.1	438.8
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	30%	30%	18%
Vol Thru, %	69%	42%	49%	64%
Vol Right, %	6%	28%	21%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	922	743	267	718
LT Vol	231	226	79	132
Through Vol	634	311	132	460
RT Vol	57	206	56	126
Lane Flow Rate	971	782	281	756
Geometry Grp	1	1	1	1
Degree of Util (X)	2.411	1.917	0.744	1.861
Departure Headway (Hd)	14.393	14.258	22.486	16.151
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	262	266	163	234
Service Time	12.393	12.258	20.486	14.151
HCM Lane V/C Ratio	3.706	2.94	1.724	3.231
HCM Control Delay, s/veh	676.1	457.8	72	438.8
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	48.8	34.2	4.6	29.3

Intersection	
Intersection Delay, s/veh	527
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	286	31	99	519	167	85	528	84	179	580	100
Future Vol, veh/h	40	286	31	99	519	167	85	528	84	179	580	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	42	301	33	104	546	176	89	556	88	188	611	105
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	133.3	578.4	483.5	679.1
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	11%	13%	21%
Vol Thru, %	76%	80%	66%	68%
Vol Right, %	12%	9%	21%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	697	357	785	859
LT Vol	85	40	99	179
Through Vol	528	286	519	580
RT Vol	84	31	167	100
Lane Flow Rate	734	376	826	904
Geometry Grp	1	1	1	1
Degree of Util (X)	1.946	0.999	2.179	2.403
Departure Headway (Hd)	18.905	24.841	16.276	16.962
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	198	150	231	226
Service Time	16.905	22.841	14.276	14.962
HCM Lane V/C Ratio	3.707	2.507	3.576	4
HCM Control Delay, s/veh	483.5	133.3	578.4	679.1
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	27.6	7.4	37.4	41.8

Intersection	
Intersection Delay, s/veh	42.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	236	76	20	198	83	186	216	13	79	270	25
Future Vol, veh/h	15	236	76	20	198	83	186	216	13	79	270	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	248	80	21	208	87	196	227	14	83	284	26
Number of Lanes	0	1	0	0	1	0	1	1	1	0	1	0

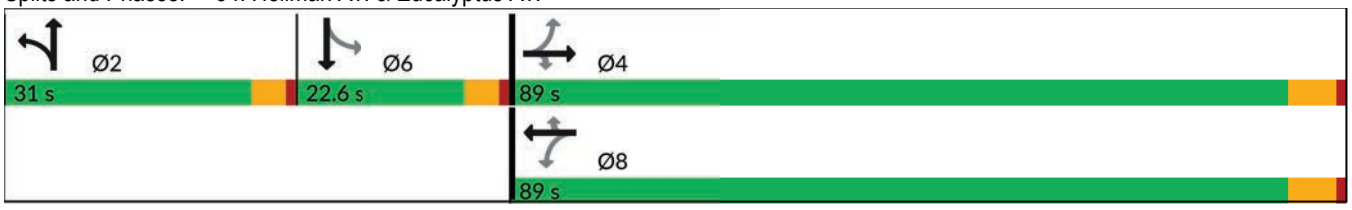
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	1	1	1
HCM Control Delay, s/veh	44.3	37.5	22.1	67.4
HCM LOS	E	E	C	F

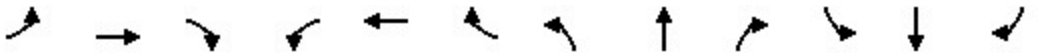
Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	5%	7%	21%
Vol Thru, %	0%	100%	0%	72%	66%	72%
Vol Right, %	0%	0%	100%	23%	28%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	186	216	13	327	301	374
LT Vol	186	0	0	15	20	79
Through Vol	0	216	0	236	198	270
RT Vol	0	0	13	76	83	25
Lane Flow Rate	196	227	14	344	317	394
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.516	0.567	0.031	0.844	0.785	0.969
Departure Headway (Hd)	9.494	8.973	8.245	8.826	8.919	8.862
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	380	402	433	410	406	409
Service Time	7.259	6.738	6.01	6.582	6.676	6.617
HCM Lane V/C Ratio	0.516	0.565	0.032	0.839	0.781	0.963
HCM Control Delay, s/veh	22	22.9	11.3	44.3	37.5	67.4
HCM Lane LOS	C	C	B	E	E	F
HCM 95th-tile Q	2.8	3.4	0.1	8	6.7	11.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	22	30	139	148	684	102	61	110	34	171
Future Volume (vph)	22	30	139	148	684	102	61	110	34	171
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Split	NA	Perm	NA
Protected Phases		4			8		2	2		6
Permitted Phases	4		4	8		8			6	
Detector Phase	4	4	4	8	8	8	2	2	6	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	24.2	28.6	28.6	22.6	22.6
Total Split (s)	89.0	89.0	89.0	89.0	89.0	89.0	31.0	31.0	22.6	22.6
Total Split (%)	62.4%	62.4%	62.4%	62.4%	62.4%	62.4%	21.7%	21.7%	15.8%	15.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	6.2	4.6	4.6		4.6
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	40.7	40.7	40.7	40.7	40.7	40.7	12.7	12.7		18.8
Actuated g/C Ratio	0.46	0.46	0.46	0.46	0.46	0.46	0.14	0.14		0.21
v/c Ratio	0.18	0.02	0.18	0.26	0.82	0.14	0.26	0.58		0.76
Control Delay (s/veh)	17.9	12.9	2.9	15.6	29.4	8.6	39.6	44.2		50.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay (s/veh)	17.9	12.9	2.9	15.6	29.4	8.6	39.6	44.2		50.2
LOS	B	B	A	B	C	A	D	D		D
Approach Delay (s/veh)		6.2			24.9			42.9		50.2
Approach LOS		A			C			D		D

Intersection Summary	
Cycle Length: 142.6	
Actuated Cycle Length: 88.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay (s/veh): 29.3	Intersection LOS: C
Intersection Capacity Utilization 72.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 34: Hellman Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	30	139	148	684	102	61	110	40	34	171	66
Future Volume (veh/h)	22	30	139	148	684	102	61	110	40	34	171	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	23	32	145	156	720	107	64	116	23	36	180	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	200	1663	742	641	875	742	185	166	33	44	221	85
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.11	0.11	0.11	0.19	0.19	0.19
Sat Flow, veh/h	673	3610	1610	1162	1900	1610	1714	1540	305	229	1143	438
Grp Volume(v), veh/h	23	32	145	156	720	107	64	0	139	285	0	0
Grp Sat Flow(s),veh/h/ln	673	1805	1610	1162	1900	1610	1714	0	1845	1810	0	0
Q Serve(g_s), s	2.0	0.3	3.4	5.5	21.3	2.5	2.2	0.0	4.7	9.7	0.0	0.0
Cycle Q Clear(g_c), s	23.2	0.3	3.4	5.8	21.3	2.5	2.2	0.0	4.7	9.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	0.13		0.24
Lane Grp Cap(c), veh/h	200	1663	742	641	875	742	185	0	199	350	0	0
V/C Ratio(X)	0.12	0.02	0.20	0.24	0.82	0.14	0.35	0.00	0.70	0.81	0.00	0.00
Avail Cap(c_a), veh/h	753	4628	2064	1596	2436	2064	701	0	754	504	0	0
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.2	9.5	10.3	11.1	15.1	10.1	26.7	0.0	27.8	24.9	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.2	2.0	0.1	0.4	0.0	1.7	6.7	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(50%),veh/ln	0.3	0.1	1.0	1.2	7.6	0.7	0.8	0.0	2.0	4.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.5	9.5	10.5	11.2	17.1	10.2	27.1	0.0	29.5	31.6	0.0	0.0
LnGrp LOS	C	A	B	B	B	B	C		C	C		
Approach Vol, veh/h		200			983			203			285	
Approach Delay, s/veh		12.0			15.4			28.7			31.6	
Approach LOS		B			B			C			C	

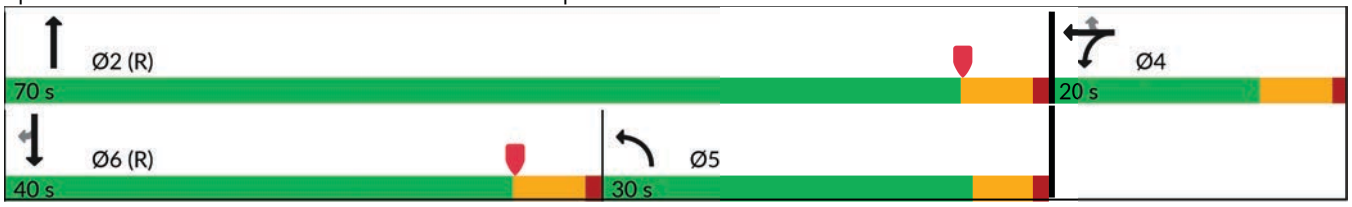
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		11.6		35.9		17.1		35.9				
Change Period (Y+Rc), s		4.6		6.2		4.6		6.2				
Max Green Setting (Gmax), s		26.4		82.8		18.0		82.8				
Max Q Clear Time (g_c+I1), s		6.7		25.2		11.7		23.3				
Green Ext Time (p_c), s		0.4		0.9		0.8		6.5				

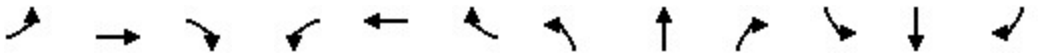
Intersection Summary												
HCM 7th Control Delay, s/veh			19.4									
HCM 7th LOS			B									

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	593	5	438	1089	1948	832	136
Future Volume (vph)	593	5	438	1089	1948	832	136
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4	4		5	2	6	
Permitted Phases			4				6
Detector Phase	4	4	4	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	8.0	8.0	8.0
Minimum Split (s)	10.8	10.8	10.8	10.0	43.8	38.8	38.8
Total Split (s)	20.0	20.0	20.0	30.0	70.0	40.0	40.0
Total Split (%)	22.2%	22.2%	22.2%	33.3%	77.8%	44.4%	44.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.0	5.8	5.8	5.8
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	14.2	14.2	14.2	37.5	64.2	21.7	21.7
Actuated g/C Ratio	0.16	0.16	0.16	0.42	0.71	0.24	0.24
v/c Ratio	1.46	1.38	1.05	0.88	0.55	0.56	0.29
Control Delay (s/veh)	258.6	221.4	91.9	25.9	1.4	30.7	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Total Delay (s/veh)	258.6	221.4	91.9	25.9	2.1	30.7	5.6
LOS	F	F	F	C	A	C	A
Approach Delay (s/veh)		193.1			10.6	27.2	
Approach LOS		F			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 35.6 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.46	
Intersection Signal Delay (s/veh): 51.3	Intersection LOS: D
Intersection Capacity Utilization 97.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 35: Archibald Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	593	5	438	1089	1948	0	0	832	136
Future Volume (veh/h)	0	0	0	593	5	438	1089	1948	0	0	832	136
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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				1800	1900	1900	1700	1900	0	0	1900	1900
Adj Flow Rate, veh/h				707	0	174	1146	2051	0	0	876	112
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				541	0	254	1369	3700	0	0	1393	333
Arrive On Green				0.16	0.00	0.16	0.44	0.71	0.00	0.00	0.21	0.21
Sat Flow, veh/h				3429	0	1610	3141	5358	0	0	6802	1563
Grp Volume(v), veh/h				707	0	174	1146	2051	0	0	876	112
Grp Sat Flow(s),veh/h/ln				1714	0	1610	1570	1729	0	0	1634	1563
Q Serve(g_s), s				14.2	0.0	9.2	29.2	16.9	0.0	0.0	11.0	5.5
Cycle Q Clear(g_c), s				14.2	0.0	9.2	29.2	16.9	0.0	0.0	11.0	5.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				541	0	254	1369	3700	0	0	1393	333
V/C Ratio(X)				1.31	0.00	0.68	0.84	0.55	0.00	0.00	0.63	0.34
Avail Cap(c_a), veh/h				541	0	254	1369	3700	0	0	2484	594
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	1.00	0.23	0.23	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.9	0.0	35.8	22.6	6.1	0.0	0.0	32.2	30.0
Incr Delay (d2), s/veh				151.1	0.0	7.4	1.1	0.1	0.0	0.0	2.2	2.7
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 BackOfQ(50%),veh/ln				17.0	0.0	8.5	9.7	4.1	0.0	0.0	4.3	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				189.0	0.0	43.2	23.6	6.3	0.0	0.0	34.3	32.7
LnGrp LOS				F		D	C	A			C	C
Approach Vol, veh/h					881			3197			988	
Approach Delay, s/veh					160.2			12.5			34.1	
Approach LOS					F			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	70.0	20.0	45.0	25.0
Change Period (Y+Rc), s	5.8	5.8	5.8	* 5.8
Max Green Setting (Gmax), s	64.2	14.2	25.0	* 34
Max Q Clear Time (g_c+I1), s	18.9	16.2	31.2	13.0
Green Ext Time (p_c), s	23.5	0.0	0.0	6.0

Intersection Summary	
HCM 7th Control Delay, s/veh	42.4
HCM 7th LOS	D

Notes

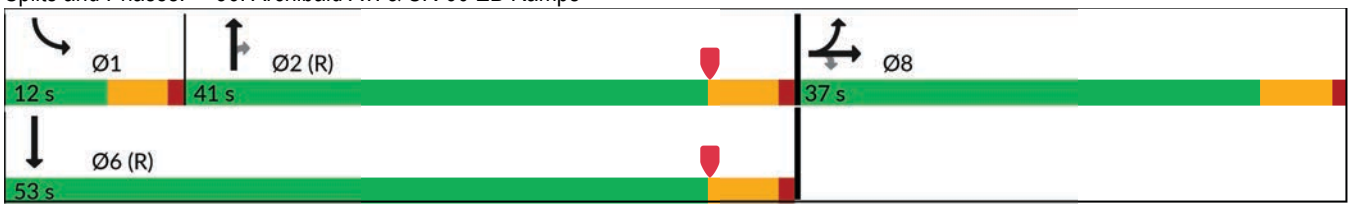
User approved volume balancing among the lanes for turning movement.

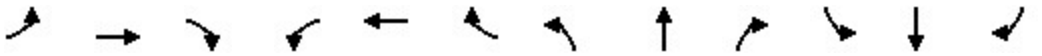
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	542	11	563	2495	671	199	1226
Future Volume (vph)	542	11	563	2495	671	199	1226
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8	8		2		1	6
Permitted Phases			8		2		
Detector Phase	8	8	8	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	10.8	10.8	10.8	32.8	32.8	10.0	33.8
Total Split (s)	37.0	37.0	37.0	41.0	41.0	12.0	53.0
Total Split (%)	41.1%	41.1%	41.1%	45.6%	45.6%	13.3%	58.9%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.0	5.8
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	27.8	27.8	27.8	37.7	37.7	7.9	50.6
Actuated g/C Ratio	0.31	0.31	0.31	0.42	0.42	0.09	0.56
v/c Ratio	0.81	0.78	0.69	0.96	0.67	0.76	0.44
Control Delay (s/veh)	41.7	36.6	26.9	37.1	5.9	66.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.7	36.6	26.9	37.1	5.9	66.7	1.0
LOS	D	D	C	D	A	E	A
Approach Delay (s/veh)		35.3		30.5			10.2
Approach LOS		D		C			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 35.6 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 26.4	Intersection LOS: C
Intersection Capacity Utilization 97.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 36: Archibald Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	542	11	563	0	0	0	0	2495	671	199	1226	0
Future Volume (veh/h)	542	11	563	0	0	0	0	2495	671	199	1226	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	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	1800	1900	1900				0	1900	1900	1700	1900	0
Adj Flow Rate, veh/h	713	0	297				0	2626	604	209	1291	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	864	0	406				0	3174	765	244	3211	0
Arrive On Green	0.25	0.00	0.25				0.00	0.49	0.49	0.16	1.00	0.00
Sat Flow, veh/h	3429	0	1610				0	6802	1574	3141	5358	0
Grp Volume(v), veh/h	713	0	297				0	2626	604	209	1291	0
Grp Sat Flow(s),veh/h/ln	1714	0	1610				0	1634	1574	1570	1729	0
Q Serve(g_s), s	17.7	0.0	15.2				0.0	31.1	28.8	5.8	0.0	0.0
Cycle Q Clear(g_c), s	17.7	0.0	15.2				0.0	31.1	28.8	5.8	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	864	0	406				0	3174	765	244	3211	0
V/C Ratio(X)	0.82	0.00	0.73				0.00	0.83	0.79	0.86	0.40	0.00
Avail Cap(c_a), veh/h	1189	0	558				0	3174	765	244	3211	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	0.45	0.45	0.00
Uniform Delay (d), s/veh	31.8	0.0	30.9				0.0	19.9	19.3	37.5	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.0	3.1				0.0	2.6	8.2	12.1	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	7.2	0.0	5.9				0.0	10.5	10.6	2.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.3	0.0	34.0				0.0	22.5	27.5	49.7	0.2	0.0
LnGrp LOS	D		C					C	C	D	A	
Approach Vol, veh/h		1010						3230			1500	
Approach Delay, s/veh		34.9						23.5			7.1	
Approach LOS		C						C			A	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	12.0	49.5				61.5		28.5				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	7.0	35.2				47.2		31.2				
Max Q Clear Time (g_c+I1), s	7.8	33.1				2.0		19.7				
Green Ext Time (p_c), s	0.0	2.1				10.8		3.0				

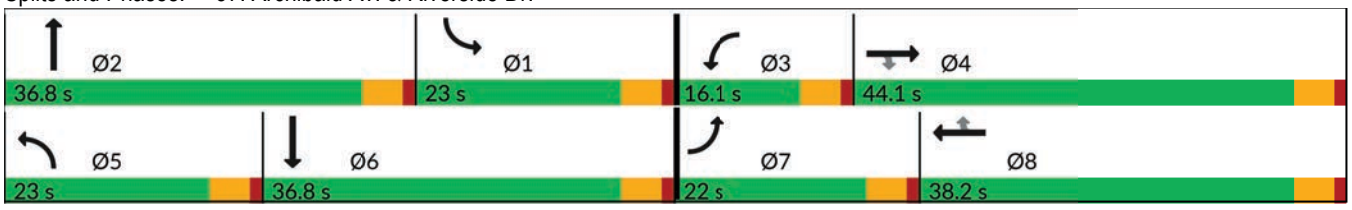
Intersection Summary			
HCM 7th Control Delay, s/veh			21.2
HCM 7th LOS			C

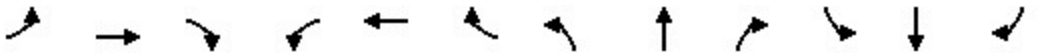
Notes
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	433	390	143	88	463	755	211	1707	428	873
Future Volume (vph)	433	390	143	88	463	755	211	1707	428	873
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.2	38.2	9.6	38.2	38.2	9.6	32.2	9.6	33.2
Total Split (s)	22.0	44.1	44.1	16.1	38.2	38.2	23.0	36.8	23.0	36.8
Total Split (%)	18.3%	36.8%	36.8%	13.4%	31.8%	31.8%	19.2%	30.7%	19.2%	30.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.4	41.2	41.2	9.8	33.6	33.6	17.5	32.2	18.4	33.1
Actuated g/C Ratio	0.15	0.34	0.34	0.08	0.28	0.28	0.15	0.27	0.15	0.28
v/c Ratio	1.85	0.33	0.23	0.67	0.48	1.15	0.89	1.33	1.72	0.96
Control Delay (s/veh)	426.0	30.5	5.4	76.1	37.9	105.8	84.9	189.0	372.0	56.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	426.0	30.5	5.4	76.1	37.9	105.8	84.9	189.0	372.0	56.0
LOS	F	C	A	E	D	F	F	F	F	E
Approach Delay (s/veh)		203.9			79.7			177.8		134.4
Approach LOS		F			E			F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.85	
Intersection Signal Delay (s/veh): 148.0	Intersection LOS: F
Intersection Capacity Utilization 117.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 37: Archibald Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	433	390	143	88	463	755	211	1707	44	428	873	426
Future Volume (veh/h)	433	390	143	88	463	755	211	1707	44	428	873	426
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	456	411	106	93	487	702	222	1797	40	451	919	402
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	271	1105	484	116	779	341	250	1525	34	286	1108	484
Arrive On Green	0.16	0.31	0.31	0.07	0.22	0.22	0.15	0.29	0.29	0.17	0.31	0.31
Sat Flow, veh/h	1714	3610	1582	1714	3610	1581	1714	5218	116	1714	3534	1544
Grp Volume(v), veh/h	456	411	106	93	487	702	222	1190	647	451	899	422
Grp Sat Flow(s),veh/h/ln	1714	1805	1582	1714	1805	1581	1714	1729	1876	1714	1729	1620
Q Serve(g_s), s	17.4	9.8	5.5	5.9	13.5	16.2	14.0	32.2	32.2	18.4	26.6	26.6
Cycle Q Clear(g_c), s	17.4	9.8	5.5	5.9	13.5	16.2	14.0	32.2	32.2	18.4	26.6	26.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		0.95
Lane Grp Cap(c), veh/h	271	1105	484	116	779	341	250	1011	548	286	1084	508
V/C Ratio(X)	1.68	0.37	0.22	0.80	0.62	2.06	0.89	1.18	1.18	1.58	0.83	0.83
Avail Cap(c_a), veh/h	271	1294	567	179	1101	482	286	1011	548	286	1084	508
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	29.9	28.4	50.6	39.2	20.0	46.2	39.0	39.0	45.9	35.1	35.1
Incr Delay (d2), s/veh	323.6	0.2	0.2	6.8	0.8	485.8	23.1	90.5	98.3	275.1	5.5	11.1
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(50%),veh/ln	31.4	4.1	2.0	2.7	5.8	51.5	7.3	25.5	28.8	29.3	11.3	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	370.0	30.1	28.7	57.4	40.0	505.8	69.3	129.5	137.3	321.0	40.6	46.2
LnGrp LOS	F	C	C	E	D	F	E	F	F	F	D	D
Approach Vol, veh/h		973			1282			2059			1772	
Approach Delay, s/veh		189.2			296.3			125.5			113.3	
Approach LOS		F			F			F			F	

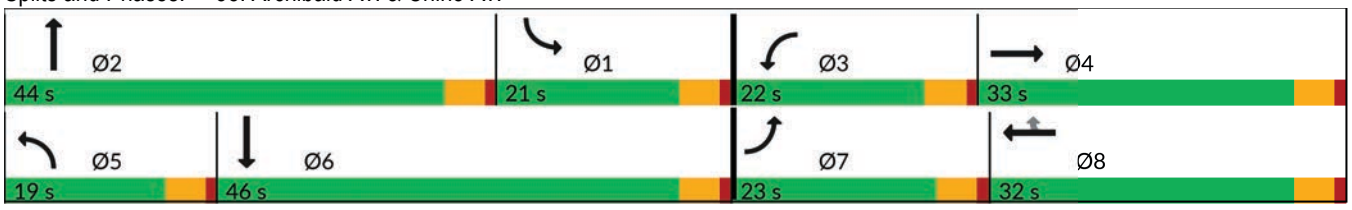
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	36.8	12.1	38.3	20.7	39.1	22.0	28.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	32.2	11.5	39.5	18.4	32.2	17.4	33.6
Max Q Clear Time (g_c+I1), s	20.4	34.2	7.9	11.8	16.0	28.6	19.4	18.2
Green Ext Time (p_c), s	0.0	0.0	0.0	2.8	0.1	2.4	0.0	5.2

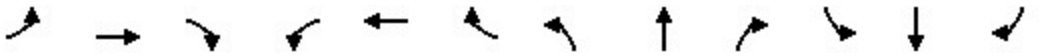
Intersection Summary	
HCM 7th Control Delay, s/veh	168.1
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	237	140	221	54	296	163	1193	108	680
Future Volume (vph)	237	140	221	54	296	163	1193	108	680
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	23.0	33.0	22.0	32.0	32.0	19.0	44.0	21.0	46.0
Total Split (%)	19.2%	27.5%	18.3%	26.7%	26.7%	15.8%	36.7%	17.5%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.3	25.8	17.3	24.8	24.8	13.8	34.6	12.3	33.1
Actuated g/C Ratio	0.17	0.24	0.16	0.23	0.23	0.13	0.32	0.11	0.30
v/c Ratio	0.87	0.89	0.86	0.13	0.53	0.79	0.78	0.59	0.68
Control Delay (s/veh)	75.1	57.0	75.6	36.6	9.0	74.3	37.0	60.6	36.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.1	57.0	75.6	36.6	9.0	74.3	37.0	60.6	36.1
LOS	E	E	E	D	A	E	D	E	D
Approach Delay (s/veh)		63.9		37.4			41.1		39.2
Approach LOS		E		D			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 44.0	Intersection LOS: D
Intersection Capacity Utilization 83.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 38: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	140	246	221	54	296	163	1193	136	108	680	66
Future Volume (veh/h)	237	140	246	221	54	296	163	1193	136	108	680	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	249	147	246	233	57	205	172	1256	139	114	716	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	281	162	271	265	464	388	203	1614	179	143	988	83
Arrive On Green	0.16	0.25	0.25	0.15	0.24	0.24	0.12	0.32	0.32	0.08	0.29	0.29
Sat Flow, veh/h	1714	638	1067	1714	1900	1589	1714	5027	556	1714	3458	290
Grp Volume(v), veh/h	249	0	393	233	57	205	172	949	446	114	393	383
Grp Sat Flow(s),veh/h/ln	1714	0	1705	1714	1900	1589	1714	1900	1783	1714	1900	1848
Q Serve(g_s), s	13.9	0.0	21.9	13.0	2.3	8.4	9.6	22.2	22.2	6.4	18.3	18.3
Cycle Q Clear(g_c), s	13.9	0.0	21.9	13.0	2.3	8.4	9.6	22.2	22.2	6.4	18.3	18.3
Prop In Lane	1.00		0.63	1.00		1.00	1.00		0.31	1.00		0.16
Lane Grp Cap(c), veh/h	281	0	432	265	464	388	203	1220	573	143	543	528
V/C Ratio(X)	0.89	0.00	0.91	0.88	0.12	0.53	0.85	0.78	0.78	0.80	0.72	0.73
Avail Cap(c_a), veh/h	321	0	493	304	531	444	252	1526	716	287	802	780
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	0.0	35.5	40.6	28.9	18.9	42.4	30.1	30.1	44.2	31.6	31.6
Incr Delay (d2), s/veh	22.3	0.0	19.3	22.2	0.1	1.1	19.2	2.1	4.3	9.8	1.9	1.9
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(50%),veh/ln	7.4	0.0	11.0	6.9	1.0	3.0	4.9	9.5	9.3	3.0	8.0	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.4	0.0	54.8	62.8	29.0	20.0	61.5	32.2	34.5	54.0	33.4	33.5
LnGrp LOS	E		D	E	C	B	E	C	C	D	C	C
Approach Vol, veh/h		642			495			1567			890	
Approach Delay, s/veh		57.8			41.2			36.1			36.1	
Approach LOS		E			D			D			D	

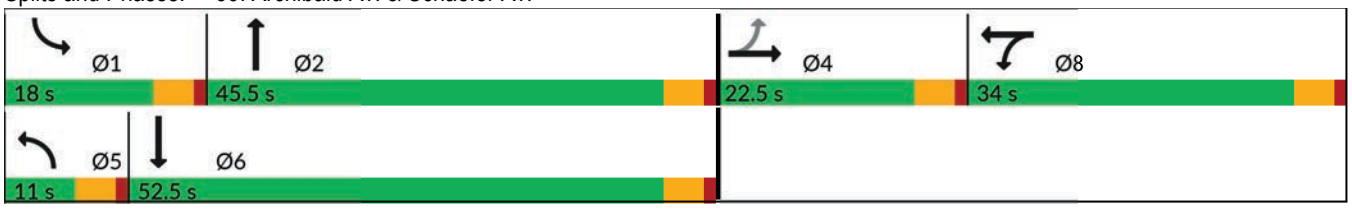
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	36.1	19.8	29.5	16.2	32.6	20.7	28.6
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	16.4	39.4	17.4	28.4	14.4	41.4	18.4	27.4
Max Q Clear Time (g_c+I1), s	8.4	24.2	15.0	23.9	11.6	20.3	15.9	10.4
Green Ext Time (p_c), s	0.1	7.3	0.2	0.9	0.1	4.2	0.2	0.8

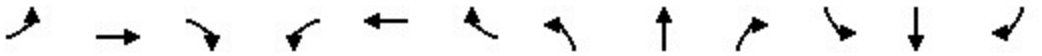
Intersection Summary	
HCM 7th Control Delay, s/veh	40.7
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	231	73	78	50	75	1272	103	1094
Future Volume (vph)	231	73	78	50	75	1272	103	1094
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	22.5	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	22.5	22.5	34.0	34.0	11.0	45.5	18.0	52.5
Total Split (%)	18.8%	18.8%	28.3%	28.3%	9.2%	37.9%	15.0%	43.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		18.3	12.5	12.5	6.5	36.9	10.2	40.5
Actuated g/C Ratio		0.19	0.13	0.13	0.07	0.38	0.11	0.42
v/c Ratio		5.00	0.37	0.57	0.69	0.70	0.60	0.85
Control Delay (s/veh)		Error	43.9	28.1	77.7	28.4	58.4	31.9
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		Error	43.9	28.1	77.7	28.4	58.4	31.9
LOS		F	D	C	E	C	E	C
Approach Delay (s/veh)		1843.6		33.3		31.1		34.0
Approach LOS		F		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.6	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 5.00	
Intersection Signal Delay (s/veh): 212.0	Intersection LOS: F
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	73	19	78	50	108	75	1272	46	103	1094	110
Future Volume (veh/h)	231	73	19	78	50	108	75	1272	46	103	1094	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	243	77	20	82	53	101	79	1339	48	108	1152	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	260	82	21	206	70	134	100	2024	73	136	1374	138
Arrive On Green	0.20	0.20	0.20	0.12	0.12	0.12	0.06	0.39	0.39	0.08	0.41	0.41
Sat Flow, veh/h	1298	411	107	1714	585	1115	1714	5135	184	1714	3312	333
Grp Volume(v), veh/h	340	0	0	82	0	154	79	902	485	108	627	641
Grp Sat Flow(s),veh/h/ln	1816	0	0	1714	0	1699	1714	1729	1861	1714	1805	1840
Q Serve(g_s), s	16.4	0.0	0.0	3.9	0.0	7.8	4.1	19.1	19.1	5.5	27.8	27.9
Cycle Q Clear(g_c), s	16.4	0.0	0.0	3.9	0.0	7.8	4.1	19.1	19.1	5.5	27.8	27.9
Prop In Lane	0.71		0.06	1.00		0.66	1.00		0.10	1.00		0.18
Lane Grp Cap(c), veh/h	364	0	0	206	0	204	100	1363	734	136	749	764
V/C Ratio(X)	0.93	0.00	0.00	0.40	0.00	0.75	0.79	0.66	0.66	0.80	0.84	0.84
Avail Cap(c_a), veh/h	364	0	0	564	0	559	123	1584	852	257	968	987
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	35.1	0.0	0.0	36.3	0.0	38.0	41.5	22.2	22.2	40.4	23.4	23.5
Incr Delay (d2), s/veh	30.8	0.0	0.0	1.2	0.0	5.6	23.8	0.8	1.5	4.0	5.2	5.2
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(50%),veh/ln	9.9	0.0	0.0	1.6	0.0	3.4	2.3	6.9	7.5	2.3	11.2	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.9	0.0	0.0	37.5	0.0	43.6	65.3	23.0	23.7	44.4	28.6	28.6
LnGrp LOS	E			D		D	E	C	C	D	C	C
Approach Vol, veh/h		340			236			1466			1376	
Approach Delay, s/veh		65.9			41.5			25.5			29.9	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	39.8		22.5	9.8	41.7		15.3				
Change Period (Y+Rc), s	4.6	4.6		4.6	4.6	4.6		4.6				
Max Green Setting (Gmax), s	13.4	40.9		17.9	6.4	47.9		29.4				
Max Q Clear Time (g_c+I1), s	7.5	21.1		18.4	6.1	29.9		9.8				
Green Ext Time (p_c), s	0.0	8.2		0.0	0.0	7.1		0.9				

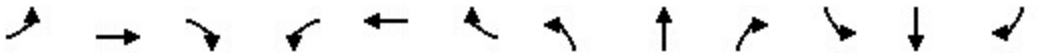
Intersection Summary		
HCM 7th Control Delay, s/veh		32.4
HCM 7th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	455	166	550	455	280	194	864	501	249	752	248
Future Volume (vph)	159	455	166	550	455	280	194	864	501	249	752	248
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	11.0	41.2		17.0	47.2	47.2	14.0	45.8		16.0	47.8	47.8
Total Split (%)	9.2%	34.3%		14.2%	39.3%	39.3%	11.7%	38.2%		13.3%	39.8%	39.8%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	6.6	24.9	99.8	12.7	31.1	31.1	9.7	31.6	99.8	11.7	33.6	33.6
Actuated g/C Ratio	0.07	0.25	1.00	0.13	0.31	0.31	0.10	0.32	1.00	0.12	0.34	0.34
v/c Ratio	0.81	0.37	0.11	1.45	0.81	0.46	1.24	0.80	0.33	1.31	0.65	0.41
Control Delay (s/veh)	78.3	31.7	0.1	249.9	43.9	11.6	188.7	37.6	0.6	208.3	31.5	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	78.3	31.7	0.1	249.9	43.9	11.6	188.7	37.6	0.6	208.3	31.5	14.3
LOS	E	C	A	F	D	B	F	D	A	F	C	B
Approach Delay (s/veh)		34.5			125.0			44.5			63.3	
Approach LOS		C			F			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.45	
Intersection Signal Delay (s/veh): 69.0	Intersection LOS: E
Intersection Capacity Utilization 82.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 40: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	455	166	550	455	280	194	864	501	249	752	248
Future Volume (veh/h)	159	455	166	550	455	280	194	864	501	249	752	248
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	167	479	0	579	479	283	204	909	0	262	792	203
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	225	1158		437	552	462	181	1095		219	1176	525
Arrive On Green	0.11	0.33	0.00	0.21	0.44	0.44	0.16	0.46	0.00	0.19	0.49	0.49
Sat Flow, veh/h	3141	5187	1610	3141	1900	1590	1714	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	167	479	0	579	479	283	204	909	0	262	792	203
Grp Sat Flow(s),veh/h/ln	1570	1729	1610	1570	1900	1590	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	4.6	6.4	0.0	12.4	20.4	12.2	9.4	19.7	0.0	11.4	14.9	7.1
Cycle Q Clear(g_c), s	4.6	6.4	0.0	12.4	20.4	12.2	9.4	19.7	0.0	11.4	14.9	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	1158		437	552	462	181	1095		219	1176	525
V/C Ratio(X)	0.74	0.41		1.33	0.87	0.61	1.13	0.83		1.20	0.67	0.39
Avail Cap(c_a), veh/h	225	2129		437	908	760	181	1668		219	1749	780
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	25.1	0.0	35.3	23.6	21.3	37.5	22.3	0.0	36.0	19.2	17.2
Incr Delay (d2), s/veh	10.9	0.2	0.0	161.6	5.1	1.3	105.7	2.2	0.0	123.6	0.7	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(50%),veh/ln	2.0	2.3	0.0	13.8	7.3	3.8	8.7	6.2	0.0	11.6	4.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.9	25.4	0.0	196.9	28.7	22.6	143.2	24.5	0.0	159.6	19.9	17.6
LnGrp LOS	D	C		F	C	C	F	C		F	B	B
Approach Vol, veh/h		646			1341			1113			1257	
Approach Delay, s/veh		31.7			100.0			46.3			48.6	
Approach LOS		C			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	31.6	17.0	24.5	14.0	33.6	11.0	30.5
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	11.4	41.2	12.4	36.6	9.4	43.2	6.4	42.6
Max Q Clear Time (g_c+I1), s	13.4	21.7	14.4	8.4	11.4	16.9	6.6	22.4
Green Ext Time (p_c), s	0.0	5.4	0.0	3.0	0.0	5.7	0.0	3.5

Intersection Summary	
HCM 7th Control Delay, s/veh	61.3
HCM 7th LOS	E

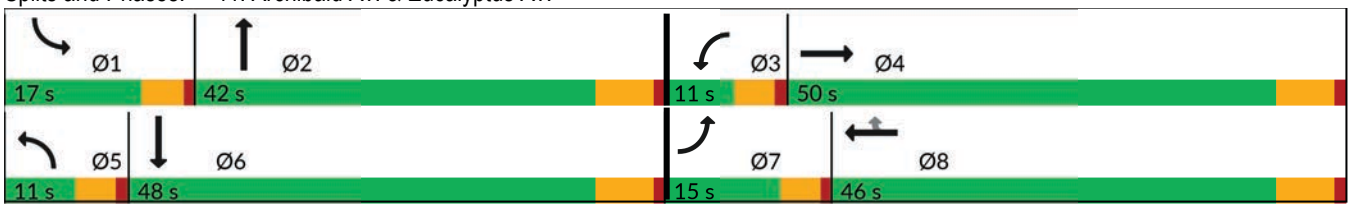
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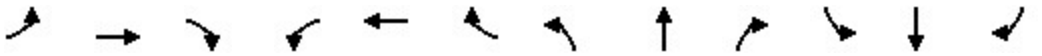
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	93	94	67	287	221	444	1167	128	1206
Future Volume (vph)	93	94	67	287	221	444	1167	128	1206
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	42.2	9.6	42.2	42.2	9.6	32.2	9.6	32.2
Total Split (s)	15.0	50.0	11.0	46.0	46.0	11.0	42.0	17.0	48.0
Total Split (%)	12.5%	41.7%	9.2%	38.3%	38.3%	9.2%	35.0%	14.2%	40.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.4	17.3	6.2	16.1	16.1	6.8	30.2	8.5	31.9
Actuated g/C Ratio	0.09	0.21	0.08	0.20	0.20	0.08	0.37	0.10	0.39
v/c Ratio	0.35	0.28	0.30	0.43	0.53	1.82	0.57	0.42	0.71
Control Delay (s/veh)	44.1	13.9	46.0	31.9	16.4	407.7	23.5	43.1	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.1	13.9	46.0	31.9	16.4	407.7	23.5	43.1	24.7
LOS	D	B	D	C	B	F	C	D	C
Approach Delay (s/veh)		23.1		27.6			121.8		26.3
Approach LOS		C		C			F		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 82.2	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.82	
Intersection Signal Delay (s/veh): 66.7	Intersection LOS: E
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 41: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	94	118	67	287	221	444	1167	124	128	1206	143
Future Volume (veh/h)	93	94	118	67	287	221	444	1167	124	128	1206	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.99
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	1700	1900	1900	1700	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	98	99	106	71	302	140	467	1228	123	135	1269	103
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	195	279	245	170	530	233	295	2467	246	213	1854	150
Arrive On Green	0.06	0.15	0.15	0.05	0.15	0.15	0.09	0.41	0.41	0.07	0.38	0.38
Sat Flow, veh/h	3141	1805	1585	3141	3610	1584	3141	6077	606	3141	4884	396
Grp Volume(v), veh/h	98	99	106	71	302	140	467	990	361	135	898	474
Grp Sat Flow(s),veh/h/ln	1570	1805	1585	1570	1805	1584	1570	1634	1780	1570	1729	1822
Q Serve(g_s), s	2.1	3.3	4.1	1.5	5.3	5.6	6.4	10.2	10.3	2.8	14.8	14.8
Cycle Q Clear(g_c), s	2.1	3.3	4.1	1.5	5.3	5.6	6.4	10.2	10.3	2.8	14.8	14.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.34	1.00		0.22
Lane Grp Cap(c), veh/h	195	279	245	170	530	233	295	1990	723	213	1313	692
V/C Ratio(X)	0.50	0.35	0.43	0.42	0.57	0.60	1.58	0.50	0.50	0.63	0.68	0.68
Avail Cap(c_a), veh/h	480	1162	1020	295	2111	926	295	2579	937	572	2124	1119
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	25.7	26.1	31.1	27.0	27.2	30.8	15.0	15.1	30.9	17.7	17.7
Incr Delay (d2), s/veh	0.8	0.8	1.2	0.6	1.0	2.5	277.1	0.2	0.5	1.2	0.6	1.2
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(50%),veh/ln	0.7	1.4	1.5	0.5	2.1	2.1	13.5	3.0	3.4	1.0	4.8	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.7	26.5	27.3	31.7	28.0	29.7	307.9	15.2	15.6	32.1	18.3	18.9
LnGrp LOS	C	C	C	C	C	C	F	B	B	C	B	B
Approach Vol, veh/h		303			513			1818			1507	
Approach Delay, s/veh		28.4			29.0			90.5			19.7	
Approach LOS		C			C			F			B	

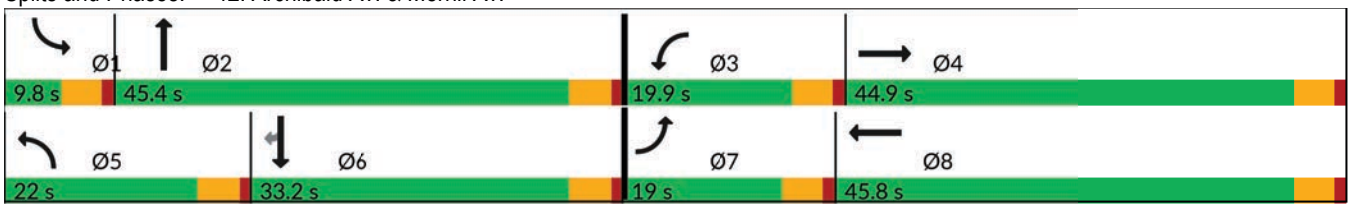
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	33.8	8.3	16.7	11.0	32.0	8.8	16.2
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	12.4	35.8	6.4	43.8	6.4	41.8	10.4	39.8
Max Q Clear Time (g_c+I1), s	4.8	12.3	3.5	6.1	8.4	16.8	4.1	7.6
Green Ext Time (p_c), s	0.1	8.7	0.0	1.1	0.0	9.0	0.1	2.3

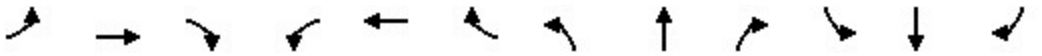
Intersection Summary	
HCM 7th Control Delay, s/veh	52.6
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	496	142	465	156	336	611	852	45	605	681
Future Volume (vph)	496	142	465	156	336	611	852	45	605	681
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			Free							6
Detector Phase	7	4		3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	44.8		9.6	45.8	9.6	32.5	9.6	31.5	31.5
Total Split (s)	19.0	44.9		19.9	45.8	22.0	45.4	9.8	33.2	33.2
Total Split (%)	15.8%	37.4%		16.6%	38.2%	18.3%	37.8%	8.2%	27.7%	27.7%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	None	None
Act Effct Green (s)	14.5	20.0	98.6	13.6	19.1	17.6	45.4	5.2	28.9	28.9
Actuated g/C Ratio	0.15	0.20	1.00	0.14	0.19	0.18	0.46	0.05	0.29	0.29
v/c Ratio	1.10	0.19	0.30	0.70	0.60	1.12	0.31	0.27	0.57	0.95
Control Delay (s/veh)	111.2	32.7	0.5	58.5	36.5	113.2	18.3	52.2	33.5	38.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	111.2	32.7	0.5	58.5	36.5	113.2	18.3	52.2	33.5	38.3
LOS	F	C	A	E	D	F	B	D	C	D
Approach Delay (s/veh)		54.4			42.4		53.8		36.6	
Approach LOS		D			D		D		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay (s/veh): 47.6	Intersection LOS: D
Intersection Capacity Utilization 85.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 42: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	496	142	465	156	336	84	611	852	168	45	605	681
Future Volume (veh/h)	496	142	465	156	336	84	611	852	168	45	605	681
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	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	1700	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	522	149	0	164	354	50	643	897	120	47	637	706
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	503	723		197	488	68	608	3010	396	123	1172	497
Arrive On Green	0.16	0.19	0.00	0.12	0.15	0.15	0.19	0.46	0.46	0.04	0.31	0.31
Sat Flow, veh/h	3238	3800	1610	1714	3255	455	3238	6568	863	3238	3800	1610
Grp Volume(v), veh/h	522	149	0	164	205	199	643	776	241	47	637	706
Grp Sat Flow(s),veh/h/ln	1619	1900	1610	1714	1900	1811	1619	1900	1731	1619	1900	1610
Q Serve(g_s), s	14.4	3.1	0.0	8.7	9.5	9.7	17.4	7.9	8.1	1.3	12.9	28.6
Cycle Q Clear(g_c), s	14.4	3.1	0.0	8.7	9.5	9.7	17.4	7.9	8.1	1.3	12.9	28.6
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	503	723		197	285	272	608	2613	794	123	1172	497
V/C Ratio(X)	1.04	0.21		0.83	0.72	0.73	1.06	0.30	0.30	0.38	0.54	1.42
Avail Cap(c_a), veh/h	503	1652		283	844	805	608	2613	794	182	1172	497
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	31.6	0.0	40.1	37.5	37.6	37.7	15.7	15.8	43.5	26.6	32.1
Incr Delay (d2), s/veh	50.3	0.1	0.0	13.0	3.4	3.8	52.8	0.1	0.2	2.0	0.5	201.1
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(50%),veh/ln	8.9	1.4	0.0	4.2	4.5	4.4	10.8	3.0	2.8	0.5	5.4	38.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	89.4	31.8	0.0	53.2	41.0	41.4	90.4	15.8	16.0	45.5	27.1	233.1
LnGrp LOS	F	C		D	D	D	F	B	B	D	C	F
Approach Vol, veh/h		671			568			1660			1390	
Approach Delay, s/veh		76.6			44.6			44.7			132.4	
Approach LOS		E			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	47.1	15.3	22.2	22.0	33.2	19.0	18.5
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	5.2	40.8	15.3	40.3	17.4	28.6	14.4	41.2
Max Q Clear Time (g_c+I1), s	3.3	10.1	10.7	5.1	19.4	30.6	16.4	11.7
Green Ext Time (p_c), s	0.0	6.6	0.2	0.8	0.0	0.0	0.0	2.2

Intersection Summary	
HCM 7th Control Delay, s/veh	78.1
HCM 7th LOS	E

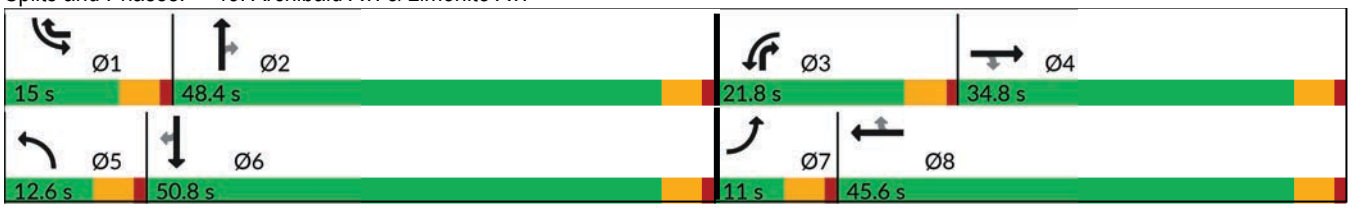
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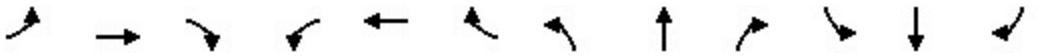
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	732	68	347	697	620	96	756	352	463	499	186
Future Volume (vph)	200	732	68	347	697	620	96	756	352	463	499	186
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	14.6	9.6	45.6	9.6	9.6	47.6	9.6	9.6	37.6	37.6
Total Split (s)	11.0	34.8	34.8	21.8	45.6	15.0	12.6	48.4	21.8	15.0	50.8	50.8
Total Split (%)	9.2%	29.0%	29.0%	18.2%	38.0%	12.5%	10.5%	40.3%	18.2%	12.5%	42.3%	42.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.5	26.7	26.7	15.3	35.5	46.1	7.1	29.5	49.6	10.6	33.0	33.0
Actuated g/C Ratio	0.06	0.26	0.26	0.15	0.35	0.46	0.07	0.29	0.49	0.11	0.33	0.33
v/c Ratio	1.04	0.81	0.14	0.77	0.58	0.52	0.45	0.75	0.45	1.48	0.31	0.30
Control Delay (s/veh)	124.1	43.4	0.5	54.3	29.3	16.3	55.4	37.6	15.9	266.5	26.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	124.1	43.4	0.5	54.3	29.3	16.3	55.4	37.6	15.9	266.5	26.4	4.9
LOS	F	D	A	D	C	B	E	D	B	F	C	A
Approach Delay (s/veh)		56.6			29.7			32.7			119.7	
Approach LOS		E			C			C			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.48	
Intersection Signal Delay (s/veh): 56.4	Intersection LOS: E
Intersection Capacity Utilization 82.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 43: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	732	68	347	697	620	96	756	352	463	499	186
Future Volume (veh/h)	200	732	68	347	697	620	96	756	352	463	499	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1700	1900	1900	1700	1900	1800	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	211	771	66	365	734	587	101	796	254	487	525	118
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	226	931	415	434	1169	1171	162	1011	673	368	1791	556
Arrive On Green	0.11	0.39	0.39	0.21	0.49	0.49	0.08	0.42	0.42	0.18	0.52	0.52
Sat Flow, veh/h	3141	3610	1610	3141	3610	2646	3141	3610	1610	3141	5187	1609
Grp Volume(v), veh/h	211	771	66	365	734	587	101	796	254	487	525	118
Grp Sat Flow(s),veh/h/ln	1570	1805	1610	1570	1805	1323	1570	1805	1610	1570	1729	1609
Q Serve(g_s), s	5.9	17.1	2.4	9.9	13.4	12.6	2.8	17.0	8.6	10.4	5.1	3.5
Cycle Q Clear(g_c), s	5.9	17.1	2.4	9.9	13.4	12.6	2.8	17.0	8.6	10.4	5.1	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	931	415	434	1169	1171	162	1011	673	368	1791	556
V/C Ratio(X)	0.93	0.83	0.16	0.84	0.63	0.50	0.62	0.79	0.38	1.32	0.29	0.21
Avail Cap(c_a), veh/h	226	1227	547	608	1666	1535	283	1779	1016	368	2697	836
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	25.5	20.9	34.3	18.9	13.2	40.2	23.5	14.1	36.6	15.2	14.9
Incr Delay (d2), s/veh	41.0	3.7	0.2	5.4	0.6	0.3	1.5	1.4	0.3	164.0	0.1	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(50%),veh/ln	3.4	6.2	0.9	3.7	4.4	2.8	1.0	5.6	2.6	11.8	1.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	80.5	29.2	21.1	39.7	19.4	13.6	41.6	24.9	14.5	200.6	15.3	15.1
LnGrp LOS	F	C	C	D	B	B	D	C	B	F	B	B
Approach Vol, veh/h		1048			1686			1151			1130	
Approach Delay, s/veh		39.0			21.8			24.1			95.1	
Approach LOS		D			C			C			F	

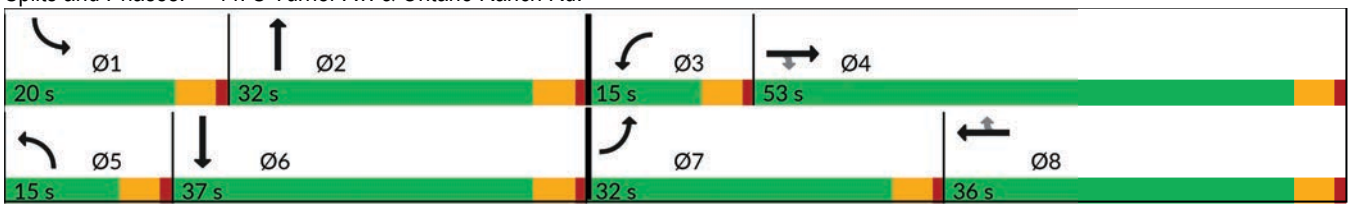
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	29.5	16.9	27.5	9.2	35.3	11.0	33.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	10.4	43.8	17.2	30.2	8.0	46.2	6.4	41.0
Max Q Clear Time (g_c+I1), s	12.4	19.0	11.9	19.1	4.8	7.1	7.9	15.4
Green Ext Time (p_c), s	0.0	5.9	0.4	3.8	0.0	3.7	0.0	7.9

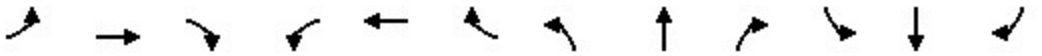
Intersection Summary	
HCM 7th Control Delay, s/veh	42.4
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	263	1308	218	162	1297	198	228	381	129	221
Future Volume (vph)	263	1308	218	162	1297	198	228	381	129	221
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.8	23.8	9.6	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	32.0	53.0	53.0	15.0	36.0	36.0	15.0	32.0	20.0	37.0
Total Split (%)	26.7%	44.2%	44.2%	12.5%	30.0%	30.0%	12.5%	26.7%	16.7%	30.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	22.2	46.5	46.5	10.4	34.7	34.7	10.4	27.5	12.6	29.6
Actuated g/C Ratio	0.19	0.40	0.40	0.09	0.30	0.30	0.09	0.24	0.11	0.26
v/c Ratio	0.84	0.90	0.32	1.11	1.19	0.34	1.56	1.35	0.73	0.84
Control Delay (s/veh)	67.6	41.7	10.7	153.8	132.9	7.3	315.2	206.0	73.0	54.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.6	41.7	10.7	153.8	132.9	7.3	315.2	206.0	73.0	54.4
LOS	E	D	B	F	F	A	F	F	E	D
Approach Delay (s/veh)		41.7			120.0			237.4		59.1
Approach LOS		D			F			F		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.56	
Intersection Signal Delay (s/veh): 103.6	Intersection LOS: F
Intersection Capacity Utilization 105.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	1308	218	162	1297	198	228	381	184	129	221	160
Future Volume (veh/h)	263	1308	218	162	1297	198	228	381	184	129	221	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	277	1377	222	171	1365	201	240	401	168	136	233	150
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	306	1542	653	158	1216	504	158	307	129	163	266	171
Arrive On Green	0.18	0.41	0.41	0.09	0.32	0.32	0.09	0.24	0.24	0.09	0.25	0.25
Sat Flow, veh/h	1714	3800	1608	1714	3800	1574	1714	1263	529	1714	1080	695
Grp Volume(v), veh/h	277	1377	222	171	1365	201	240	0	569	136	0	383
Grp Sat Flow(s),veh/h/ln	1714	1900	1608	1714	1900	1574	1714	0	1792	1714	0	1775
Q Serve(g_s), s	17.8	38.0	10.7	10.4	36.0	11.2	10.4	0.0	27.4	8.8	0.0	23.4
Cycle Q Clear(g_c), s	17.8	38.0	10.7	10.4	36.0	11.2	10.4	0.0	27.4	8.8	0.0	23.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		0.39
Lane Grp Cap(c), veh/h	306	1542	653	158	1216	504	158	0	436	163	0	436
V/C Ratio(X)	0.91	0.89	0.34	1.08	1.12	0.40	1.52	0.00	1.30	0.84	0.00	0.88
Avail Cap(c_a), veh/h	417	1634	691	158	1216	504	158	0	436	234	0	511
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	31.2	23.1	51.1	38.3	29.8	51.1	0.0	42.6	50.1	0.0	40.8
Incr Delay (d2), s/veh	15.9	6.5	0.3	94.4	66.3	0.5	261.7	0.0	152.9	11.1	0.0	14.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	17.6	3.9	8.5	27.0	4.2	15.8	0.0	30.1	4.2	0.0	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.2	37.6	23.4	145.5	104.6	30.3	312.7	0.0	195.5	61.2	0.0	55.1
LnGrp LOS	E	D	C	F	F	C	F		F	E		E
Approach Vol, veh/h		1876			1737			809			519	
Approach Delay, s/veh		39.4			100.0			230.3			56.7	
Approach LOS		D			F			F			E	

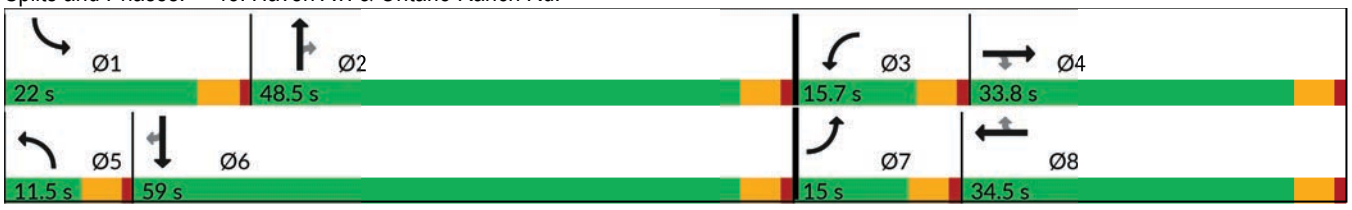
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	32.0	15.0	50.3	15.0	32.3	24.7	40.6
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	27.4	10.4	48.4	10.4	32.4	27.4	31.4
Max Q Clear Time (g_c+I1), s	10.8	29.4	12.4	40.0	12.4	25.4	19.8	38.0
Green Ext Time (p_c), s	0.1	0.0	0.0	5.7	0.0	1.2	0.2	0.0

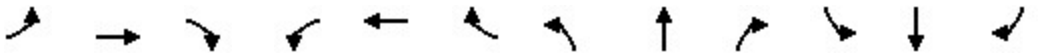
Intersection Summary	
HCM 7th Control Delay, s/veh	93.8
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	805	61	247	889	234	81	528	240	234	387	77
Future Volume (vph)	125	805	61	247	889	234	81	528	240	234	387	77
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	34.5	34.5	9.6	47.8	47.8	9.6	45.8	45.8
Total Split (s)	15.0	33.8	33.8	15.7	34.5	34.5	11.5	48.5	48.5	22.0	59.0	59.0
Total Split (%)	12.5%	28.2%	28.2%	13.1%	28.8%	28.8%	9.6%	40.4%	40.4%	18.3%	49.2%	49.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.3	24.2	24.2	11.0	24.9	24.9	7.0	36.1	36.1	17.7	46.8	46.8
Actuated g/C Ratio	0.10	0.22	0.22	0.10	0.23	0.23	0.06	0.34	0.34	0.16	0.43	0.43
v/c Ratio	0.80	0.73	0.14	0.82	0.62	0.44	0.77	0.87	0.37	0.88	0.49	0.11
Control Delay (s/veh)	84.5	43.2	0.6	69.9	39.6	7.2	93.3	49.5	5.8	77.3	24.5	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	84.5	43.2	0.6	69.9	39.6	7.2	93.3	49.5	5.8	77.3	24.5	2.9
LOS	F	D	A	E	D	A	F	D	A	E	C	A
Approach Delay (s/veh)		45.8			39.5			41.3			39.8	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay (s/veh): 41.6	Intersection LOS: D
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 45: Haven Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	805	61	247	889	234	81	528	240	234	387	77
Future Volume (veh/h)	125	805	61	247	889	234	81	528	240	234	387	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	132	847	42	260	936	138	85	556	190	246	407	70
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	160	1124	343	320	1471	362	107	633	536	276	821	693
Arrive On Green	0.09	0.22	0.22	0.10	0.23	0.23	0.06	0.33	0.33	0.16	0.43	0.43
Sat Flow, veh/h	1714	5187	1583	3141	6536	1607	1714	1900	1607	1714	1900	1605
Grp Volume(v), veh/h	132	847	42	260	936	138	85	556	190	246	407	70
Grp Sat Flow(s),veh/h/ln	1714	1729	1583	1570	1634	1607	1714	1900	1607	1714	1900	1605
Q Serve(g_s), s	7.4	15.1	2.1	8.0	12.8	7.2	4.8	27.2	8.8	13.8	15.2	2.6
Cycle Q Clear(g_c), s	7.4	15.1	2.1	8.0	12.8	7.2	4.8	27.2	8.8	13.8	15.2	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	1124	343	320	1471	362	107	633	536	276	821	693
V/C Ratio(X)	0.82	0.75	0.12	0.81	0.64	0.38	0.79	0.88	0.35	0.89	0.50	0.10
Avail Cap(c_a), veh/h	181	1538	469	354	1984	488	120	847	716	303	1049	886
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	36.1	31.0	43.3	34.5	32.4	45.5	30.9	24.8	40.5	20.2	16.6
Incr Delay (d2), s/veh	20.9	1.4	0.2	11.0	0.5	0.7	23.8	8.2	0.4	23.4	0.5	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(50%),veh/ln	3.9	6.1	0.8	3.4	4.7	2.7	2.7	13.0	3.1	7.4	6.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.7	37.5	31.2	54.3	35.0	33.0	69.4	39.1	25.2	63.9	20.7	16.7
LnGrp LOS	E	D	C	D	C	C	E	D	C	E	C	B
Approach Vol, veh/h		1021			1334			831			723	
Approach Delay, s/veh		40.8			38.6			39.0			35.0	
Approach LOS		D			D			D			C	

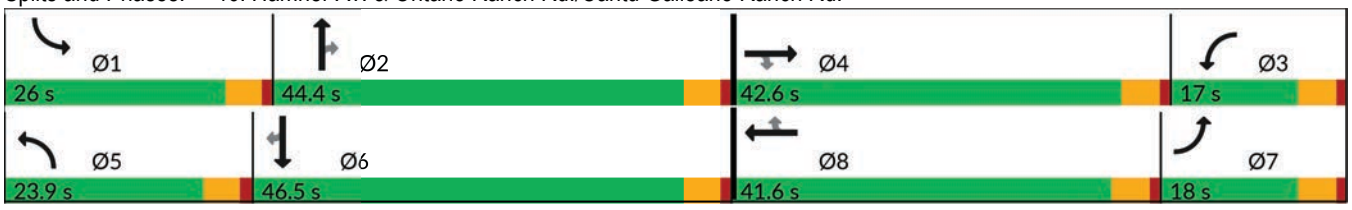
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.5	37.4	14.6	25.9	10.8	47.2	13.8	26.8
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	17.4	43.9	11.1	29.2	6.9	54.4	10.4	29.9
Max Q Clear Time (g_c+I1), s	15.8	29.2	10.0	17.1	6.8	17.2	9.4	14.8
Green Ext Time (p_c), s	0.1	3.4	0.1	4.2	0.0	2.6	0.0	5.4

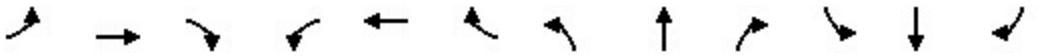
Intersection Summary	
HCM 7th Control Delay, s/veh	38.6
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	452	1528	152	284	640	292	294	1556	655	729	402	157
Future Volume (vph)	452	1528	152	284	640	292	294	1556	655	729	402	157
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6
Total Split (s)	18.0	42.6	42.6	17.0	41.6	41.6	23.9	44.4	44.4	26.0	46.5	46.5
Total Split (%)	13.8%	32.8%	32.8%	13.1%	32.0%	32.0%	18.4%	34.2%	34.2%	20.0%	35.8%	35.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	23.6	38.0	38.0	12.4	26.8	26.8	16.0	39.8	39.8	21.4	45.2	45.2
Actuated g/C Ratio	0.18	0.29	0.29	0.10	0.21	0.21	0.12	0.31	0.31	0.16	0.35	0.35
v/c Ratio	0.78	0.93	0.28	0.94	0.56	0.53	0.75	0.91	1.06	1.40	0.21	0.24
Control Delay (s/veh)	61.0	55.8	12.9	95.6	47.3	8.3	66.8	51.8	84.5	229.6	30.6	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.0	55.8	12.9	95.6	47.3	8.3	66.8	51.8	84.5	229.6	30.6	5.5
LOS	E	E	B	F	D	A	E	D	F	F	C	A
Approach Delay (s/veh)		53.8			49.2			62.1			140.2	
Approach LOS		D			D			E			F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.40	
Intersection Signal Delay (s/veh): 71.5	Intersection LOS: E
Intersection Capacity Utilization 107.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 46: Hamner Av. & Ontario Ranch Rd./Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	452	1528	152	284	640	292	294	1556	655	729	402	157
Future Volume (veh/h)	452	1528	152	284	640	292	294	1556	655	729	402	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1768	1976	1976	1768	1976	1976	1768	1976	1976	1768	1976	1976
Adj Flow Rate, veh/h	476	1608	81	299	674	223	309	1638	347	767	423	165
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	784	1719	486	327	916	259	359	1784	504	565	2147	599
Arrive On Green	0.47	0.58	0.58	0.19	0.31	0.31	0.21	0.60	0.60	0.34	0.72	0.72
Sat Flow, veh/h	3368	5928	1675	3368	5928	1675	3368	5928	1675	3368	5928	1653
Grp Volume(v), veh/h	476	1608	81	299	674	223	309	1638	347	767	423	165
Grp Sat Flow(s),veh/h/ln	1684	1976	1675	1684	1976	1675	1684	1976	1675	1684	1976	1653
Q Serve(g_s), s	13.4	31.8	2.1	11.1	13.0	11.5	11.3	31.4	13.6	21.4	2.9	2.3
Cycle Q Clear(g_c), s	13.4	31.8	2.1	11.1	13.0	11.5	11.3	31.4	13.6	21.4	2.9	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	784	1719	486	327	916	259	359	1784	504	565	2147	599
V/C Ratio(X)	0.61	0.94	0.17	0.91	0.74	0.86	0.86	0.92	0.69	1.36	0.20	0.28
Avail Cap(c_a), veh/h	784	1765	499	327	1718	485	509	1848	522	565	2147	599
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	25.7	11.0	50.9	41.8	22.0	49.3	24.0	12.3	42.4	11.6	3.2
Incr Delay (d2), s/veh	1.0	9.8	0.2	28.4	1.2	8.3	7.7	7.7	3.6	172.6	0.0	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(50%),veh/ln	4.4	9.6	1.1	5.3	5.4	4.2	4.5	9.3	5.0	20.3	1.2	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.8	35.5	11.2	79.3	42.9	30.3	57.0	31.7	15.9	215.0	11.7	3.5
LnGrp LOS	C	D	B	E	D	C	E	C	B	F	B	A
Approach Vol, veh/h		2165			1196			2294			1355	
Approach Delay, s/veh		33.5			49.7			32.7			125.8	
Approach LOS		C			D			C			F	

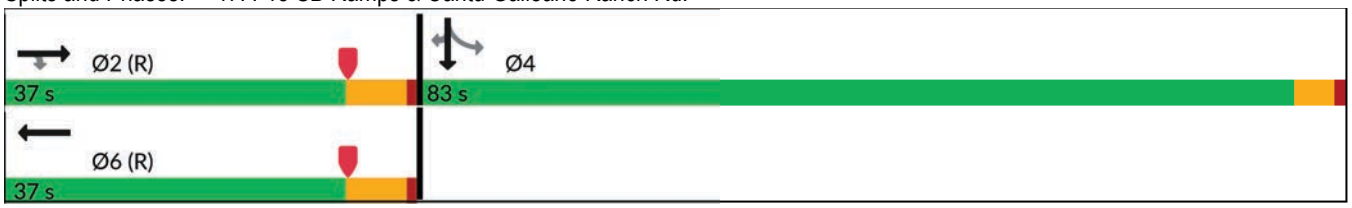
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	43.0	17.0	41.6	18.2	50.8	34.3	24.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	21.4	39.8	12.4	38.0	19.3	41.9	13.4	37.0
Max Q Clear Time (g_c+I1), s	23.4	33.4	13.1	33.8	13.3	4.9	15.4	15.0
Green Ext Time (p_c), s	0.0	5.0	0.0	3.2	0.3	3.2	0.0	4.7

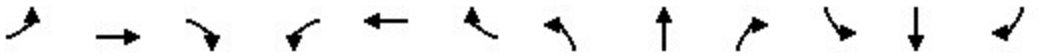
Intersection Summary	
HCM 7th Control Delay, s/veh	53.8
HCM 7th LOS	D

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1374	878	868	411	326	0	1244
Future Volume (vph)	1374	878	868	411	326	0	1244
Turn Type	NA	Perm	NA	Free	Perm	NA	Perm
Protected Phases	2		6			4	
Permitted Phases		2		Free	4		4
Detector Phase	2	2	6		4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	37.0	37.0	37.0		83.0	83.0	83.0
Total Split (%)	30.8%	30.8%	30.8%		69.2%	69.2%	69.2%
Yellow Time (s)	5.5	5.5	5.5		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5		4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Min	C-Min	C-Min		Min	Min	Min
Act Effct Green (s)	43.2	43.2	43.2	120.0	65.7	65.7	65.7
Actuated g/C Ratio	0.36	0.36	0.36	1.00	0.55	0.55	0.55
v/c Ratio	0.70	0.83	0.67	0.27	0.33	0.75	0.74
Control Delay (s/veh)	37.2	12.4	43.3	0.4	14.9	24.3	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.2	12.4	43.3	0.4	14.9	24.3	24.2
LOS	D	B	D	A	B	C	C
Approach Delay (s/veh)	27.5		29.5			22.5	
Approach LOS	C		C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 37.5 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 26.5	Intersection LOS: C
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 47: I-15 SB Ramps & Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	1374	878	0	868	411	0	0	0	326	0	1244
Future Volume (veh/h)	0	1374	878	0	868	411	0	0	0	326	0	1244
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
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	0	1900	1900	0	1900	1900				1800	1900	1900
Adj Flow Rate, veh/h	0	1446	0	0	914	0				229	0	1202
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2773		0	1849					722	0	1356
Arrive On Green	0.00	0.49	0.00	0.00	0.33	0.00				0.42	0.00	0.42
Sat Flow, veh/h	0	5700	1610	0	3800	1610				1714	0	3220
Grp Volume(v), veh/h	0	1446	0	0	914	0				229	0	1202
Grp Sat Flow(s),veh/h/ln	0	1900	1610	0	1900	1610				1714	0	1610
Q Serve(g_s), s	0.0	20.9	0.0	0.0	23.2	0.0				10.7	0.0	41.4
Cycle Q Clear(g_c), s	0.0	20.9	0.0	0.0	23.2	0.0				10.7	0.0	41.4
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2773		0	1849					722	0	1356
V/C Ratio(X)	0.00	0.52		0.00	0.49					0.32	0.00	0.89
Avail Cap(c_a), veh/h	0	2773		0	1849					1120	0	2104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.67	0.67				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.00	0.00	0.78	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.2	0.0	0.0	28.6	0.0				23.2	0.0	32.1
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.7	0.0				0.3	0.0	3.2
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	0.0	8.5	0.0	0.0	11.0	0.0				4.2	0.0	15.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	21.3	0.0	0.0	29.3	0.0				23.5	0.0	35.3
LnGrp LOS		C			C					C		D
Approach Vol, veh/h		1446			914						1431	
Approach Delay, s/veh		21.3			29.3						33.4	
Approach LOS		C			C						C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	64.9	55.1	64.9
Change Period (Y+Rc), s	6.5	4.6	6.5
Max Green Setting (Gmax), s	30.5	78.4	30.5
Max Q Clear Time (g_c+I1), s	22.9	43.4	25.2
Green Ext Time (p_c), s	4.8	7.1	2.5

Intersection Summary	
HCM 7th Control Delay, s/veh	27.8
HCM 7th LOS	C

Notes

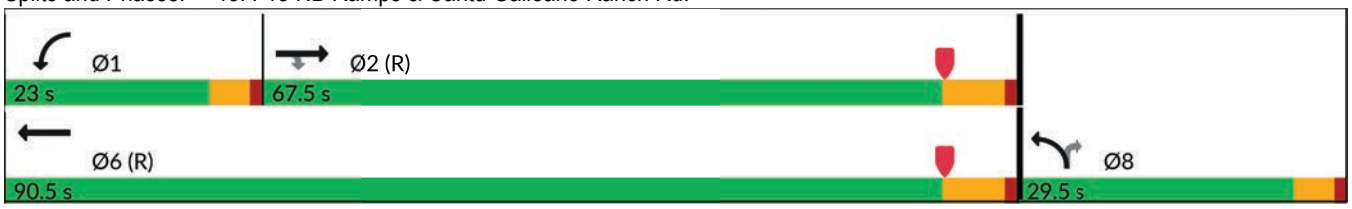
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	661	1039	481	644	578	430
Future Volume (vph)	661	1039	481	644	578	430
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	61.3	61.3	11.0	22.5	22.5	22.5
Total Split (s)	67.5	67.5	23.0	90.5	29.5	29.5
Total Split (%)	56.3%	56.3%	19.2%	75.4%	24.6%	24.6%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.6	4.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	59.6	59.6	18.4	82.6	26.3	26.3
Actuated g/C Ratio	0.50	0.50	0.15	0.69	0.22	0.22
v/c Ratio	0.25	0.99	1.02	0.17	0.97	0.54
Control Delay (s/veh)	9.5	48.9	96.3	6.6	72.0	7.9
Queue Delay	0.0	1.6	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.5	50.4	96.3	6.6	72.0	7.9
LOS	A	D	F	A	E	A
Approach Delay (s/veh)	34.5			44.9	52.0	
Approach LOS	C			D	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 44.8 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay (s/veh): 42.2	Intersection LOS: D
Intersection Capacity Utilization 95.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 48: I-15 NB Ramps & Cantu Galleano Ranch Rd.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	661	1039	481	644	578	430
Future Volume (veh/h)	661	1039	481	644	578	430
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		0.98	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	1900	1900	1700	1900	1800	1900
Adj Flow Rate, veh/h	696	568	506	678	608	242
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2970	820	497	4062	668	314
Arrive On Green	0.87	0.87	0.23	1.00	0.29	0.29
Sat Flow, veh/h	5700	1574	3238	5700	3429	1610
Grp Volume(v), veh/h	696	568	506	678	608	242
Grp Sat Flow(s),veh/h/ln	1900	1574	1619	1900	1714	1610
Q Serve(g_s), s	2.4	14.2	18.4	0.0	20.5	16.5
Cycle Q Clear(g_c), s	2.4	14.2	18.4	0.0	20.5	16.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2970	820	497	4062	668	314
V/C Ratio(X)	0.23	0.69	1.02	0.17	0.91	0.77
Avail Cap(c_a), veh/h	2970	820	497	4062	711	334
HCM Platoon Ratio	1.67	1.67	1.50	1.50	1.50	1.50
Upstream Filter(I)	0.73	0.73	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.9	4.7	46.2	0.0	41.5	40.0
Incr Delay (d2), s/veh	0.1	3.5	45.3	0.1	15.3	10.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.8	9.5	0.0	9.0	6.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	4.0	8.2	91.5	0.1	56.7	50.0
LnGrp LOS	A	A	F	A	E	D
Approach Vol, veh/h	1264			1184	850	
Approach Delay, s/veh	5.9			39.2	54.8	
Approach LOS	A			D	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	23.0	69.0				92.0	28.0
Change Period (Y+Rc), s	4.6	6.5				6.5	4.6
Max Green Setting (Gmax), s	18.4	61.0				84.0	24.9
Max Q Clear Time (g_c+I1), s	20.4	16.2				2.0	22.5
Green Ext Time (p_c), s	0.0	7.5				4.5	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	30.4
HCM 7th LOS	C

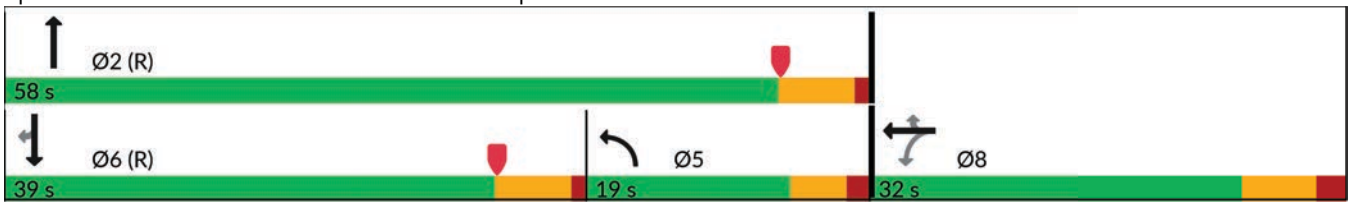
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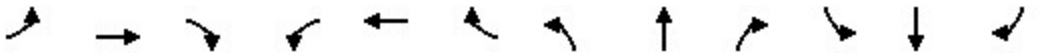
User approved volume balancing among the lanes for turning movement.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	878	0	527	473	1191	1282	604
Future Volume (vph)	878	0	527	473	1191	1282	604
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.0	17.0	17.0	15.2	28.0	27.0	27.0
Total Split (s)	32.0	32.0	32.0	19.0	58.0	39.0	39.0
Total Split (%)	35.6%	35.6%	35.6%	21.1%	64.4%	43.3%	43.3%
Yellow Time (s)	5.0	5.0	5.0	3.7	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	1.5	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	5.2	6.0	6.0	6.0
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	25.0	25.0	25.0	13.8	52.0	33.0	33.0
Actuated g/C Ratio	0.28	0.28	0.28	0.15	0.58	0.37	0.37
v/c Ratio	1.13	0.97	0.92	1.90	0.60	1.02	0.66
Control Delay (s/veh)	114.2	59.5	51.0	434.9	20.8	59.3	5.8
Queue Delay	0.0	0.0	0.0	0.0	3.6	0.0	0.0
Total Delay (s/veh)	114.2	59.5	51.0	434.9	24.4	59.3	5.8
LOS	F	E	D	F	C	E	A
Approach Delay (s/veh)		75.7			141.1	42.2	
Approach LOS		E			F	D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 30.8 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.90	
Intersection Signal Delay (s/veh): 84.9	Intersection LOS: F
Intersection Capacity Utilization 146.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: Euclid Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	878	0	527	473	1191	0	0	1282	604
Future Volume (veh/h)	0	0	0	878	0	527	473	1191	0	0	1282	604
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		0.97
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				1800	1900	1900	1800	1900	0	0	1900	1900
Adj Flow Rate, veh/h				1056	0	282	498	1254	0	0	1349	375
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				952	0	442	766	3177	0	0	1324	575
Arrive On Green				0.28	0.00	0.28	0.59	1.00	0.00	0.00	0.37	0.37
Sat Flow, veh/h				3429	0	1590	1714	3705	0	0	3705	1568
Grp Volume(v), veh/h				1056	0	282	498	1254	0	0	1349	375
Grp Sat Flow(s),veh/h/ln				1714	0	1590	1714	1805	0	0	1805	1568
Q Serve(g_s), s				25.0	0.0	14.0	17.3	0.0	0.0	0.0	33.0	17.9
Cycle Q Clear(g_c), s				25.0	0.0	14.0	17.3	0.0	0.0	0.0	33.0	17.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				952	0	442	766	3177	0	0	1324	575
V/C Ratio(X)				1.11	0.00	0.64	0.65	0.39	0.00	0.00	1.02	0.65
Avail Cap(c_a), veh/h				952	0	442	766	3177	0	0	1324	575
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.5	0.0	28.5	13.6	0.0	0.0	0.0	28.5	23.7
Incr Delay (d2), s/veh				63.8	0.0	3.5	0.2	0.0	0.0	0.0	29.6	5.7
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 BackOfQ(50%),veh/ln				18.4	0.0	5.6	4.8	0.0	0.0	0.0	18.2	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				96.3	0.0	32.1	13.8	0.0	0.0	0.0	58.1	29.4
LnGrp LOS				F		C	B	A			F	C
Approach Vol, veh/h					1338			1752			1724	
Approach Delay, s/veh					82.7			3.9			51.9	
Approach LOS					F			A			D	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	86.0		47.0	39.0		32.0						
Change Period (Y+Rc), s	6.0		6.0	* 6		7.0						
Max Green Setting (Gmax), s	52.0		13.8	* 33		25.0						
Max Q Clear Time (g_c+I1), s	2.0		19.3	35.0		27.0						
Green Ext Time (p_c), s	17.4		0.0	0.0		0.0						

Intersection Summary	
HCM 7th Control Delay, s/veh	43.0
HCM 7th LOS	D

Notes

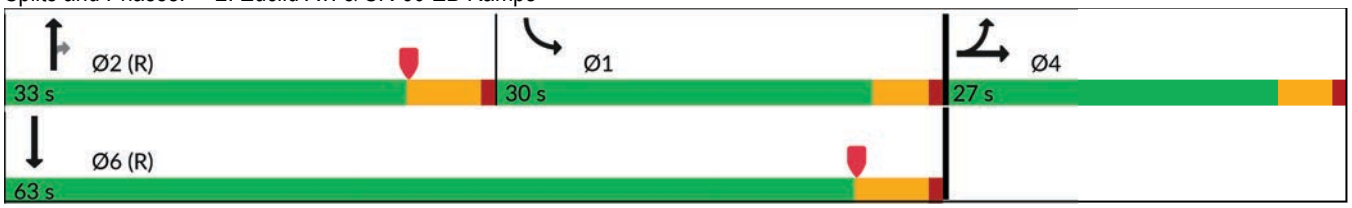
User approved volume balancing among the lanes for turning movement.

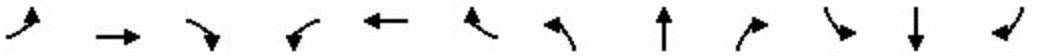
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	363	1	1301	756	394	1766
Future Volume (vph)	363	1	1301	756	394	1766
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	29.0	29.0	14.7	27.0
Total Split (s)	27.0	27.0	33.0	33.0	30.0	63.0
Total Split (%)	30.0%	30.0%	36.7%	36.7%	33.3%	70.0%
Yellow Time (s)	3.6	3.6	5.0	5.0	3.7	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	23.4	23.4	27.0	27.0	24.3	56.0
Actuated g/C Ratio	0.26	0.26	0.30	0.30	0.27	0.62
v/c Ratio	0.81	1.28	1.26	0.89	0.90	0.83
Control Delay (s/veh)	49.0	172.1	156.0	21.9	26.2	7.2
Queue Delay	0.0	0.0	0.2	0.0	0.0	0.8
Total Delay (s/veh)	49.0	172.1	156.2	21.9	26.2	8.0
LOS	D	F	F	C	C	A
Approach Delay (s/veh)		123.4	106.8			11.3
Approach LOS		F	F			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay (s/veh): 68.6	Intersection LOS: E
Intersection Capacity Utilization 146.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	363	1	463	0	0	0	0	1301	756	394	1766	0
Future Volume (veh/h)	363	1	463	0	0	0	0	1301	756	394	1766	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99				1.00		0.97	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	1800	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	382	1	428				0	1369	637	415	1859	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	427	1	394				0	1083	470	457	2286	0
Arrive On Green	0.25	0.25	0.25				0.00	0.30	0.30	0.53	1.00	0.00
Sat Flow, veh/h	1714	4	1584				0	3705	1567	1714	3705	0
Grp Volume(v), veh/h	382	0	429				0	1369	637	415	1859	0
Grp Sat Flow(s),veh/h/ln	1714	0	1588				0	1805	1567	1714	1805	0
Q Serve(g_s), s	19.4	0.0	22.4				0.0	27.0	27.0	19.7	0.0	0.0
Cycle Q Clear(g_c), s	19.4	0.0	22.4				0.0	27.0	27.0	19.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	427	0	395				0	1083	470	457	2286	0
V/C Ratio(X)	0.90	0.00	1.09				0.00	1.26	1.35	0.91	0.81	0.00
Avail Cap(c_a), veh/h	427	0	395				0	1083	470	482	2286	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	0.09	0.09	0.09	0.09	0.00
Uniform Delay (d), s/veh	32.7	0.0	33.8				0.0	31.5	31.5	20.0	0.0	0.0
Incr Delay (d2), s/veh	20.9	0.0	70.1				0.0	119.5	160.9	2.6	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	10.3	0.0	16.1				0.0	28.8	30.4	4.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.6	0.0	103.9				0.0	151.0	192.4	22.6	0.3	0.0
LnGrp LOS	D		F					F	F	C	A	
Approach Vol, veh/h		811						2006			2274	
Approach Delay, s/veh		80.2						164.2			4.4	
Approach LOS		F						F			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	30.0	33.0		27.0		63.0
Change Period (Y+Rc), s	6.0	* 6		4.6		6.0
Max Green Setting (Gmax), s	25.3	* 27		22.4		57.0
Max Q Clear Time (g_c+I1), s	21.7	29.0		24.4		2.0
Green Ext Time (p_c), s	0.5	0.0		0.0		34.0

Intersection Summary	
HCM 7th Control Delay, s/veh	79.4
HCM 7th LOS	E

Notes

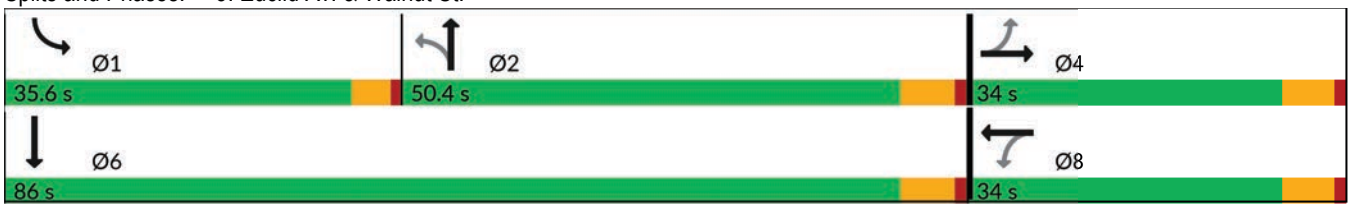
User approved volume balancing among the lanes for turning movement.

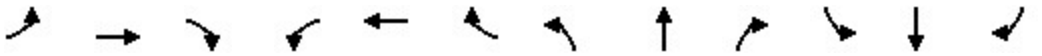
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	290	696	65	502	156	1361	334	1580
Future Volume (vph)	290	696	65	502	156	1361	334	1580
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	34.0	34.0	34.0	34.0	50.4	50.4	35.6	86.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	42.0%	42.0%	29.7%	71.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	28.2	28.2	28.2	28.2	44.7	44.7	16.1	65.3
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.42	0.42	0.15	0.62
v/c Ratio	4.24	1.03	1.00	0.80	2.10	0.68	0.74	0.61
Control Delay (s/veh)	Error	75.7	152.0	41.0	563.5	26.7	52.2	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	Error	75.7	152.0	41.0	563.5	26.7	52.2	12.7
LOS	F	E	F	D	F	C	D	B
Approach Delay (s/veh)		412.0		50.0		80.0		18.8
Approach LOS		F		D		E		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 105.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.24	
Intersection Signal Delay (s/veh): 123.6	Intersection LOS: F
Intersection Capacity Utilization 102.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	696	242	65	502	228	156	1361	53	334	1580	252
Future Volume (veh/h)	290	696	242	65	502	228	156	1361	53	334	1580	252
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	305	733	233	68	528	238	164	1433	29	352	1663	238
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	118	736	234	71	663	298	159	2270	46	422	2811	401
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.43	0.43	0.43	0.13	0.61	0.61
Sat Flow, veh/h	675	2683	853	560	2418	1086	228	5233	106	3141	4586	654
Grp Volume(v), veh/h	305	493	473	68	394	372	164	947	515	352	1252	649
Grp Sat Flow(s),veh/h/ln	675	1805	1731	560	1805	1699	228	1729	1880	1570	1729	1782
Q Serve(g_s), s	7.3	28.0	28.0	0.2	20.8	20.9	40.2	22.0	22.0	11.2	22.6	22.8
Cycle Q Clear(g_c), s	28.2	28.0	28.0	28.2	20.8	20.9	44.6	22.0	22.0	11.2	22.6	22.8
Prop In Lane	1.00		0.49	1.00		0.64	1.00		0.06	1.00		0.37
Lane Grp Cap(c), veh/h	118	495	475	71	495	466	159	1500	816	422	2119	1092
V/C Ratio(X)	2.59	1.00	1.00	0.96	0.80	0.80	1.03	0.63	0.63	0.83	0.59	0.59
Avail Cap(c_a), veh/h	118	495	475	71	495	466	159	1500	816	947	2698	1390
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.9	37.2	37.2	51.4	34.6	34.7	40.1	22.7	22.7	43.4	12.1	12.1
Incr Delay (d2), s/veh	739.9	39.3	40.1	92.3	8.7	9.5	79.3	0.9	1.6	1.7	0.3	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(50%),veh/ln	27.1	17.0	16.5	3.5	9.8	9.4	7.5	8.4	9.3	4.3	7.4	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	789.8	76.5	77.4	143.7	43.4	44.2	119.4	23.6	24.3	45.1	12.3	12.6
LnGrp LOS	F	E	E	F	D	D	F	C	C	D	B	B
Approach Vol, veh/h		1271			834			1626			2253	
Approach Delay, s/veh		248.0			51.9			33.4			17.5	
Approach LOS		F			D			C			B	

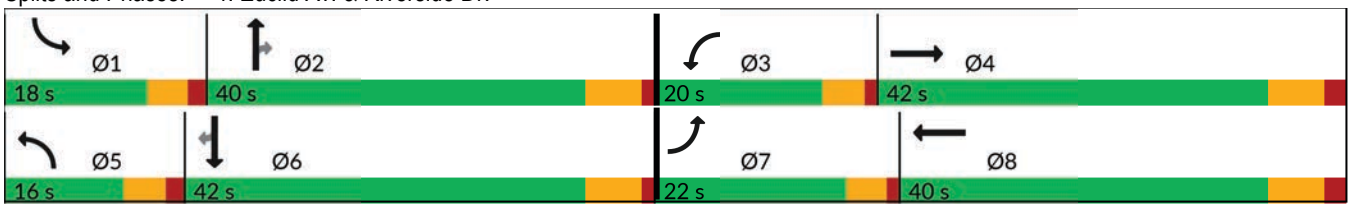
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	18.4	50.4		34.0		68.8		34.0				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	44.6		28.2		80.2		28.2				
Max Q Clear Time (g_c+I1), s	13.2	46.6		30.2		24.8		30.2				
Green Ext Time (p_c), s	0.6	0.0		0.0		21.1		0.0				

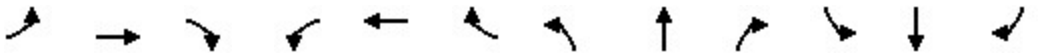
Intersection Summary		
HCM 7th Control Delay, s/veh		75.6
HCM 7th LOS		E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	152	427	142	553	90	1222	229	225	1225	386
Future Volume (vph)	152	427	142	553	90	1222	229	225	1225	386
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	33.0	15.2	36.0	36.0
Total Split (s)	22.0	42.0	20.0	40.0	16.0	40.0	40.0	18.0	42.0	42.0
Total Split (%)	18.3%	35.0%	16.7%	33.3%	13.3%	33.3%	33.3%	15.0%	35.0%	35.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	5.0	3.7	5.0	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	6.0	5.2	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.0	34.0	14.0	33.1	10.5	34.0	34.0	12.8	36.3	36.3
Actuated g/C Ratio	0.13	0.29	0.12	0.28	0.09	0.29	0.29	0.11	0.31	0.31
v/c Ratio	0.74	0.94	0.73	0.70	0.63	1.23	0.44	1.28	1.16	0.59
Control Delay (s/veh)	70.0	67.9	71.9	41.5	71.0	150.3	19.0	202.7	118.8	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	70.0	67.9	71.9	41.5	71.0	150.3	19.0	202.7	118.8	14.6
LOS	E	E	E	D	E	F	B	F	F	B
Approach Delay (s/veh)		68.4		46.8		126.2			107.2	
Approach LOS		E		D		F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay (s/veh): 98.0	Intersection LOS: F
Intersection Capacity Utilization 102.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	427	59	142	553	111	90	1222	229	225	1225	386
Future Volume (veh/h)	152	427	59	142	553	111	90	1222	229	225	1225	386
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	160	449	40	149	582	78	95	1286	153	237	1289	314
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	187	487	43	179	890	119	143	1078	471	193	1182	519
Arrive On Green	0.11	0.28	0.28	0.10	0.28	0.28	0.08	0.30	0.30	0.11	0.33	0.33
Sat Flow, veh/h	1714	1717	153	1714	3193	427	1714	3610	1576	1714	3610	1586
Grp Volume(v), veh/h	160	0	489	149	328	332	95	1286	153	237	1289	314
Grp Sat Flow(s),veh/h/ln	1714	0	1870	1714	1805	1814	1714	1805	1576	1714	1805	1586
Q Serve(g_s), s	10.4	0.0	28.9	9.7	18.3	18.4	6.1	34.0	8.6	12.8	37.3	18.9
Cycle Q Clear(g_c), s	10.4	0.0	28.9	9.7	18.3	18.4	6.1	34.0	8.6	12.8	37.3	18.9
Prop In Lane	1.00		0.08	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	0	530	179	503	506	143	1078	471	193	1182	519
V/C Ratio(X)	0.85	0.00	0.92	0.83	0.65	0.66	0.66	1.19	0.33	1.23	1.09	0.60
Avail Cap(c_a), veh/h	260	0	575	230	523	526	163	1078	471	193	1182	519
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	0.0	39.6	50.0	36.2	36.3	50.6	39.9	31.0	50.5	38.3	32.1
Incr Delay (d2), s/veh	13.5	0.0	20.3	14.6	3.2	3.3	8.2	96.2	0.4	140.3	54.3	2.0
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(50%),veh/ln	5.1	0.0	15.6	4.8	8.2	8.3	2.8	28.4	3.2	12.8	24.5	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	63.4	0.0	59.9	64.7	39.4	39.5	58.8	136.1	31.4	190.8	92.6	34.1
LnGrp LOS	E		E	E	D	D	E	F	C	F	F	C
Approach Vol, veh/h		649			809			1534			1840	
Approach Delay, s/veh		60.7			44.1			120.9			95.3	
Approach LOS		E			D			F			F	

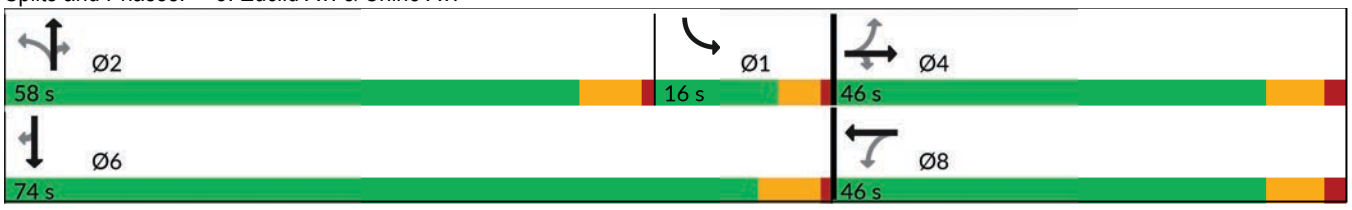
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	40.0	16.6	39.3	14.7	43.3	17.1	38.7
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	12.8	34.0	15.3	35.0	10.8	36.0	17.3	33.0
Max Q Clear Time (g_c+I1), s	14.8	36.0	11.7	30.9	8.1	39.3	12.4	20.4
Green Ext Time (p_c), s	0.0	0.0	0.1	1.4	0.0	0.0	0.1	4.1

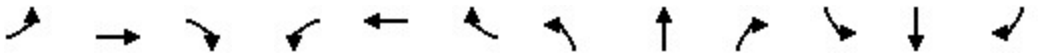
Intersection Summary	
HCM 7th Control Delay, s/veh	90.2
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	156	628	45	108	146	44	1359	247	92	1291	76
Future Volume (vph)	156	628	45	108	146	44	1359	247	92	1291	76
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	46.0	46.0	46.0	46.0	46.0	58.0	58.0	58.0	16.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	48.3%	48.3%	48.3%	13.3%	61.7%	61.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2		7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	38.8	38.8	38.8		38.8	50.3	50.3	50.3	10.8	65.8	65.8
Actuated g/C Ratio	0.33	0.33	0.33		0.33	0.43	0.43	0.43	0.09	0.56	0.56
v/c Ratio	0.58	1.06	0.08		7.12	0.69	0.93	0.35	0.63	0.68	0.09
Control Delay (s/veh)	43.2	92.5	0.7		Error	79.8	44.4	15.4	70.4	20.8	4.1
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.2	92.5	0.7		Error	79.8	44.4	15.4	70.4	20.8	4.1
LOS	D	F	A		F	E	D	B	E	C	A
Approach Delay (s/veh)		78.3			2778.8		41.0			23.0	
Approach LOS		E			F		D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 7.12	
Intersection Signal Delay (s/veh): 254.7	Intersection LOS: F
Intersection Capacity Utilization 118.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	628	45	108	146	77	44	1359	247	92	1291	76
Future Volume (veh/h)	156	628	45	108	146	77	44	1359	247	92	1291	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1900	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	164	661	34	114	154	75	46	1431	207	97	1359	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	257	617	523	40	40	11	119	1536	685	138	2023	880
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.43	0.43	0.43	0.08	0.56	0.56
Sat Flow, veh/h	1108	1900	1610	0	123	34	366	3610	1610	1714	3610	1571
Grp Volume(v), veh/h	164	661	34	343	0	0	46	1431	207	97	1359	54
Grp Sat Flow(s),veh/h/ln	1108	1900	1610	157	0	0	366	1805	1610	1714	1805	1571
Q Serve(g_s), s	0.0	38.8	1.7	0.0	0.0	0.0	14.4	45.1	10.1	6.6	31.7	1.9
Cycle Q Clear(g_c), s	29.9	38.8	1.7	38.8	0.0	0.0	46.1	45.1	10.1	6.6	31.7	1.9
Prop In Lane	1.00		1.00	0.33		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	617	523	91	0	0	119	1536	685	138	2023	880
V/C Ratio(X)	0.64	1.07	0.06	3.76	0.00	0.00	0.39	0.93	0.30	0.70	0.67	0.06
Avail Cap(c_a), veh/h	257	617	523	91	0	0	121	1557	695	162	2041	888
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	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	40.3	27.8	38.9	0.0	0.0	48.2	32.7	22.6	53.5	18.5	12.0
Incr Delay (d2), s/veh	5.1	56.5	0.1	1269.5	0.0	0.0	2.1	10.4	0.2	7.6	0.9	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(50%),veh/ln	4.6	27.1	0.7	34.8	0.0	0.0	1.3	20.0	3.6	3.0	11.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.4	96.8	27.8	1308.4	0.0	0.0	50.2	43.1	22.9	61.1	19.4	12.0
LnGrp LOS	D	F	C	F			D	D	C	E	B	B
Approach Vol, veh/h		859			343			1684			1510	
Approach Delay, s/veh		83.7			1308.4			40.8			21.8	
Approach LOS		F			F			D			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.1	57.3		46.0		73.4		46.0				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	11.3	* 52		38.8		67.5		38.8				
Max Q Clear Time (g_c+I1), s	8.6	48.1		40.8		33.7		40.8				
Green Ext Time (p_c), s	0.0	2.7		0.0		11.3		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		141.6
HCM 7th LOS		F

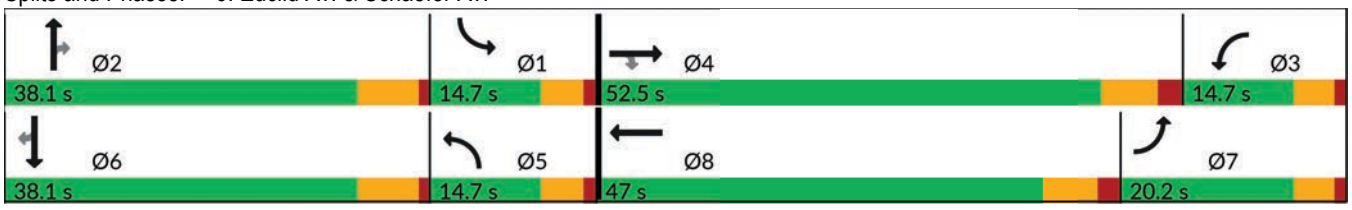
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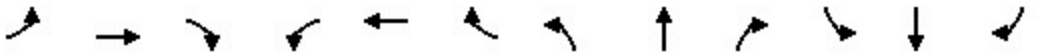
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	218	584	134	107	175	76	1331	187	195	1181	126
Future Volume (vph)	218	584	134	107	175	76	1331	187	195	1181	126
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	29.5	14.7	37.5	37.5
Total Split (s)	20.2	52.5	52.5	14.7	47.0	14.7	38.1	38.1	14.7	38.1	38.1
Total Split (%)	16.8%	43.8%	43.8%	12.3%	39.2%	12.3%	31.8%	31.8%	12.3%	31.8%	31.8%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	25.4	40.5	40.5	10.0	25.1	10.0	31.7	31.7	10.0	35.0	35.0
Actuated g/C Ratio	0.22	0.35	0.35	0.09	0.22	0.09	0.28	0.28	0.09	0.30	0.30
v/c Ratio	0.61	0.92	0.22	0.76	0.77	0.54	1.41	0.38	1.39	1.14	0.24
Control Delay (s/veh)	50.3	56.3	6.9	83.8	50.0	66.1	224.3	16.4	247.8	110.8	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.3	56.3	6.9	83.8	50.0	66.1	224.3	16.4	247.8	110.8	8.6
LOS	D	E	A	F	D	E	F	B	F	F	A
Approach Delay (s/veh)		47.8			58.9		192.3			119.9	
Approach LOS		D			E		F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.41	
Intersection Signal Delay (s/veh): 125.1	Intersection LOS: F
Intersection Capacity Utilization 106.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	584	134	107	175	125	76	1331	187	195	1181	126
Future Volume (veh/h)	218	584	134	107	175	125	76	1331	187	195	1181	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	229	615	80	113	184	120	80	1401	194	205	1243	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	405	661	560	146	212	138	151	1002	438	151	1002	435
Arrive On Green	0.24	0.35	0.35	0.09	0.20	0.20	0.09	0.28	0.28	0.09	0.28	0.28
Sat Flow, veh/h	1714	1900	1609	1714	1073	700	1714	3610	1576	1714	3610	1566
Grp Volume(v), veh/h	229	615	80	113	0	304	80	1401	194	205	1243	90
Grp Sat Flow(s),veh/h/ln	1714	1900	1609	1714	0	1773	1714	1805	1576	1714	1805	1566
Q Serve(g_s), s	13.4	35.5	3.9	7.3	0.0	18.9	5.1	31.6	11.5	10.0	31.6	5.0
Cycle Q Clear(g_c), s	13.4	35.5	3.9	7.3	0.0	18.9	5.1	31.6	11.5	10.0	31.6	5.0
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	405	661	560	146	0	350	151	1002	438	151	1002	435
V/C Ratio(X)	0.57	0.93	0.14	0.77	0.00	0.87	0.53	1.40	0.44	1.36	1.24	0.21
Avail Cap(c_a), veh/h	405	760	643	151	0	623	151	1002	438	151	1002	435
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	35.8	25.5	51.0	0.0	44.3	49.7	41.1	33.9	51.9	41.1	31.5
Incr Delay (d2), s/veh	1.2	16.3	0.1	19.0	0.0	5.1	1.8	185.0	0.7	199.1	116.6	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(50%),veh/ln	5.6	18.5	1.4	3.8	0.0	8.5	2.2	38.8	4.3	12.4	29.3	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.5	52.1	25.6	69.9	0.0	49.3	51.5	226.1	34.6	251.0	157.7	31.7
LnGrp LOS	D	D	C	E		D	D	F	C	F	F	C
Approach Vol, veh/h		924			417			1675			1538	
Approach Delay, s/veh		46.7			54.9			195.6			162.7	
Approach LOS		D			D			F			F	

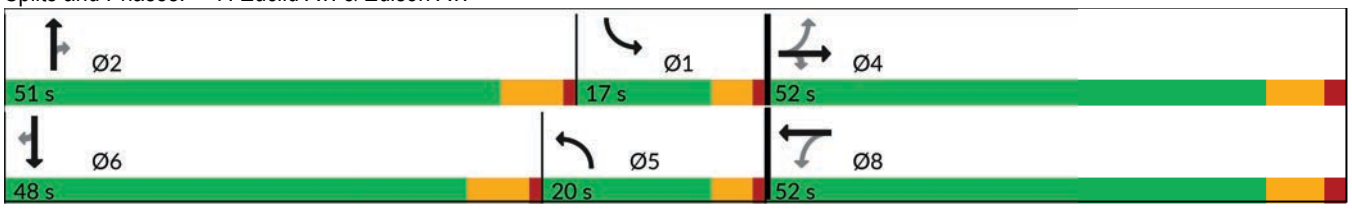
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	38.1	14.4	46.6	14.7	38.1	31.6	29.4
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	10.0	31.6	10.0	45.5	10.0	31.6	15.5	40.0
Max Q Clear Time (g_c+I1), s	12.0	33.6	9.3	37.5	7.1	33.6	15.4	20.9
Green Ext Time (p_c), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	1.2

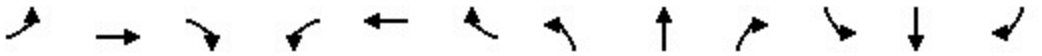
Intersection Summary	
HCM 7th Control Delay, s/veh	141.4
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	241	857	232	100	360	248	1316	130	158	991	218
Future Volume (vph)	241	857	232	100	360	248	1316	130	158	991	218
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	44.2	44.2	44.2	45.2	45.2	14.7	26.5	26.5	14.7	37.5	37.5
Total Split (s)	52.0	52.0	52.0	52.0	52.0	20.0	51.0	51.0	17.0	48.0	48.0
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	16.7%	42.5%	42.5%	14.2%	40.0%	40.0%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	44.8	44.8	44.8	44.8	44.8	17.2	44.5	44.5	12.3	39.6	39.6
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.37	0.14	0.37	0.37	0.10	0.33	0.33
v/c Ratio	1.30	1.27	0.35	1.78	0.66	0.58	1.04	0.22	0.95	0.88	0.36
Control Delay (s/veh)	201.4	166.7	12.6	437.3	36.1	54.5	71.5	12.1	109.7	47.2	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	201.4	166.7	12.6	437.3	36.1	54.5	71.5	12.1	109.7	47.2	9.8
LOS	F	F	B	F	D	D	E	B	F	D	A
Approach Delay (s/veh)		146.1			110.7		64.4			48.4	
Approach LOS		F			F		E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.78	
Intersection Signal Delay (s/veh): 87.1	Intersection LOS: F
Intersection Capacity Utilization 120.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Euclid Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	241	857	232	100	360	77	248	1316	130	158	991	218
Future Volume (veh/h)	241	857	232	100	360	77	248	1316	130	158	991	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	254	902	176	105	379	76	261	1385	122	166	1043	202
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	211	709	601	60	572	115	475	1339	585	176	1163	509
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.15	0.37	0.37	0.10	0.32	0.32
Sat Flow, veh/h	901	1900	1610	504	1532	307	3141	3610	1576	1714	3610	1581
Grp Volume(v), veh/h	254	902	176	105	0	455	261	1385	122	166	1043	202
Grp Sat Flow(s),veh/h/ln	901	1900	1610	504	0	1839	1570	1805	1576	1714	1805	1581
Q Serve(g_s), s	20.1	44.8	9.2	0.0	0.0	24.7	9.2	44.5	6.3	11.5	33.1	11.9
Cycle Q Clear(g_c), s	44.8	44.8	9.2	44.8	0.0	24.7	9.2	44.5	6.3	11.5	33.1	11.9
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	709	601	60	0	687	475	1339	585	176	1163	509
V/C Ratio(X)	1.21	1.27	0.29	1.75	0.00	0.66	0.55	1.03	0.21	0.94	0.90	0.40
Avail Cap(c_a), veh/h	211	709	601	60	0	687	475	1339	585	176	1248	547
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	37.6	26.5	60.0	0.0	31.3	47.1	37.8	25.7	53.5	38.8	31.6
Incr Delay (d2), s/veh	128.5	133.1	0.3	397.0	0.0	2.4	0.8	34.0	0.2	51.3	8.5	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(50%),veh/ln	13.8	45.8	3.5	8.4	0.0	10.9	3.5	24.4	2.3	7.3	15.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	181.3	170.7	26.7	457.0	0.0	33.7	47.9	71.7	25.9	104.8	47.2	32.1
LnGrp LOS	F	F	C	F		C	D	F	C	F	D	C
Approach Vol, veh/h		1332			560			1768			1411	
Approach Delay, s/veh		153.7			113.1			65.1			51.9	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	51.0		52.0	22.9	45.1		52.0				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	12.3	44.5		44.8	15.3	41.5		44.8				
Max Q Clear Time (g_c+I1), s	13.5	46.5		46.8	11.2	35.1		46.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.2	3.6		0.0				

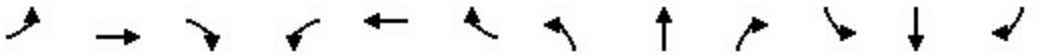
Intersection Summary	
HCM 7th Control Delay, s/veh	90.0
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	74	582	41	120	110	350	1672	55	236	1539	114
Future Volume (vph)	74	582	41	120	110	350	1672	55	236	1539	114
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	45.2	45.2	44.2	44.2	44.2	14.7	28.5	28.5	14.7	35.5	35.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	18.0	60.1	60.1	14.7	56.8	56.8
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	15.0%	50.1%	50.1%	12.3%	47.3%	47.3%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	38.0	38.0	38.0	38.0	38.0	13.3	53.6	53.6	10.0	50.3	50.3
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.11	0.45	0.45	0.08	0.42	0.42
v/c Ratio	0.20	0.97	0.73	0.21	0.20	1.03	1.04	0.08	0.92	1.02	0.16
Control Delay (s/veh)	31.7	54.6	98.0	31.2	6.1	107.9	65.2	2.1	92.9	61.9	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.7	54.6	98.0	31.2	6.1	107.9	65.2	2.1	92.9	61.9	4.3
LOS	C	D	F	C	A	F	E	A	F	E	A
Approach Delay (s/veh)		53.3		31.1			70.7			62.3	
Approach LOS		D		C			E			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay (s/veh): 61.9	Intersection LOS: E
Intersection Capacity Utilization 105.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: Euclid Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	582	565	41	120	110	350	1672	55	236	1539	114
Future Volume (veh/h)	74	582	565	41	120	110	350	1672	55	236	1539	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	78	613	428	43	126	104	368	1760	55	248	1620	102
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	368	660	460	81	602	510	359	1697	719	270	1593	675
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.17	0.67	0.67	0.13	0.63	0.63
Sat Flow, veh/h	1107	2084	1454	522	1900	1610	3238	3800	1610	3238	3800	1610
Grp Volume(v), veh/h	78	559	482	43	126	104	368	1760	55	248	1620	102
Grp Sat Flow(s),veh/h/ln	1107	1900	1638	522	1900	1610	1619	1900	1610	1619	1900	1610
Q Serve(g_s), s	5.5	33.2	33.2	4.8	4.6	4.5	13.3	53.6	1.4	9.1	50.3	3.1
Cycle Q Clear(g_c), s	10.1	33.2	33.2	38.0	4.6	4.5	13.3	53.6	1.4	9.1	50.3	3.1
Prop In Lane	1.00		0.89	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	368	602	519	81	602	510	359	1697	719	270	1593	675
V/C Ratio(X)	0.21	0.93	0.93	0.53	0.21	0.20	1.03	1.04	0.08	0.92	1.02	0.15
Avail Cap(c_a), veh/h	368	602	519	81	602	510	359	1697	719	270	1593	675
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	30.2	30.2	49.3	22.7	22.7	50.0	19.8	11.2	52.1	22.3	13.5
Incr Delay (d2), s/veh	0.2	20.8	23.3	5.3	0.1	0.1	54.2	32.1	0.0	33.9	26.9	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(50%),veh/ln	1.3	15.6	13.8	1.3	2.0	1.6	7.5	20.4	0.5	4.7	19.6	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.9	51.1	53.5	54.6	22.9	22.9	104.2	51.9	11.2	86.0	49.2	13.6
LnGrp LOS	C	D	D	D	C	C	F	F	B	F	F	B
Approach Vol, veh/h		1119			273			2183			1970	
Approach Delay, s/veh		50.4			27.9			59.7			52.0	
Approach LOS		D			C			E			D	

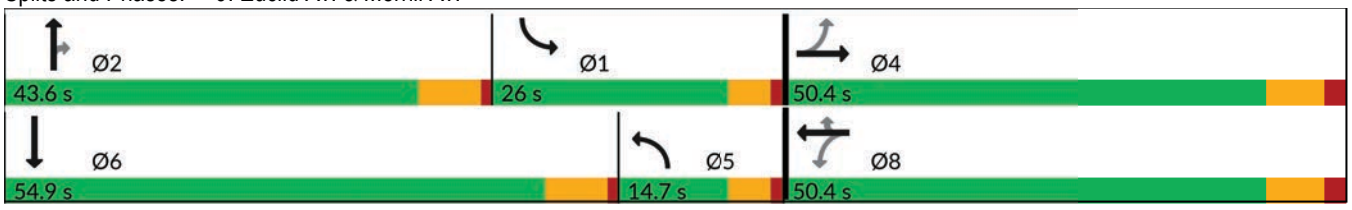
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	60.1		45.2	18.0	56.8		45.2				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.0	53.6		38.0	13.3	50.3		38.0				
Max Q Clear Time (g_c+I1), s	11.1	55.6		35.2	15.3	52.3		40.0				
Green Ext Time (p_c), s	0.0	0.0		1.5	0.0	0.0		0.0				

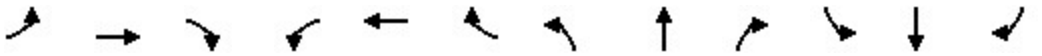
Intersection Summary	
HCM 7th Control Delay, s/veh	53.5
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	8	17	492	2	359	7	1122	580	556	1307
Future Volume (vph)	8	17	492	2	359	7	1122	580	556	1307
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		4		8		5	2		1	6
Permitted Phases	4		8		8			2		
Detector Phase	4	4	8	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	47.2	47.2	47.2	14.7	28.5	28.5	14.7	28.5
Total Split (s)	50.4	50.4	50.4	50.4	50.4	14.7	43.6	43.6	26.0	54.9
Total Split (%)	42.0%	42.0%	42.0%	42.0%	42.0%	12.3%	36.3%	36.3%	21.7%	45.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		43.2	43.2	43.2	43.2	10.0	37.1	37.1	21.3	60.2
Actuated g/C Ratio		0.36	0.36	0.36	0.36	0.08	0.31	0.31	0.18	0.50
v/c Ratio		0.06	1.10	0.00	0.48	0.05	1.06	0.96	1.05	0.76
Control Delay (s/veh)		18.6	106.8	24.5	7.9	51.6	84.0	54.6	100.1	28.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		18.6	106.8	24.5	7.9	51.6	84.0	54.6	100.1	28.6
LOS		B	F	C	A	D	F	D	F	C
Approach Delay (s/veh)		18.6		64.9			73.9			49.9
Approach LOS		B		E			E			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay (s/veh): 61.7	Intersection LOS: E
Intersection Capacity Utilization 99.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: Euclid Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	17	13	492	2	359	7	1122	580	556	1307	4
Future Volume (veh/h)	8	17	13	492	2	359	7	1122	580	556	1307	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	8	18	11	518	2	325	7	1181	603	585	1376	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	137	303	171	543	684	580	164	1116	487	558	1443	4
Arrive On Green	0.36	0.54	0.36	0.36	0.54	0.36	0.14	0.46	0.46	0.27	0.59	0.59
Sat Flow, veh/h	280	842	475	1329	1900	1610	1714	3610	1576	3141	3692	11
Grp Volume(v), veh/h	37	0	0	518	2	325	7	1181	603	585	673	707
Grp Sat Flow(s),veh/h/ln	1597	0	0	1329	1900	1610	1714	1805	1576	1570	1805	1898
Q Serve(g_s), s	0.0	0.0	0.0	41.8	0.1	19.4	0.4	37.1	37.1	21.3	42.0	42.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	43.2	0.1	19.4	0.4	37.1	37.1	21.3	42.0	42.0
Prop In Lane	0.22		0.30	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	611	0	0	543	684	580	164	1116	487	558	705	742
V/C Ratio(X)	0.06	0.00	0.00	0.95	0.00	0.56	0.04	1.06	1.24	1.05	0.95	0.95
Avail Cap(c_a), veh/h	611	0	0	543	684	580	164	1116	487	558	728	765
HCM Platoon Ratio	1.00	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	0.0	0.0	39.7	17.7	30.8	46.6	32.2	32.2	44.0	23.8	23.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	27.2	0.0	0.8	0.0	43.7	123.5	51.7	22.3	21.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	18.9	0.0	7.3	0.2	19.1	27.5	11.0	16.3	17.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.6	0.0	0.0	66.9	17.7	31.5	46.7	75.9	155.7	95.7	46.2	45.5
LnGrp LOS	C			E	B	C	D	F	F	F	D	D
Approach Vol, veh/h		37			845			1791			1965	
Approach Delay, s/veh		21.6			53.2			102.7			60.7	
Approach LOS		C			D			F			E	

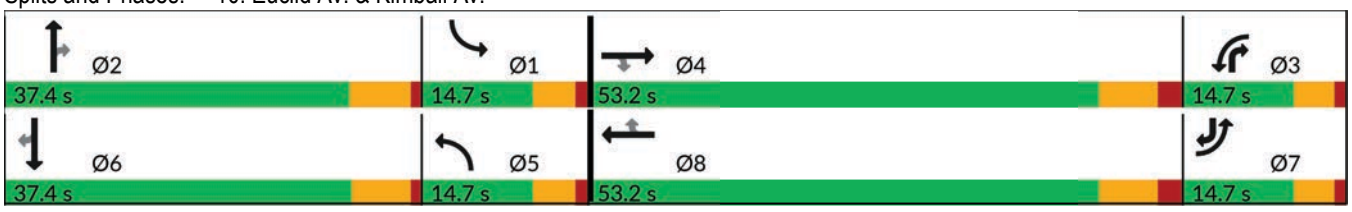
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.0	43.6		50.4	16.2	53.4		50.4				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	21.3	37.1		43.2	10.0	48.4		43.2				
Max Q Clear Time (g_c+I1), s	23.3	39.1		3.4	2.4	44.0		45.2				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	2.9		0.0				

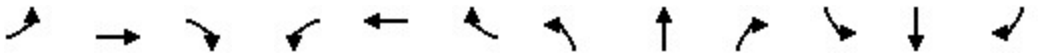
Intersection Summary		
HCM 7th Control Delay, s/veh		75.2
HCM 7th LOS		E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	357	1126	81	65	733	240	174	914	88	613	795	297
Future Volume (vph)	357	1126	81	65	733	240	174	914	88	613	795	297
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	14.7	37.4	14.7
Total Split (s)	14.7	53.2	53.2	14.7	53.2	53.2	14.7	37.4	14.7	14.7	37.4	14.7
Total Split (%)	12.3%	44.3%	44.3%	12.3%	44.3%	44.3%	12.3%	31.2%	12.3%	12.3%	31.2%	12.3%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	3.7	5.4	3.7
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	4.7	6.4	4.7
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.8	42.1	42.1	10.0	31.3	31.3	12.0	31.0	47.5	10.0	29.0	51.5
Actuated g/C Ratio	0.18	0.36	0.36	0.09	0.27	0.27	0.10	0.27	0.41	0.09	0.25	0.44
v/c Ratio	0.65	0.86	0.13	0.46	0.75	0.43	1.03	0.95	0.13	2.32	0.88	0.42
Control Delay (s/veh)	51.7	41.7	2.2	62.8	43.4	8.3	129.7	61.3	6.9	629.0	53.9	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.7	41.7	2.2	62.8	43.4	8.3	129.7	61.3	6.9	629.0	53.9	17.3
LOS	D	D	A	E	D	A	F	E	A	F	D	B
Approach Delay (s/veh)		42.0			36.5			67.3			254.2	
Approach LOS		D			D			E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.32	
Intersection Signal Delay (s/veh): 112.4	Intersection LOS: F
Intersection Capacity Utilization 103.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	357	1126	81	65	733	240	174	914	88	613	795	297
Future Volume (veh/h)	357	1126	81	65	733	240	174	914	88	613	795	297
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
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	1700	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	376	1185	53	68	772	160	183	962	62	645	837	286
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	631	1338	560	135	897	380	189	1029	563	292	956	712
Arrive On Green	0.29	0.53	0.53	0.12	0.35	0.35	0.17	0.41	0.41	0.14	0.38	0.38
Sat Flow, veh/h	3238	3800	1590	1714	3800	1610	1714	3800	1610	3238	3800	1584
Grp Volume(v), veh/h	376	1185	53	68	772	160	183	962	62	645	837	286
Grp Sat Flow(s),veh/h/ln	1619	1900	1590	1714	1900	1610	1714	1900	1610	1619	1900	1584
Q Serve(g_s), s	11.0	30.7	1.8	4.1	20.9	8.4	11.8	26.9	0.0	10.0	22.7	0.0
Cycle Q Clear(g_c), s	11.0	30.7	1.8	4.1	20.9	8.4	11.8	26.9	0.0	10.0	22.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	631	1338	560	135	897	380	189	1029	563	292	956	712
V/C Ratio(X)	0.60	0.89	0.09	0.50	0.86	0.42	0.97	0.93	0.11	2.21	0.88	0.40
Avail Cap(c_a), veh/h	631	1575	659	154	1575	667	189	1058	575	292	1061	756
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	24.2	17.4	46.9	34.1	30.1	46.1	32.0	19.7	48.0	32.9	16.6
Incr Delay (d2), s/veh	1.1	5.8	0.1	2.9	1.0	0.3	55.8	14.4	0.1	556.1	7.8	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	10.9	0.7	1.8	8.0	2.9	7.4	11.6	0.9	26.2	9.3	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.6	30.0	17.5	49.7	35.1	30.4	101.9	46.4	19.8	604.1	40.7	17.0
LnGrp LOS	D	C	B	D	D	C	F	D	B	F	D	B
Approach Vol, veh/h		1614			1000			1207			1768	
Approach Delay, s/veh		31.1			35.3			53.5			242.4	
Approach LOS		C			D			D			F	

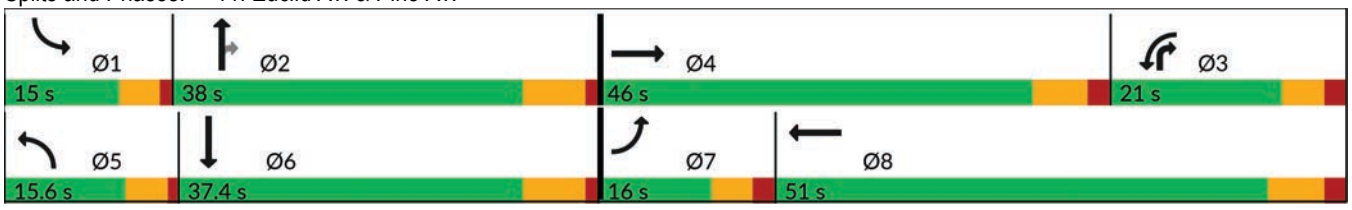
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	36.6	13.5	46.3	16.9	34.3	26.3	33.4
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	10.0	30.9	10.0	46.0	10.0	31.0	10.0	46.0
Max Q Clear Time (g_c+I1), s	12.0	28.9	6.1	32.7	13.8	24.7	13.0	22.9
Green Ext Time (p_c), s	0.0	1.2	0.0	6.4	0.0	3.1	0.0	3.3

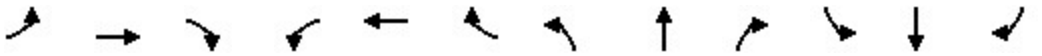
Intersection Summary	
HCM 7th Control Delay, s/veh	103.5
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	40	621	450	364	56	700	853	116	658
Future Volume (vph)	40	621	450	364	56	700	853	116	658
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	16.0	46.0	21.0	51.0	15.6	38.0	21.0	15.0	37.4
Total Split (%)	13.3%	38.3%	17.5%	42.5%	13.0%	31.7%	17.5%	12.5%	31.2%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.1	39.1	15.3	50.9	10.2	26.1	42.3	10.3	29.3
Actuated g/C Ratio	0.09	0.34	0.13	0.44	0.09	0.23	0.37	0.09	0.26
v/c Ratio	0.28	1.23	1.10	0.53	0.39	0.85	1.34	0.80	0.75
Control Delay (s/veh)	55.8	149.4	119.6	28.5	58.8	52.7	187.8	87.2	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.8	149.4	119.6	28.5	58.8	52.7	187.8	87.2	45.7
LOS	E	F	F	C	E	D	F	F	D
Approach Delay (s/veh)		144.6		75.9		124.5			51.6
Approach LOS		F		E		F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114.7	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.34	
Intersection Signal Delay (s/veh): 103.5	Intersection LOS: F
Intersection Capacity Utilization 115.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	621	119	450	364	50	56	700	853	116	658	34
Future Volume (veh/h)	40	621	119	450	364	50	56	700	853	116	658	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	42	654	0	474	383	48	59	737	451	122	693	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	110	645		431	694	87	127	845	565	146	859	25
Arrive On Green	0.10	0.51	0.00	0.20	0.63	0.63	0.11	0.33	0.33	0.13	0.35	0.35
Sat Flow, veh/h	1714	1900	0	3238	1653	207	1714	3800	1575	1714	3672	106
Grp Volume(v), veh/h	42	654	0	474	0	431	59	737	451	122	358	355
Grp Sat Flow(s),veh/h/ln	1714	1900	0	1619	0	1860	1714	1900	1575	1714	1900	1878
Q Serve(g_s), s	2.6	39.0	0.0	15.3	0.0	15.1	3.7	20.9	6.2	8.0	19.6	19.6
Cycle Q Clear(g_c), s	2.6	39.0	0.0	15.3	0.0	15.1	3.7	20.9	6.2	8.0	19.6	19.6
Prop In Lane	1.00		0.00	1.00		0.11	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	110	645		431	0	781	127	845	565	146	444	439
V/C Ratio(X)	0.38	1.01		1.10	0.00	0.55	0.47	0.87	0.80	0.83	0.81	0.81
Avail Cap(c_a), veh/h	154	645		431	0	781	163	1042	647	154	511	505
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	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	49.7	28.2	0.0	45.9	0.0	15.1	48.9	36.7	11.5	49.3	34.9	34.9
Incr Delay (d2), s/veh	0.8	38.9	0.0	72.8	0.0	1.1	1.0	6.1	5.3	28.0	7.0	7.1
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(50%),veh/ln	1.1	20.5	0.0	9.8	0.0	5.0	1.5	8.6	5.4	4.3	8.2	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.5	67.0	0.0	118.7	0.0	16.2	49.9	42.8	16.8	77.2	41.9	42.1
LnGrp LOS	D	F		F		B	D	D	B	E	D	D
Approach Vol, veh/h		696			905			1247			835	
Approach Delay, s/veh		66.0			69.9			33.7			47.2	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	32.0	22.3	46.0	13.2	33.4	13.1	55.2
Change Period (Y+Rc), s	4.7	6.5	7.0	* 7	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.3	31.5	15.3	* 39	10.9	30.9	10.3	44.0
Max Q Clear Time (g_c+I1), s	10.0	22.9	17.3	41.0	5.7	21.6	4.6	17.1
Green Ext Time (p_c), s	0.0	2.6	0.0	0.0	0.0	1.7	0.0	3.6

Intersection Summary	
HCM 7th Control Delay, s/veh	51.8
HCM 7th LOS	D

Notes

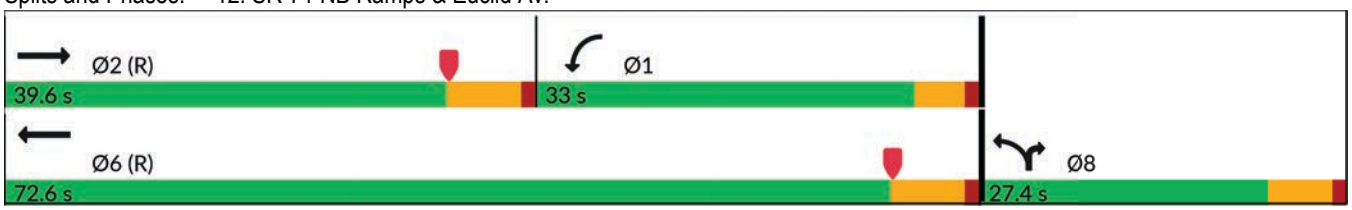
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	833	508	742	74	865
Future Volume (vph)	833	508	742	74	865
Turn Type	NA	Prot	NA	Prot	Prot
Protected Phases	2	1	6	8	8
Permitted Phases					
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	31.5	12.7	24.5	13.8	13.8
Total Split (s)	39.6	33.0	72.6	27.4	27.4
Total Split (%)	39.6%	33.0%	72.6%	27.4%	27.4%
Yellow Time (s)	5.5	3.7	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.7	6.5	5.8	5.8
Lead/Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	None
Act Effct Green (s)	31.4	30.0	66.1	21.6	21.6
Actuated g/C Ratio	0.31	0.30	0.66	0.22	0.22
v/c Ratio	0.89	1.04	0.33	0.12	1.23
Control Delay (s/veh)	33.5	88.1	7.8	32.1	131.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.5	88.1	7.8	32.1	131.8
LOS	C	F	A	C	F
Approach Delay (s/veh)	33.5		40.4	124.0	
Approach LOS	C		D	F	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay (s/veh): 63.4	Intersection LOS: E
Intersection Capacity Utilization 90.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: SR-71 NB Ramps & Euclid Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	833	111	508	742	74	865
Future Volume (veh/h)	833	111	508	742	74	865
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1900	1900	1800	1900	1700	1900
Adj Flow Rate, veh/h	877	0	535	781	78	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1018		787	2910	222	
Arrive On Green	0.19	0.00	0.46	0.81	0.07	0.00
Sat Flow, veh/h	3800	0	1714	3705	3141	1610
Grp Volume(v), veh/h	877	0	535	781	78	0
Grp Sat Flow(s),veh/h/ln	1805	0	1714	1805	1570	1610
Q Serve(g_s), s	23.5	0.0	24.5	5.4	2.4	0.0
Cycle Q Clear(g_c), s	23.5	0.0	24.5	5.4	2.4	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1018		787	2910	222	
V/C Ratio(X)	0.86		0.68	0.27	0.35	
Avail Cap(c_a), veh/h	1195		787	2910	678	
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.7	0.0	21.3	2.4	44.3	0.0
Incr Delay (d2), s/veh	6.8	0.0	2.0	0.2	0.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	0.0	9.0	0.8	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	45.4	0.0	23.2	2.6	45.2	0.0
LnGrp LOS	D		C	A	D	
Approach Vol, veh/h	877			1316	78	
Approach Delay, s/veh	45.4			11.0	45.2	
Approach LOS	D			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	52.4	34.7				87.1	12.9
Change Period (Y+Rc), s	6.5	* 6.5				6.5	5.8
Max Green Setting (Gmax), s	28.3	* 33				66.1	21.6
Max Q Clear Time (g_c+I1), s	26.5	25.5				7.4	4.4
Green Ext Time (p_c), s	0.2	2.7				4.1	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	25.5
HCM 7th LOS	C

Notes

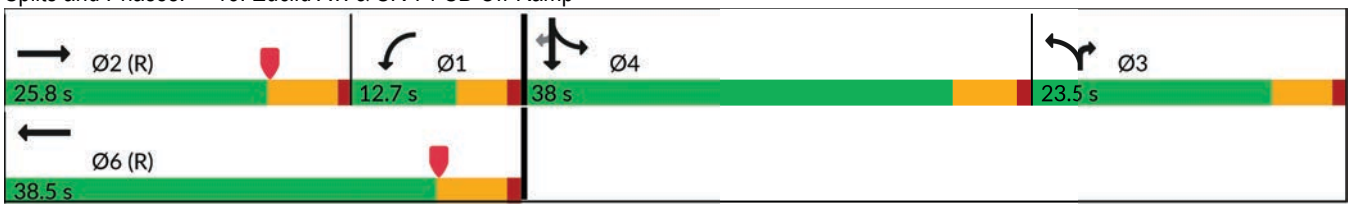
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

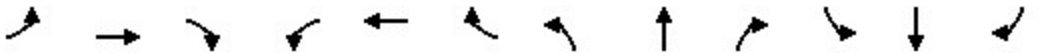
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	441	95	150	25	139	815	83	59
Future Volume (vph)	441	95	150	25	139	815	83	59
Turn Type	NA	Prot	NA	Prot	Prot	Split	NA	Perm
Protected Phases	2	1	6	3	3	4	4	
Permitted Phases								4
Detector Phase	2	1	6	3	3	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	25.2	12.7	27.2	23.5	23.5	34.8	34.8	34.8
Total Split (s)	25.8	12.7	38.5	23.5	23.5	38.0	38.0	38.0
Total Split (%)	25.8%	12.7%	38.5%	23.5%	23.5%	38.0%	38.0%	38.0%
Yellow Time (s)	5.2	3.7	5.2	4.5	4.5	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	4.7	6.2	5.5	5.5	5.8	5.8	5.8
Lead/Lag	Lead	Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	28.8	9.1	42.6	8.5	8.5	31.4	31.4	31.4
Actuated g/C Ratio	0.29	0.09	0.43	0.09	0.09	0.31	0.31	0.31
v/c Ratio	0.49	0.65	0.15	0.18	0.51	0.93	0.87	0.10
Control Delay (s/veh)	31.4	58.1	10.3	45.2	11.5	59.4	50.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.4	58.1	10.3	45.2	11.5	59.4	50.1	0.3
LOS	C	E	B	D	B	E	D	A
Approach Delay (s/veh)	31.4		25.0				51.4	
Approach LOS	C		C				D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay (s/veh): 39.1	Intersection LOS: D
Intersection Capacity Utilization 65.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: Euclid Av. & SR-71 SB Off-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	441	42	95	150	63	25	0	139	815	83	59
Future Volume (veh/h)	0	441	42	95	150	63	25	0	139	815	83	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1900	1900	1800	1900	1900	1800	0	1900	1800	1900	1900
Adj Flow Rate, veh/h	0	464	25	100	158	0	26	0	59	920	0	44
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	548	29	630	2118		0	0	0	1005	0	472
Arrive On Green	0.00	0.16	0.16	0.61	0.98	0.00	0.00	0.00	0.00	0.29	0.00	0.29
Sat Flow, veh/h	0	3574	187	1714	3705	0		0		3429	0	1610
Grp Volume(v), veh/h	0	240	249	100	158	0		0.0		920	0	44
Grp Sat Flow(s),veh/h/ln	0	1805	1861	1714	1805	0				1714	0	1610
Q Serve(g_s), s	0.0	12.9	13.0	2.5	0.1	0.0				25.9	0.0	2.0
Cycle Q Clear(g_c), s	0.0	12.9	13.0	2.5	0.1	0.0				25.9	0.0	2.0
Prop In Lane	0.00		0.10	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	284	293	630	2118					1005	0	472
V/C Ratio(X)	0.00	0.84	0.85	0.16	0.07					0.92	0.00	0.09
Avail Cap(c_a), veh/h	0	354	365	630	2118					1104	0	518
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	40.9	41.0	12.7	0.4	0.0				34.1	0.0	25.7
Incr Delay (d2), s/veh	0.0	25.3	25.2	0.0	0.1	0.0				10.8	0.0	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	0.0	7.5	7.8	0.9	0.0	0.0				12.0	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	66.2	66.1	12.8	0.5	0.0				45.0	0.0	25.7
LnGrp LOS		E	E	B	A					D		C
Approach Vol, veh/h		489			258						964	
Approach Delay, s/veh		66.2			5.2						44.1	
Approach LOS		E			A						D	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	42.9	22.0		35.1		64.9						
Change Period (Y+Rc), s	6.2	* 6.2		5.8		6.2						
Max Green Setting (Gmax), s	8.0	* 20		32.2		32.3						
Max Q Clear Time (g_c+I1), s	4.5	15.0		27.9		2.1						
Green Ext Time (p_c), s	0.0	0.7		1.4		0.5						

Intersection Summary		
HCM 7th Control Delay, s/veh		44.6
HCM 7th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	33.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	847	40	30	398	61	30	42	121	44	9	15
Future Vol, veh/h	20	847	40	30	398	61	30	42	121	44	9	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	21	892	42	32	419	64	32	44	127	46	9	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	483	0	0	934	0	0	1442	1501	913	1470	1490	451
Stage 1	-	-	-	-	-	-	955	955	-	514	514	-
Stage 2	-	-	-	-	-	-	487	546	-	956	976	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1090	-	-	741	-	-	111	123	334	106	125	613
Stage 1	-	-	-	-	-	-	313	340	-	547	539	-
Stage 2	-	-	-	-	-	-	566	521	-	313	332	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1090	-	-	741	-	-	91	111	334	~ 37	113	613
Mov Cap-2 Maneuver	-	-	-	-	-	-	91	111	-	~ 37	113	-
Stage 1	-	-	-	-	-	-	300	326	-	515	507	-
Stage 2	-	-	-	-	-	-	509	490	-	161	319	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.18	0.62	158.39	$ 370.56
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	180	39	-	-	108	-	-	53
HCM Lane V/C Ratio	1.128	0.019	-	-	0.043	-	-	1.352
HCM Ctrl Dly (s/v)	158.4	8.4	0	-	10.1	0	-	$ 370.6
HCM Lane LOS	F	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	10.3	0.1	-	-	0.1	-	-	6.5

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

Intersection	
Int Delay, s/veh	19.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	796	18	42	757	0	53	8	84	0	2	0
Future Vol, veh/h	0	796	18	42	757	0	53	8	84	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	838	19	44	797	0	56	8	88	0	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	797	0	0	857	0	0	1734	1733	847	-	1742	797
Stage 1	-	-	-	-	-	-	847	847	-	-	885	-
Stage 2	-	-	-	-	-	-	886	885	-	-	857	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	-	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	-	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	-	4	3.3
Pot Cap-1 Maneuver	834	-	-	792	-	-	70	89	365	0	88	390
Stage 1	-	-	-	-	-	-	359	381	-	0	366	-
Stage 2	-	-	-	-	-	-	342	366	-	0	377	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	834	-	-	792	-	-	61	80	365	-	79	390
Mov Cap-2 Maneuver	-	-	-	-	-	-	61	80	-	-	79	-
Stage 1	-	-	-	-	-	-	359	381	-	-	329	-
Stage 2	-	-	-	-	-	-	306	329	-	-	377	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.52	235.47	51.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	121	834	-	-	95	-	-	79
HCM Lane V/C Ratio	1.26	-	-	-	0.056	-	-	0.027
HCM Ctrl Dly (s/v)	235.5	0	-	-	9.8	0	-	51.9
HCM Lane LOS	F	A	-	-	A	A	-	F
HCM 95th %tile Q(veh)	9.8	0	-	-	0.2	-	-	0.1

Intersection	
Intersection Delay, s/veh	484.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	516	80	61	442	105	52	563	55	50	625	123
Future Vol, veh/h	83	516	80	61	442	105	52	563	55	50	625	123
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	87	543	84	64	465	111	55	593	58	53	658	129
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	465.2	381.2	457.1	603.7
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	12%	10%	6%
Vol Thru, %	84%	76%	73%	78%
Vol Right, %	8%	12%	17%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	670	679	608	798
LT Vol	52	83	61	50
Through Vol	563	516	442	625
RT Vol	55	80	105	123
Lane Flow Rate	705	715	640	840
Geometry Grp	1	1	1	1
Degree of Util (X)	1.873	1.896	1.691	2.221
Departure Headway (Hd)	20.807	20.149	21.46	18.858
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	183	186	179	202
Service Time	18.807	18.149	19.46	16.858
HCM Lane V/C Ratio	3.852	3.844	3.575	4.158
HCM Control Delay, s/veh	457.1	465.2	381.2	603.7
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	24	25.1	19.8	33.8

Intersection	
Intersection Delay, s/veh	414.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	88	631	129	26	351	55	48	525	12	28	477	45
Future Vol, veh/h	88	631	129	26	351	55	48	525	12	28	477	45
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	93	664	136	27	369	58	51	553	13	29	502	47
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	653	180.1	346.6	304
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	10%	6%	5%
Vol Thru, %	90%	74%	81%	87%
Vol Right, %	2%	15%	13%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	585	848	432	550
LT Vol	48	88	26	28
Through Vol	525	631	351	477
RT Vol	12	129	55	45
Lane Flow Rate	616	893	455	579
Geometry Grp	1	1	1	1
Degree of Util (X)	1.642	2.362	1.204	1.537
Departure Headway (Hd)	16.777	13.889	19.256	17.267
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	222	277	196	220
Service Time	14.777	11.889	17.256	15.267
HCM Lane V/C Ratio	2.775	3.224	2.321	2.632
HCM Control Delay, s/veh	346.6	653	180.1	304
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	23	48.8	11.9	20

Intersection	
Intersection Delay, s/veh	298.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	208	541	51	54	599	170	64	161	51	70	55	95
Future Vol, veh/h	208	541	51	54	599	170	64	161	51	70	55	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	219	569	54	57	631	179	67	169	54	74	58	100
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

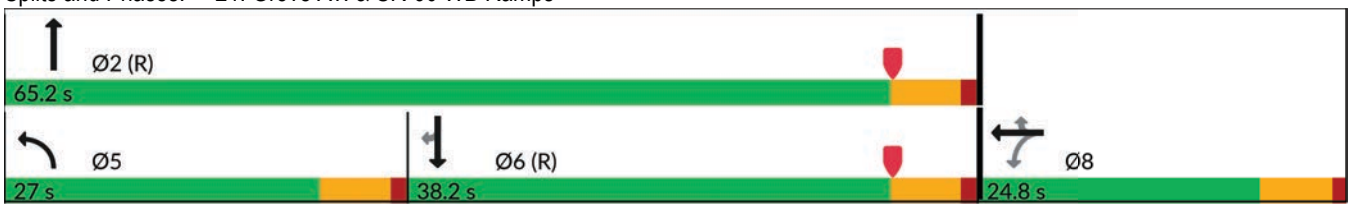
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	375.8	384.5	35.2	28.7
HCM LOS	F	F	E	D

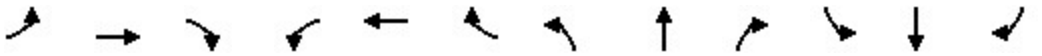
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	26%	7%	32%
Vol Thru, %	58%	68%	73%	25%
Vol Right, %	18%	6%	21%	43%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	276	800	823	220
LT Vol	64	208	54	70
Through Vol	161	541	599	55
RT Vol	51	51	170	95
Lane Flow Rate	291	842	866	232
Geometry Grp	1	1	1	1
Degree of Util (X)	0.671	1.764	1.785	0.546
Departure Headway (Hd)	11.557	9.107	8.941	12.092
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	317	404	416	301
Service Time	9.557	7.107	6.941	10.092
HCM Lane V/C Ratio	0.918	2.084	2.082	0.771
HCM Control Delay, s/veh	35.2	375.8	384.5	28.7
HCM Lane LOS	E	F	F	D
HCM 95th-tile Q	4.5	43.7	45.4	3.1

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	326	320	891	1132	864
Future Volume (vph)	0	326	320	891	1132	864
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	15.8	24.8	15.8	15.8
Total Split (s)	24.8	24.8	27.0	65.2	38.2	38.2
Total Split (%)	27.6%	27.6%	30.0%	72.4%	42.4%	42.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	17.2	17.2	19.9	61.2	35.6	35.6
Actuated g/C Ratio	0.19	0.19	0.22	0.68	0.40	0.40
v/c Ratio	0.82	0.78	0.89	0.38	0.84	0.92
Control Delay (s/veh)	54.5	30.3	36.8	7.3	32.3	26.1
Queue Delay	0.0	0.0	0.0	0.7	0.0	0.0
Total Delay (s/veh)	54.5	30.3	36.8	8.0	32.3	26.1
LOS	D	C	D	A	C	C
Approach Delay (s/veh)	41.2			15.6	29.6	
Approach LOS	D			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 30.8 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay (s/veh): 27.0	Intersection LOS: C
Intersection Capacity Utilization 102.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 21: Grove Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	268	0	326	320	891	0	0	1132	864
Future Volume (veh/h)	0	0	0	268	0	326	320	891	0	0	1132	864
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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	1900	1900	1800	1900	0	0	1900	1900
Adj Flow Rate, veh/h				282	0	258	337	938	0	0	1192	760
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				334	0	298	362	2478	0	0	1483	644
Arrive On Green				0.18	0.00	0.18	0.42	1.00	0.00	0.00	0.41	0.41
Sat Flow, veh/h				1810	0	1610	1714	3705	0	0	3705	1566
Grp Volume(v), veh/h				282	0	258	337	938	0	0	1192	760
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1714	1805	0	0	1805	1566
Q Serve(g_s), s				13.5	0.0	14.0	16.9	0.0	0.0	0.0	26.1	37.0
Cycle Q Clear(g_c), s				13.5	0.0	14.0	16.9	0.0	0.0	0.0	26.1	37.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				334	0	298	362	2478	0	0	1483	644
V/C Ratio(X)				0.84	0.00	0.87	0.93	0.38	0.00	0.00	0.80	1.18
Avail Cap(c_a), veh/h				382	0	340	404	2478	0	0	1483	644
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	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.4	0.0	35.6	25.4	0.0	0.0	0.0	23.3	26.5
Incr Delay (d2), s/veh				13.6	0.0	18.1	3.8	0.0	0.0	0.0	4.7	96.7
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 BackOfQ(50%),veh/ln				6.9	0.0	6.7	5.0	0.0	0.0	0.0	10.9	29.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				49.1	0.0	53.7	29.2	0.0	0.0	0.0	28.0	123.2
LnGrp LOS				D		D	C	A			C	F
Approach Vol, veh/h					540			1275			1952	
Approach Delay, s/veh					51.3			7.7			65.1	
Approach LOS					D			A			E	

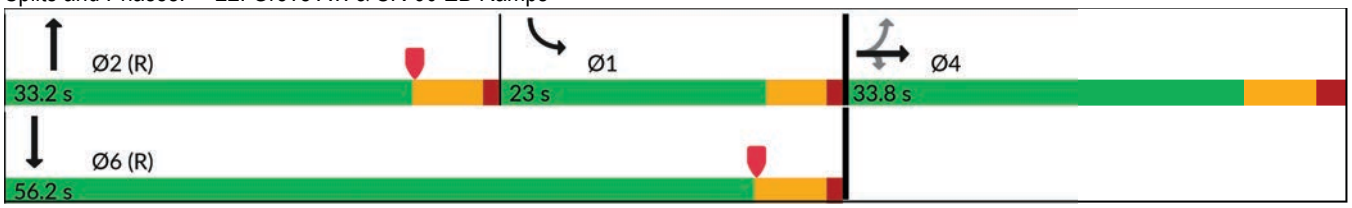
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		67.6			24.8	42.8		22.4				
Change Period (Y+Rc), s		5.8			5.8	5.8		5.8				
Max Green Setting (Gmax), s		59.4			21.2	32.4		19.0				
Max Q Clear Time (g_c+I1), s		2.0			18.9	39.0		16.0				
Green Ext Time (p_c), s		5.7			0.1	0.0		0.6				

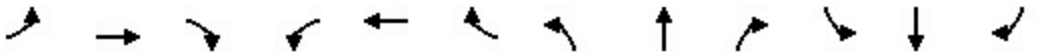
Intersection Summary		
HCM 7th Control Delay, s/veh	43.7	
HCM 7th LOS	D	

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	1	321	748	409	991
Future Volume (vph)	1	321	748	409	991
Turn Type	NA	Perm	NA	Prot	NA
Protected Phases	4		2	1	6
Permitted Phases		4			
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	31.8	15.0	25.8
Total Split (s)	33.8	33.8	33.2	23.0	56.2
Total Split (%)	37.6%	37.6%	36.9%	25.6%	62.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	5.8	5.0	5.8
Lead/Lag			Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	26.0	26.0	28.4	18.0	51.4
Actuated g/C Ratio	0.29	0.29	0.32	0.20	0.57
v/c Ratio	0.93	0.63	1.12	1.26	0.51
Control Delay (s/veh)	58.3	24.7	94.3	160.1	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	58.3	24.7	94.3	160.1	15.6
LOS	E	C	F	F	B
Approach Delay (s/veh)	44.6		94.3		57.8
Approach LOS	D		F		E

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay (s/veh): 68.3	Intersection LOS: E
Intersection Capacity Utilization 102.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	463	1	321	0	0	0	0	748	527	409	991	0
Future Volume (veh/h)	463	1	321	0	0	0	0	748	527	409	991	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	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	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	487	1	222				0	787	292	431	1043	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	517	1	460				0	778	288	351	2071	0
Arrive On Green	0.43	0.43	0.29				0.00	0.46	0.46	0.41	1.00	0.00
Sat Flow, veh/h	1806	4	1607				0	2649	947	1714	3705	0
Grp Volume(v), veh/h	488	0	222				0	556	523	431	1043	0
Grp Sat Flow(s),veh/h/ln	1810	0	1607				0	1805	1696	1714	1805	0
Q Serve(g_s), s	23.2	0.0	10.3				0.0	27.4	27.4	18.4	0.0	0.0
Cycle Q Clear(g_c), s	23.2	0.0	10.3				0.0	27.4	27.4	18.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.56	1.00		0.00
Lane Grp Cap(c), veh/h	518	0	460				0	550	516	351	2071	0
V/C Ratio(X)	0.94	0.00	0.48				0.00	1.01	1.01	1.23	0.50	0.00
Avail Cap(c_a), veh/h	543	0	482				0	550	516	351	2071	0
HCM Platoon Ratio	1.50	1.50	1.00				1.00	1.50	1.50	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.44	0.44	0.00
Uniform Delay (d), s/veh	24.9	0.0	26.6				0.0	24.5	24.5	26.6	0.0	0.0
Incr Delay (d2), s/veh	23.9	0.0	0.3				0.0	41.3	42.9	113.6	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	10.7	0.0	3.7				0.0	14.6	14.0	16.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.8	0.0	26.9				0.0	65.8	67.4	140.2	0.4	0.0
LnGrp LOS	D		C					F	F	F	A	
Approach Vol, veh/h		710						1079			1474	
Approach Delay, s/veh		42.0						66.6			41.3	
Approach LOS		D						E			D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.2	33.2		32.6		57.4
Change Period (Y+Rc), s	5.8	* 5.8		6.8		5.8
Max Green Setting (Gmax), s	18.0	* 27		27.0		50.4
Max Q Clear Time (g_c+I1), s	20.4	29.4		25.2		2.0
Green Ext Time (p_c), s	0.0	0.0		0.5		6.6

Intersection Summary	
HCM 7th Control Delay, s/veh	49.8
HCM 7th LOS	D

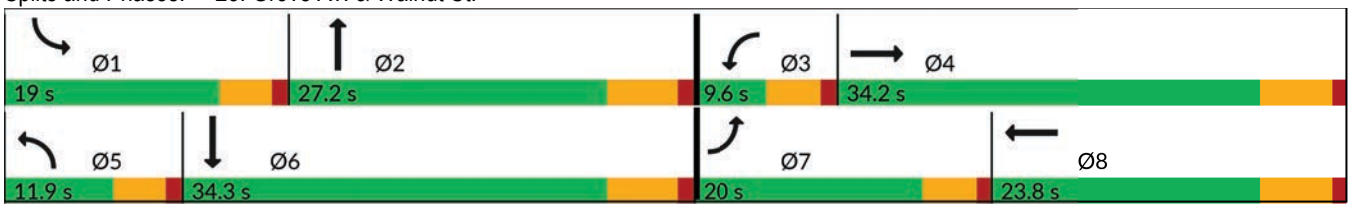
Notes

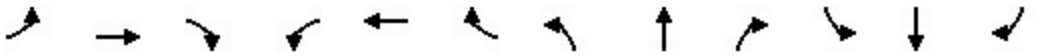
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	187	556	58	382	141	854	185	760
Future Volume (vph)	187	556	58	382	141	854	185	760
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	9.6	23.8
Total Split (s)	20.0	34.2	9.6	23.8	11.9	27.2	19.0	34.3
Total Split (%)	22.2%	38.0%	10.7%	26.4%	13.2%	30.2%	21.1%	38.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.0	26.5	5.0	16.3	7.4	21.6	12.6	26.9
Actuated g/C Ratio	0.15	0.31	0.06	0.19	0.09	0.26	0.15	0.32
v/c Ratio	0.75	0.70	0.60	0.80	1.00	1.15	0.76	0.84
Control Delay (s/veh)	53.7	28.2	66.6	38.8	117.4	110.6	56.0	34.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.7	28.2	66.6	38.8	117.4	110.6	56.0	34.7
LOS	D	C	E	D	F	F	E	C
Approach Delay (s/veh)		33.3		41.5		111.4		38.3
Approach LOS		C		D		F		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 84.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay (s/veh): 59.7	Intersection LOS: E
Intersection Capacity Utilization 83.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 23: Grove Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	556	192	58	382	159	141	854	145	185	760	145
Future Volume (veh/h)	187	556	192	58	382	159	141	854	145	185	760	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	197	585	190	61	402	143	148	899	142	195	800	117
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	235	750	243	80	497	175	159	848	134	232	993	145
Arrive On Green	0.14	0.28	0.28	0.05	0.19	0.19	0.09	0.27	0.27	0.14	0.31	0.31
Sat Flow, veh/h	1714	2670	865	1714	2607	916	1714	3116	492	1714	3152	461
Grp Volume(v), veh/h	197	395	380	61	277	268	148	521	520	195	458	459
Grp Sat Flow(s),veh/h/ln	1714	1805	1729	1714	1805	1718	1714	1805	1803	1714	1805	1808
Q Serve(g_s), s	8.8	15.8	15.9	2.8	11.5	11.8	6.7	21.4	21.4	8.7	18.3	18.3
Cycle Q Clear(g_c), s	8.8	15.8	15.9	2.8	11.5	11.8	6.7	21.4	21.4	8.7	18.3	18.3
Prop In Lane	1.00		0.50	1.00		0.53	1.00		0.27	1.00		0.25
Lane Grp Cap(c), veh/h	235	507	486	80	344	328	159	491	491	232	568	569
V/C Ratio(X)	0.84	0.78	0.78	0.76	0.80	0.82	0.93	1.06	1.06	0.84	0.81	0.81
Avail Cap(c_a), veh/h	336	652	625	109	413	393	159	491	491	314	654	655
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	26.0	26.1	37.0	30.4	30.5	35.4	28.6	28.6	33.1	24.7	24.7
Incr Delay (d2), s/veh	8.6	4.6	4.9	12.1	9.3	11.0	50.3	57.4	57.5	10.7	6.5	6.5
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(50%),veh/ln	4.0	6.8	6.6	1.4	5.5	5.5	4.9	16.2	16.2	4.1	8.1	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.6	30.6	30.9	49.2	39.7	41.5	85.7	86.0	86.2	43.8	31.2	31.2
LnGrp LOS	D	C	C	D	D	D	F	F	F	D	C	C
Approach Vol, veh/h		972			606			1189			1112	
Approach Delay, s/veh		33.0			41.5			86.1			33.4	
Approach LOS		C			D			F			C	

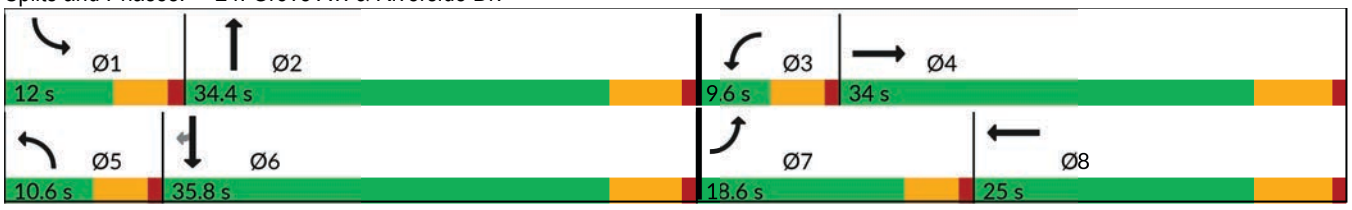
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	27.2	8.3	27.9	11.9	30.6	15.4	20.8
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	14.4	21.4	5.0	28.4	7.3	28.5	15.4	18.0
Max Q Clear Time (g_c+I1), s	10.7	23.4	4.8	17.9	8.7	20.3	10.8	13.8
Green Ext Time (p_c), s	0.1	0.0	0.0	3.3	0.0	3.4	0.1	1.2

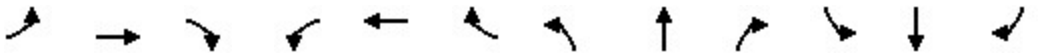
Intersection Summary	
HCM 7th Control Delay, s/veh	50.7
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	155	498	178	734	32	828	118	585	149
Future Volume (vph)	155	498	178	734	32	828	118	585	149
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	18.6	34.0	9.6	25.0	10.6	34.4	12.0	35.8	35.8
Total Split (%)	20.7%	37.8%	10.7%	27.8%	11.8%	38.2%	13.3%	39.8%	39.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.8	27.8	5.0	21.0	5.6	28.6	7.4	34.2	34.2
Actuated g/C Ratio	0.13	0.31	0.06	0.23	0.06	0.32	0.08	0.38	0.38
v/c Ratio	0.73	1.03	1.97	1.29	0.32	1.74	0.89	0.85	0.21
Control Delay (s/veh)	55.9	77.2	497.5	169.5	48.3	365.3	94.1	40.9	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.9	77.2	497.5	169.5	48.3	365.3	94.1	40.9	2.1
LOS	E	E	F	F	D	F	F	D	A
Approach Delay (s/veh)		72.6		217.3		355.2		41.4	
Approach LOS		E		F		F		D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.97	
Intersection Signal Delay (s/veh): 187.4	Intersection LOS: F
Intersection Capacity Utilization 118.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	498	69	178	734	307	32	828	158	118	585	149
Future Volume (veh/h)	155	498	69	178	734	307	32	828	158	118	585	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	163	524	73	187	773	297	34	872	158	124	616	119
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	502	70	95	635	244	55	497	90	141	700	593
Arrive On Green	0.11	0.31	0.31	0.06	0.25	0.25	0.03	0.32	0.32	0.08	0.37	0.37
Sat Flow, veh/h	1714	1626	227	1714	2538	974	1714	1565	284	1714	1900	1610
Grp Volume(v), veh/h	163	0	597	187	550	520	34	0	1030	124	616	119
Grp Sat Flow(s),veh/h/ln	1714	0	1853	1714	1805	1707	1714	0	1849	1714	1900	1610
Q Serve(g_s), s	8.4	0.0	27.8	5.0	22.5	22.5	1.8	0.0	28.6	6.4	27.3	4.5
Cycle Q Clear(g_c), s	8.4	0.0	27.8	5.0	22.5	22.5	1.8	0.0	28.6	6.4	27.3	4.5
Prop In Lane	1.00		0.12	1.00		0.57	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	196	0	572	95	452	427	55	0	588	141	700	593
V/C Ratio(X)	0.83	0.00	1.04	1.96	1.22	1.22	0.62	0.00	1.75	0.88	0.88	0.20
Avail Cap(c_a), veh/h	267	0	572	95	452	427	114	0	588	141	700	593
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	31.1	42.5	33.7	33.7	43.0	0.0	30.7	40.9	26.6	19.4
Incr Delay (d2), s/veh	11.4	0.0	49.3	469.2	116.1	117.5	4.3	0.0	345.9	41.3	12.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	19.0	14.4	23.6	22.5	0.8	0.0	68.1	4.2	13.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.4	0.0	80.4	511.7	149.8	151.2	47.3	0.0	376.6	82.1	39.1	19.6
LnGrp LOS	D		F	F	F	F	D		F	F	D	B
Approach Vol, veh/h		760			1257			1064			859	
Approach Delay, s/veh		74.0			204.2			366.0			42.6	
Approach LOS		E			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	34.4	9.6	34.0	7.5	38.9	14.9	28.7
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	7.4	28.6	5.0	27.8	6.0	30.0	14.0	18.8
Max Q Clear Time (g_c+I1), s	8.4	30.6	7.0	29.8	3.8	29.3	10.4	24.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	187.6
HCM 7th LOS	F

Intersection	
Intersection Delay, s/veh	843.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	120	943	238	45	651	44	51	744	84	22	645	19
Future Vol, veh/h	120	943	238	45	651	44	51	744	84	22	645	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	126	993	251	47	685	46	54	783	88	23	679	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	1236.8	581.6	734.9	518.1
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	9%	6%	3%
Vol Thru, %	85%	72%	88%	94%
Vol Right, %	10%	18%	6%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	879	1301	740	686
LT Vol	51	120	45	22
Through Vol	744	943	651	645
RT Vol	84	238	44	19
Lane Flow Rate	925	1369	779	722
Geometry Grp	1	1	1	1
Degree of Util (X)	2.455	3.616	2.072	1.923
Departure Headway (Hd)	29.954	24.147	35.411	35.558
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	130	164	117	116
Service Time	27.954	22.147	33.411	33.558
HCM Lane V/C Ratio	7.115	8.348	6.658	6.224
HCM Control Delay, s/veh	734.9	1236.8	581.6	518.1
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	26.1	52.6	18	16.2

Intersection	
Intersection Delay, s/veh	594.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	631	33	90	455	68	163	716	0	94	653	40
Future Vol, veh/h	100	631	33	90	455	68	163	716	0	94	653	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	105	664	35	95	479	72	172	754	0	99	687	42
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	581.3	405.5	724.9	610.5
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	13%	15%	12%
Vol Thru, %	81%	83%	74%	83%
Vol Right, %	0%	4%	11%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	879	764	613	787
LT Vol	163	100	90	94
Through Vol	716	631	455	653
RT Vol	0	33	68	40
Lane Flow Rate	925	804	645	828
Geometry Grp	1	1	1	1
Degree of Util (X)	2.476	2.144	1.714	2.207
Departure Headway (Hd)	22.261	23.178	26.617	23.835
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	176	169	142	166
Service Time	20.261	21.178	24.617	21.835
HCM Lane V/C Ratio	5.256	4.757	4.542	4.988
HCM Control Delay, s/veh	724.9	581.3	405.5	610.5
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	34.2	26.9	17.1	27.4

Intersection	
Intersection Delay, s/veh	407.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	182	587	17	5	354	84	33	623	1	175	246	120
Future Vol, veh/h	182	587	17	5	354	84	33	623	1	175	246	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	192	618	18	5	373	88	35	656	1	184	259	126
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	589.1	189.6	432.1	293.2
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	23%	1%	32%
Vol Thru, %	95%	75%	80%	45%
Vol Right, %	0%	2%	19%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	657	786	443	541
LT Vol	33	182	5	175
Through Vol	623	587	354	246
RT Vol	1	17	84	120
Lane Flow Rate	692	827	466	569
Geometry Grp	1	1	1	1
Degree of Util (X)	1.845	2.213	1.229	1.507
Departure Headway (Hd)	16.212	14.671	19.387	17.796
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	235	256	191	211
Service Time	14.212	12.671	17.387	15.796
HCM Lane V/C Ratio	2.945	3.23	2.44	2.697
HCM Control Delay, s/veh	432.1	589.1	189.6	293.2
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	28.8	42	12.3	18.9

Intersection	
Intersection Delay, s/veh	555.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	164	581	91	120	520	262	67	270	105	393	171	83
Future Vol, veh/h	164	581	91	120	520	262	67	270	105	393	171	83
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	173	612	96	126	547	276	71	284	111	414	180	87
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	656.6	721.8	206	433.3
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	20%	13%	61%
Vol Thru, %	61%	69%	58%	26%
Vol Right, %	24%	11%	29%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	442	836	902	647
LT Vol	67	164	120	393
Through Vol	270	581	520	171
RT Vol	105	91	262	83
Lane Flow Rate	465	880	949	681
Geometry Grp	1	1	1	1
Degree of Util (X)	1.226	2.34	2.492	1.824
Departure Headway (Hd)	24.744	19.021	18.237	19.824
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	154	202	209	191
Service Time	22.744	17.021	16.237	17.824
HCM Lane V/C Ratio	3.019	4.356	4.541	3.565
HCM Control Delay, s/veh	206	656.6	721.8	433.3
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	10.5	36.3	41.3	23.9

Intersection	
Intersection Delay, s/veh	500.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	246	104	376	50	385	151	230	498	35	74	408	266
Future Vol, veh/h	246	104	376	50	385	151	230	498	35	74	408	266
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	259	109	396	53	405	159	242	524	37	78	429	280
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	503.9	355.1	574.8	535.7
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	30%	34%	9%	10%
Vol Thru, %	65%	14%	66%	55%
Vol Right, %	5%	52%	26%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	763	726	586	748
LT Vol	230	246	50	74
Through Vol	498	104	385	408
RT Vol	35	376	151	266
Lane Flow Rate	803	764	617	787
Geometry Grp	1	1	1	1
Degree of Util (X)	2.148	1.986	1.621	2.057
Departure Headway (Hd)	20.056	19.996	22.621	20.313
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	193	191	167	189
Service Time	18.056	17.996	20.621	18.313
HCM Lane V/C Ratio	4.161	4	3.695	4.164
HCM Control Delay, s/veh	574.8	503.9	355.1	535.7
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	30.5	27.1	17.8	28.3

Intersection	
Intersection Delay, s/veh	557.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	620	37	170	393	158	45	654	197	267	356	14
Future Vol, veh/h	38	620	37	170	393	158	45	654	197	267	356	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	40	653	39	179	414	166	47	688	207	281	375	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	495.1	519.8	722.2	436.8
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	5%	24%	42%
Vol Thru, %	73%	89%	55%	56%
Vol Right, %	22%	5%	22%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	896	695	721	637
LT Vol	45	38	170	267
Through Vol	654	620	393	356
RT Vol	197	37	158	14
Lane Flow Rate	943	732	759	671
Geometry Grp	1	1	1	1
Degree of Util (X)	2.482	1.946	2.006	1.801
Departure Headway (Hd)	20.14	23.167	22.681	24.624
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	189	168	167	154
Service Time	18.14	21.167	20.681	22.624
HCM Lane V/C Ratio	4.989	4.357	4.545	4.357
HCM Control Delay, s/veh	722.2	495.1	519.8	436.8
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	37.5	23.3	24.8	19.7

Intersection	
Intersection Delay, s/veh	31.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	257	120	14	184	110	83	306	23	113	87	3
Future Vol, veh/h	12	257	120	14	184	110	83	306	23	113	87	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	271	126	15	194	116	87	322	24	119	92	3
Number of Lanes	0	1	0	0	1	0	1	1	1	0	1	0

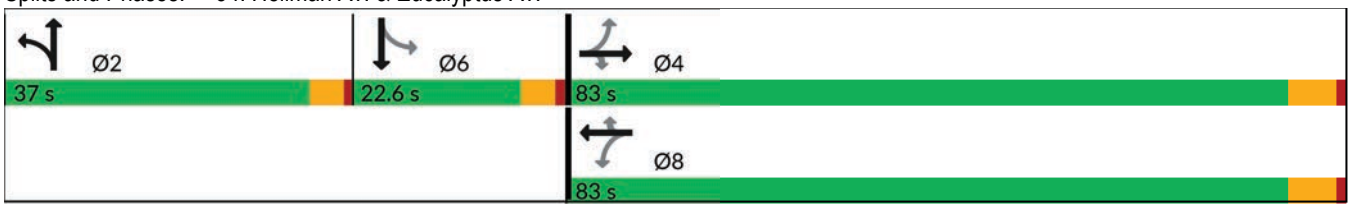
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	1	1	1
HCM Control Delay, s/veh	44.9	28.4	25.3	21.6
HCM LOS	E	D	D	C

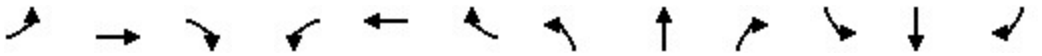
Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	3%	5%	56%
Vol Thru, %	0%	100%	0%	66%	60%	43%
Vol Right, %	0%	0%	100%	31%	36%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	306	23	389	308	203
LT Vol	83	0	0	12	14	113
Through Vol	0	306	0	257	184	87
RT Vol	0	0	23	120	110	3
Lane Flow Rate	87	322	24	409	324	214
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.209	0.725	0.05	0.878	0.715	0.532
Departure Headway (Hd)	8.618	8.101	7.378	7.723	7.944	8.967
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	416	445	484	467	454	402
Service Time	6.386	5.869	5.145	5.485	5.713	6.745
HCM Lane V/C Ratio	0.209	0.724	0.05	0.876	0.714	0.532
HCM Control Delay, s/veh	13.7	29.6	10.5	44.9	28.4	21.6
HCM Lane LOS	B	D	B	E	D	C
HCM 95th-tile Q	0.8	5.7	0.2	9.3	5.6	3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	69	533	86	77	440	56	62	216	78	94
Future Volume (vph)	69	533	86	77	440	56	62	216	78	94
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Split	NA	Perm	NA
Protected Phases		4			8		2	2		6
Permitted Phases	4		4	8		8			6	
Detector Phase	4	4	4	8	8	8	2	2	6	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	24.2	28.6	28.6	22.6	22.6
Total Split (s)	83.0	83.0	83.0	83.0	83.0	83.0	37.0	37.0	22.6	22.6
Total Split (%)	58.2%	58.2%	58.2%	58.2%	58.2%	58.2%	25.9%	25.9%	15.8%	15.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	6.2	4.6	4.6		4.6
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	28.3	28.3	28.3	28.3	28.3	28.3	32.6	32.6		18.1
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.30	0.34	0.34		0.19
v/c Ratio	0.63	0.52	0.18	0.45	0.81	0.11	0.11	0.77		0.85
Control Delay (s/veh)	53.2	28.8	13.4	34.8	42.5	9.4	24.1	36.4		69.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay (s/veh)	53.2	28.8	13.4	34.8	42.5	9.4	24.1	36.4		69.2
LOS	D	C	B	C	D	A	C	D		E
Approach Delay (s/veh)		29.3			38.2			35.0		69.2
Approach LOS		C			D			C		E

Intersection Summary	
Cycle Length: 142.6	
Actuated Cycle Length: 94.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 37.3	Intersection LOS: D
Intersection Capacity Utilization 86.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 34: Hellman Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	533	86	77	440	56	62	216	240	78	94	23
Future Volume (veh/h)	69	533	86	77	440	56	62	216	240	78	94	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	73	561	88	81	463	59	65	227	241	82	99	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	234	1317	587	277	693	587	515	253	269	103	124	30
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.30	0.30	0.30	0.14	0.14	0.14
Sat Flow, veh/h	894	3610	1610	753	1900	1610	1714	843	895	730	881	214
Grp Volume(v), veh/h	73	561	88	81	463	59	65	0	468	205	0	0
Grp Sat Flow(s),veh/h/ln	894	1805	1610	753	1900	1610	1714	0	1739	1825	0	0
Q Serve(g_s), s	5.9	9.3	2.9	7.2	16.2	1.9	2.2	0.0	20.4	8.6	0.0	0.0
Cycle Q Clear(g_c), s	22.2	9.3	2.9	16.5	16.2	1.9	2.2	0.0	20.4	8.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	0.40		0.12
Lane Grp Cap(c), veh/h	234	1317	587	277	693	587	515	0	522	257	0	0
V/C Ratio(X)	0.31	0.43	0.15	0.29	0.67	0.10	0.13	0.00	0.90	0.80	0.00	0.00
Avail Cap(c_a), veh/h	773	3493	1558	731	1839	1558	700	0	710	414	0	0
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.5	19.0	16.9	25.1	21.2	16.6	20.2	0.0	26.6	33.0	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.2	0.1	0.6	1.1	0.1	0.0	0.0	9.2	5.6	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(50%),veh/ln	1.3	3.6	1.0	1.2	6.6	0.7	0.8	0.0	8.9	3.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.2	19.2	17.1	25.7	22.3	16.7	20.2	0.0	35.8	38.6	0.0	0.0
LnGrp LOS	C	B	B	C	C	B	C		D	D		
Approach Vol, veh/h		722			603			533			205	
Approach Delay, s/veh		20.1			22.2			33.9			38.6	
Approach LOS		C			C			C			D	

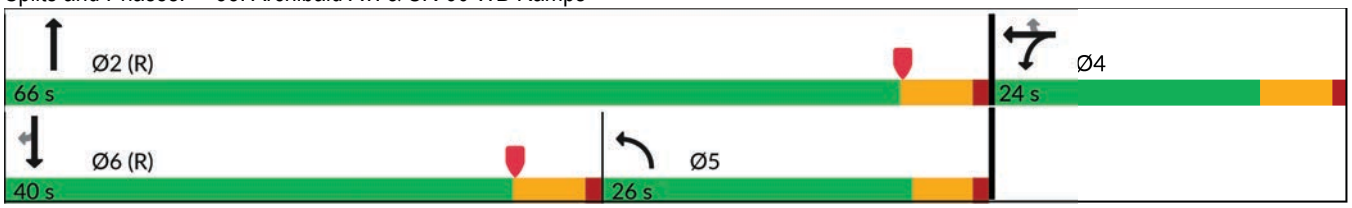
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.4		35.2		15.8		35.2				
Change Period (Y+Rc), s		4.6		6.2		4.6		6.2				
Max Green Setting (Gmax), s		32.4		76.8		18.0		76.8				
Max Q Clear Time (g_c+I1), s		22.4		24.2		10.6		18.5				
Green Ext Time (p_c), s		1.4		4.8		0.5		3.7				

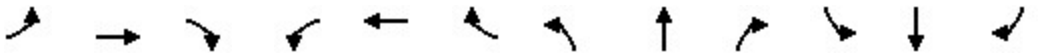
Intersection Summary												
HCM 7th Control Delay, s/veh			26.1									
HCM 7th LOS			C									

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	671	8	292	777	1008	1952	385
Future Volume (vph)	671	8	292	777	1008	1952	385
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4	4		5	2	6	
Permitted Phases			4				6
Detector Phase	4	4	4	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	8.0	8.0	8.0
Minimum Split (s)	10.8	10.8	10.8	10.0	43.8	38.8	38.8
Total Split (s)	24.0	24.0	24.0	26.0	66.0	40.0	40.0
Total Split (%)	26.7%	26.7%	26.7%	28.9%	73.3%	44.4%	44.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.0	5.8	5.8	5.8
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	18.2	18.2	18.2	21.0	60.2	34.2	34.2
Actuated g/C Ratio	0.20	0.20	0.20	0.23	0.67	0.38	0.38
v/c Ratio	1.14	1.11	0.66	1.12	0.31	0.83	0.53
Control Delay (s/veh)	128.4	117.8	25.3	92.9	0.4	28.8	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	128.4	117.8	25.3	92.9	0.4	28.8	10.1
LOS	F	F	C	F	A	C	B
Approach Delay (s/veh)		96.7			40.7	25.7	
Approach LOS		F			D	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 29.6 (33%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 44.5	Intersection LOS: D
Intersection Capacity Utilization 88.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 35: Archibald Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	671	8	292	777	1008	0	0	1952	385
Future Volume (veh/h)	0	0	0	671	8	292	777	1008	0	0	1952	385
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
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				1800	1900	1900	1700	1900	0	0	1900	1900
Adj Flow Rate, veh/h				764	0	121	818	1061	0	0	2055	285
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				693	0	326	764	3522	0	0	2428	584
Arrive On Green				0.20	0.00	0.20	0.32	0.90	0.00	0.00	0.37	0.37
Sat Flow, veh/h				3429	0	1610	3141	5358	0	0	6802	1572
Grp Volume(v), veh/h				764	0	121	818	1061	0	0	2055	285
Grp Sat Flow(s),veh/h/ln				1714	0	1610	1570	1729	0	0	1634	1572
Q Serve(g_s), s				18.2	0.0	5.8	21.9	2.5	0.0	0.0	25.9	12.5
Cycle Q Clear(g_c), s				18.2	0.0	5.8	21.9	2.5	0.0	0.0	25.9	12.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				693	0	326	764	3522	0	0	2428	584
V/C Ratio(X)				1.10	0.00	0.37	1.07	0.30	0.00	0.00	0.85	0.49
Avail Cap(c_a), veh/h				693	0	326	764	3522	0	0	2484	597
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.60	0.60	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.9	0.0	31.0	30.4	1.5	0.0	0.0	25.9	21.7
Incr Delay (d2), s/veh				65.5	0.0	0.7	46.6	0.1	0.0	0.0	3.9	2.9
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				13.4	0.0	5.5	11.8	0.5	0.0	0.0	9.7	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				101.4	0.0	31.7	77.1	1.7	0.0	0.0	29.8	24.6
LnGrp LOS				F		C	F	A			C	C
Approach Vol, veh/h					885			1879			2340	
Approach Delay, s/veh					91.9			34.5			29.2	
Approach LOS					F			C			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	66.9	24.0	27.7	39.2
Change Period (Y+Rc), s	5.8	5.8	5.8	* 5.8
Max Green Setting (Gmax), s	60.2	18.2	21.0	* 34
Max Q Clear Time (g_c+I1), s	4.5	20.2	23.9	27.9
Green Ext Time (p_c), s	8.6	0.0	0.0	5.5

Intersection Summary	
HCM 7th Control Delay, s/veh	42.0
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

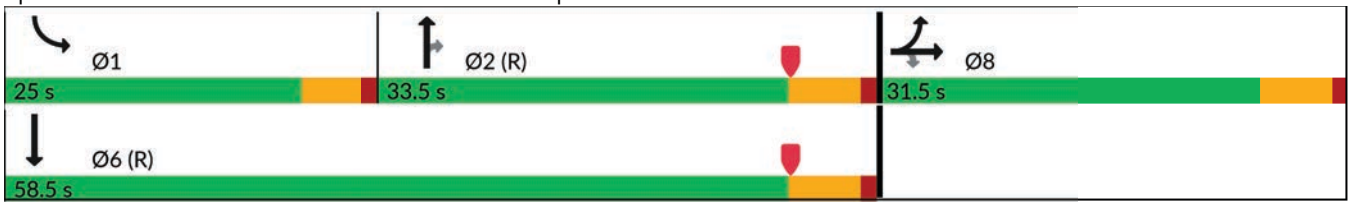
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

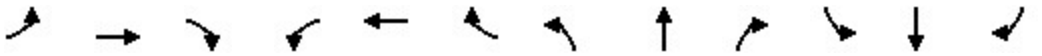
Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	159	0	716	1626	579	611	2012
Future Volume (vph)	159	0	716	1626	579	611	2012
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8	8		2		1	6
Permitted Phases			8		2		
Detector Phase	8	8	8	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	10.8	10.8	10.8	32.8	32.8	10.0	33.8
Total Split (s)	31.5	31.5	31.5	33.5	33.5	25.0	58.5
Total Split (%)	35.0%	35.0%	35.0%	37.2%	37.2%	27.8%	65.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.0	5.8
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	22.7	22.7	22.7	30.6	30.6	20.1	55.7
Actuated g/C Ratio	0.25	0.25	0.25	0.34	0.34	0.22	0.62
v/c Ratio	0.37	0.87	0.84	0.77	0.64	0.92	0.66
Control Delay (s/veh)	29.5	44.5	40.9	30.2	5.7	53.8	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.5	44.5	40.9	30.2	5.7	53.8	3.1
LOS	C	D	D	C	A	D	A
Approach Delay (s/veh)		40.6		23.8			14.9
Approach LOS		D		C			B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 29.6 (33%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay (s/veh): 22.3 — Intersection LOS: C
Intersection Capacity Utilization 88.7% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 36: Archibald Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	0	716	0	0	0	0	1626	579	611	2012	0
Future Volume (veh/h)	159	0	716	0	0	0	0	1626	579	611	2012	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1900	1900				0	1900	1900	1700	1900	0
Adj Flow Rate, veh/h	111	0	604				0	1712	460	643	2118	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	380	0	715				0	2453	604	686	3368	0
Arrive On Green	0.22	0.00	0.22				0.00	0.38	0.38	0.44	1.00	0.00
Sat Flow, veh/h	1714	0	3220				0	6802	1610	3141	5358	0
Grp Volume(v), veh/h	111	0	604				0	1712	460	643	2118	0
Grp Sat Flow(s),veh/h/ln	1714	0	1610				0	1634	1610	1570	1729	0
Q Serve(g_s), s	4.8	0.0	16.2				0.0	20.0	22.5	17.6	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	16.2				0.0	20.0	22.5	17.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	380	0	715				0	2453	604	686	3368	0
V/C Ratio(X)	0.29	0.00	0.85				0.00	0.70	0.76	0.94	0.63	0.00
Avail Cap(c_a), veh/h	490	0	920				0	2453	604	698	3368	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	0.36	0.36	0.00
Uniform Delay (d), s/veh	29.1	0.0	33.5				0.0	23.8	24.6	24.8	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	5.9				0.0	1.7	8.8	9.1	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	1.9	0.0	6.5				0.0	7.1	9.1	5.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.6	0.0	39.4				0.0	25.5	33.4	33.9	0.3	0.0
LnGrp LOS	C		D					C	C	C	A	
Approach Vol, veh/h		715						2172			2761	
Approach Delay, s/veh		37.9						27.1			8.1	
Approach LOS		D						C			A	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	24.7	39.6				64.2		25.8				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	20.0	27.7				52.7		25.7				
Max Q Clear Time (g_c+I1), s	19.6	24.5				2.0		18.2				
Green Ext Time (p_c), s	0.1	2.8				25.3		1.8				

Intersection Summary			
HCM 7th Control Delay, s/veh			19.2
HCM 7th LOS			B

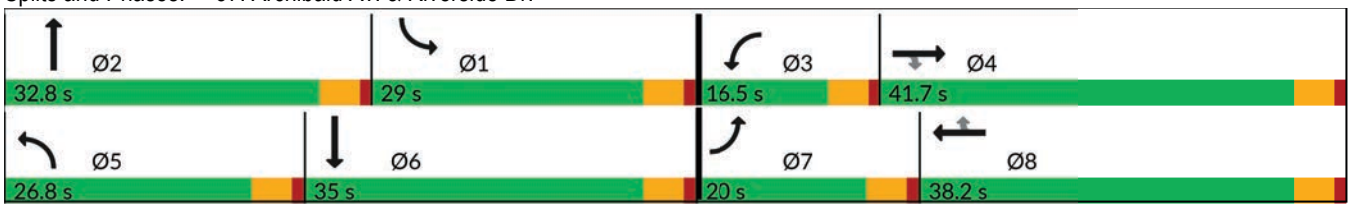
Notes

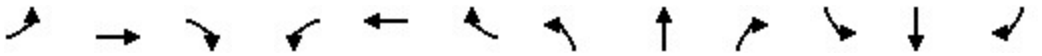
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	407	521	245	137	566	389	305	1412	644	1462
Future Volume (vph)	407	521	245	137	566	389	305	1412	644	1462
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.2	38.2	9.6	38.2	38.2	9.6	32.2	9.6	33.2
Total Split (s)	20.0	41.7	41.7	16.5	38.2	38.2	26.8	32.8	29.0	35.0
Total Split (%)	16.7%	34.8%	34.8%	13.8%	31.8%	31.8%	22.3%	27.3%	24.2%	29.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.4	29.8	29.8	11.5	25.8	25.8	22.2	28.3	24.5	30.5
Actuated g/C Ratio	0.14	0.27	0.27	0.10	0.23	0.23	0.20	0.25	0.22	0.27
v/c Ratio	1.83	0.57	0.42	0.83	0.72	0.60	0.95	1.20	1.83	1.49
Control Delay (s/veh)	417.3	38.2	6.0	85.7	45.1	7.4	83.8	133.5	409.9	256.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	417.3	38.2	6.0	85.7	45.1	7.4	83.8	133.5	409.9	256.1
LOS	F	D	A	F	D	A	F	F	F	F
Approach Delay (s/veh)		163.0			36.8			125.0		293.9
Approach LOS		F			D			F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 112.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.83	
Intersection Signal Delay (s/veh): 183.6	Intersection LOS: F
Intersection Capacity Utilization 123.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 37: Archibald Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	407	521	245	137	566	389	305	1412	64	644	1462	514
Future Volume (veh/h)	407	521	245	137	566	389	305	1412	64	644	1462	514
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	428	548	184	144	596	355	321	1486	54	678	1539	515
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	239	933	409	171	790	343	344	1309	48	378	1055	346
Arrive On Green	0.14	0.26	0.26	0.10	0.22	0.22	0.20	0.25	0.25	0.22	0.27	0.27
Sat Flow, veh/h	1714	3610	1582	1714	3610	1569	1714	5135	187	1714	3839	1258
Grp Volume(v), veh/h	428	548	184	144	596	355	321	1001	539	678	1383	671
Grp Sat Flow(s),veh/h/ln	1714	1805	1582	1714	1805	1569	1714	1729	1863	1714	1729	1639
Q Serve(g_s), s	15.4	14.7	10.8	9.1	17.1	14.8	20.4	28.2	28.2	24.4	30.4	30.4
Cycle Q Clear(g_c), s	15.4	14.7	10.8	9.1	17.1	14.8	20.4	28.2	28.2	24.4	30.4	30.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.77
Lane Grp Cap(c), veh/h	239	933	409	171	790	343	344	882	475	378	950	451
V/C Ratio(X)	1.79	0.59	0.45	0.84	0.75	1.03	0.93	1.14	1.14	1.79	1.46	1.49
Avail Cap(c_a), veh/h	239	1211	531	184	1097	477	344	882	475	378	950	451
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	35.8	34.4	48.9	40.4	16.1	43.5	41.2	41.2	43.1	40.1	40.1
Incr Delay (d2), s/veh	373.2	0.6	0.8	25.0	2.0	46.6	31.3	74.7	83.9	367.2	210.7	231.6
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(50%),veh/ln	31.0	6.2	4.0	4.9	7.4	9.2	11.2	20.5	23.2	48.4	39.9	40.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	420.8	36.4	35.2	74.0	42.4	62.8	74.8	115.9	125.1	410.3	250.8	271.7
LnGrp LOS	F	D	D	E	D	F	E	F	F	F	F	F
Approach Vol, veh/h		1160			1095			1861			2732	
Approach Delay, s/veh		178.0			53.1			111.5			295.5	
Approach LOS		F			D			F			F	

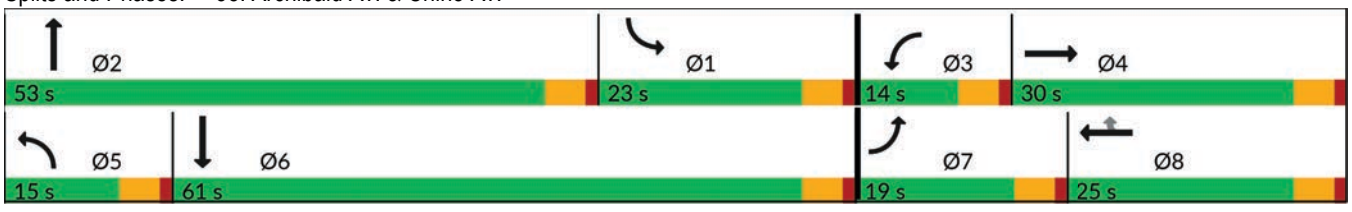
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	32.8	15.6	33.2	26.8	35.0	20.0	28.8
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	24.4	28.2	11.9	37.1	22.2	30.4	15.4	33.6
Max Q Clear Time (g_c+I1), s	26.4	30.2	11.1	16.7	22.4	32.4	17.4	19.1
Green Ext Time (p_c), s	0.0	0.0	0.0	3.7	0.0	0.0	0.0	4.2

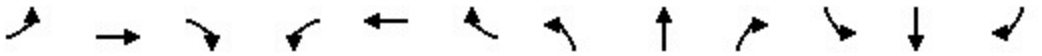
Intersection Summary	
HCM 7th Control Delay, s/veh	186.8
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	85	39	201	122	217	169	1189	150	1355
Future Volume (vph)	85	39	201	122	217	169	1189	150	1355
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	19.0	30.0	14.0	25.0	25.0	15.0	53.0	23.0	61.0
Total Split (%)	15.8%	25.0%	11.7%	20.8%	20.8%	12.5%	44.2%	19.2%	50.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.6	13.7	9.6	15.6	15.6	10.6	35.8	22.3	47.5
Actuated g/C Ratio	0.11	0.14	0.10	0.16	0.16	0.11	0.36	0.22	0.47
v/c Ratio	0.49	0.43	1.29	0.43	0.51	0.98	0.71	0.42	0.85
Control Delay (s/veh)	55.5	21.6	209.8	47.9	10.4	111.5	29.6	41.0	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.5	21.6	209.8	47.9	10.4	111.5	29.6	41.0	29.2
LOS	E	C	F	D	B	F	C	D	C
Approach Delay (s/veh)		35.3		93.2			38.7		30.3
Approach LOS		D		F			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.3	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.29	
Intersection Signal Delay (s/veh): 42.6	Intersection LOS: D
Intersection Capacity Utilization 84.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 38: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	39	85	201	122	217	169	1189	170	150	1355	89
Future Volume (veh/h)	85	39	85	201	122	217	169	1189	170	150	1355	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	89	41	82	212	128	174	178	1252	172	158	1426	85
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	114	53	106	178	249	211	196	1724	237	426	1720	102
Arrive On Green	0.07	0.09	0.09	0.10	0.13	0.13	0.11	0.35	0.35	0.25	0.49	0.49
Sat Flow, veh/h	1714	565	1131	1714	1900	1610	1714	4905	674	1714	3546	211
Grp Volume(v), veh/h	89	0	123	212	128	174	178	970	454	158	762	749
Grp Sat Flow(s),veh/h/ln	1714	0	1696	1714	1900	1610	1714	1900	1779	1714	1900	1857
Q Serve(g_s), s	4.6	0.0	6.4	9.4	5.7	5.7	9.3	20.2	20.2	6.9	31.3	31.6
Cycle Q Clear(g_c), s	4.6	0.0	6.4	9.4	5.7	5.7	9.3	20.2	20.2	6.9	31.3	31.6
Prop In Lane	1.00		0.67	1.00		1.00	1.00		0.38	1.00		0.11
Lane Grp Cap(c), veh/h	114	0	159	178	249	211	196	1335	625	426	922	901
V/C Ratio(X)	0.78	0.00	0.77	1.19	0.51	0.82	0.91	0.73	0.73	0.37	0.83	0.83
Avail Cap(c_a), veh/h	272	0	475	178	427	362	196	2026	948	426	1181	1154
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	0.0	40.2	40.7	36.7	13.7	39.7	25.6	25.6	28.2	20.1	20.2
Incr Delay (d2), s/veh	11.0	0.0	7.6	129.5	1.6	7.8	39.2	0.8	1.6	0.5	3.9	4.2
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(50%),veh/ln	2.2	0.0	2.9	10.2	2.7	3.9	5.8	8.2	7.8	2.7	12.7	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.8	0.0	47.8	170.1	38.4	21.5	78.9	26.4	27.3	28.8	24.0	24.4
LnGrp LOS	D		D	F	D	C	E	C	C	C	C	C
Approach Vol, veh/h		212			514			1602			1669	
Approach Delay, s/veh		49.9			87.0			32.5			24.6	
Approach LOS		D			F			C			C	

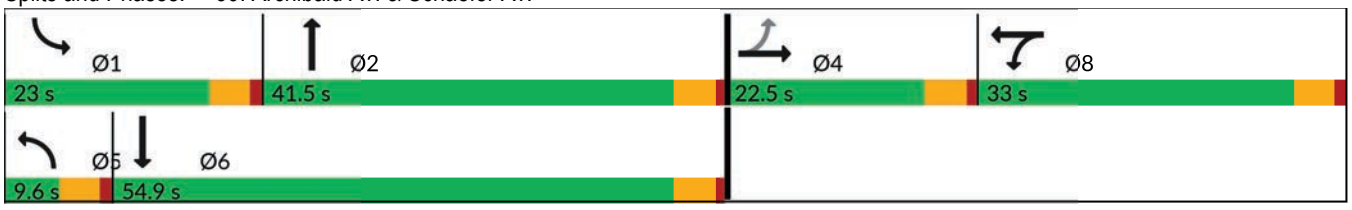
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.1	36.5	14.0	13.1	15.0	48.6	10.6	16.5
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	48.4	9.4	25.4	10.4	56.4	14.4	20.4
Max Q Clear Time (g_c+I1), s	8.9	22.2	11.4	8.4	11.3	33.6	6.6	7.7
Green Ext Time (p_c), s	0.2	9.7	0.0	0.5	0.0	10.4	0.1	1.0

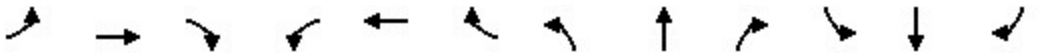
Intersection Summary	
HCM 7th Control Delay, s/veh	37.1
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	325	113	66	89	167	1538	147	1370
Future Volume (vph)	325	113	66	89	167	1538	147	1370
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	22.5	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	22.5	22.5	33.0	33.0	9.6	41.5	23.0	54.9
Total Split (%)	18.8%	18.8%	27.5%	27.5%	8.0%	34.6%	19.2%	45.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		18.0	14.1	14.1	5.0	42.2	13.4	50.5
Actuated g/C Ratio		0.17	0.13	0.13	0.05	0.40	0.13	0.48
v/c Ratio		9.11	0.30	0.55	2.20	0.81	0.72	1.08
Control Delay (s/veh)		Error	43.9	44.2	599.0	33.9	64.2	74.3
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		Error	43.9	44.2	599.0	33.9	64.2	74.3
LOS		F	D	D	F	C	E	E
Approach Delay (s/veh)		3676.2		44.1		87.8		73.5
Approach LOS		F		D		F		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 9.11	
Intersection Signal Delay (s/veh): 521.3	Intersection LOS: F
Intersection Capacity Utilization 111.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	113	99	66	89	45	167	1538	49	147	1370	353
Future Volume (veh/h)	325	113	99	66	89	45	167	1538	49	147	1370	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	342	119	104	69	94	45	176	1619	49	155	1442	372
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	190	66	58	175	124	59	84	2246	68	185	1411	352
Arrive On Green	0.18	0.18	0.18	0.10	0.10	0.10	0.05	0.43	0.43	0.11	0.49	0.49
Sat Flow, veh/h	1082	376	329	1714	1214	581	1714	5173	157	1714	2862	715
Grp Volume(v), veh/h	565	0	0	69	0	139	176	1082	586	155	892	922
Grp Sat Flow(s),veh/h/ln	1787	0	0	1714	0	1795	1714	1729	1872	1714	1805	1771
Q Serve(g_s), s	17.9	0.0	0.0	3.8	0.0	7.7	5.0	26.3	26.3	9.0	50.3	50.3
Cycle Q Clear(g_c), s	17.9	0.0	0.0	3.8	0.0	7.7	5.0	26.3	26.3	9.0	50.3	50.3
Prop In Lane	0.61		0.18	1.00		0.32	1.00		0.08	1.00		0.40
Lane Grp Cap(c), veh/h	313	0	0	175	0	184	84	1501	813	185	890	873
V/C Ratio(X)	1.80	0.00	0.00	0.39	0.00	0.76	2.10	0.72	0.72	0.84	1.00	1.06
Avail Cap(c_a), veh/h	313	0	0	477	0	500	84	1501	813	309	890	873
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	42.1	0.0	0.0	42.8	0.0	44.6	48.5	23.8	23.8	44.6	25.9	25.9
Incr Delay (d2), s/veh	373.6	0.0	0.0	1.4	0.0	6.3	530.8	1.7	3.1	3.9	30.8	46.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.1	0.0	0.0	1.6	0.0	3.6	14.4	9.8	11.0	3.8	25.8	29.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	415.7	0.0	0.0	44.3	0.0	50.8	579.3	25.5	26.9	48.6	56.6	72.1
LnGrp LOS	F			D		D	F	C	C	D	F	F
Approach Vol, veh/h		565			208			1844			1969	
Approach Delay, s/veh		415.7			48.6			78.8			63.3	
Approach LOS		F			D			E			E	

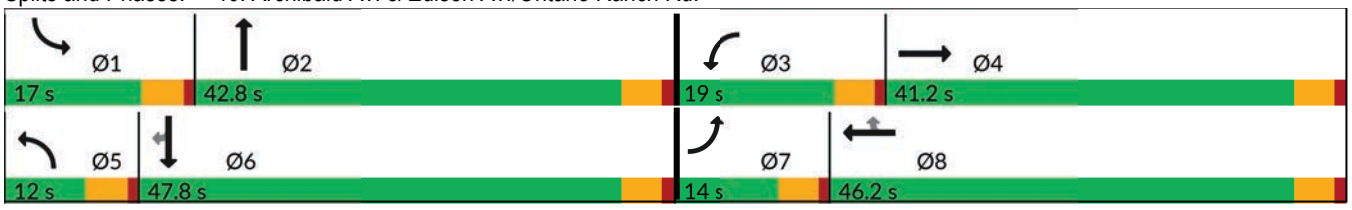
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.6	48.9		22.5	9.6	54.9		15.0				
Change Period (Y+Rc), s	4.6	4.6		4.6	4.6	4.6		4.6				
Max Green Setting (Gmax), s	18.4	36.9		17.9	5.0	50.3		28.4				
Max Q Clear Time (g_c+I1), s	11.0	28.3		19.9	7.0	52.3		9.7				
Green Ext Time (p_c), s	0.1	5.8		0.0	0.0	0.0		0.8				

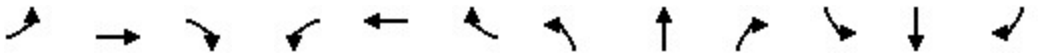
Intersection Summary			
HCM 7th Control Delay, s/veh		112.3	
HCM 7th LOS		F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	306	674	261	490	609	235	120	999	511	230	939	224
Future Volume (vph)	306	674	261	490	609	235	120	999	511	230	939	224
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	14.0	41.2		19.0	46.2	46.2	12.0	42.8		17.0	47.8	47.8
Total Split (%)	11.7%	34.3%		15.8%	38.5%	38.5%	10.0%	35.7%		14.2%	39.8%	39.8%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	9.4	36.4	119.0	14.4	41.4	41.4	7.4	37.4	119.0	12.4	42.4	42.4
Actuated g/C Ratio	0.08	0.31	1.00	0.12	0.35	0.35	0.06	0.31	1.00	0.10	0.36	0.36
v/c Ratio	1.30	0.45	0.17	1.37	0.97	0.37	1.19	0.93	0.33	1.36	0.77	0.35
Control Delay (s/veh)	205.5	34.4	0.2	219.7	67.6	12.0	194.7	54.0	0.6	235.6	38.7	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	205.5	34.4	0.2	219.7	67.6	12.0	194.7	54.0	0.6	235.6	38.7	12.9
LOS	F	C	A	F	E	B	F	D	A	F	D	B
Approach Delay (s/veh)		69.4			113.7			47.6			67.1	
Approach LOS		E			F			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay (s/veh): 73.0	Intersection LOS: E
Intersection Capacity Utilization 98.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 40: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	306	674	261	490	609	235	120	999	511	230	939	224
Future Volume (veh/h)	306	674	261	490	609	235	120	999	511	230	939	224
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	322	709	0	516	641	226	126	1052	0	242	988	217
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	251	1586		384	661	560	108	1122		180	1275	569
Arrive On Green	0.12	0.46	0.00	0.18	0.52	0.52	0.09	0.47	0.00	0.16	0.53	0.53
Sat Flow, veh/h	3141	5187	1610	3141	1900	1610	1714	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	322	709	0	516	641	226	126	1052	0	242	988	217
Grp Sat Flow(s),veh/h/ln	1570	1729	1610	1570	1900	1610	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	9.4	11.0	0.0	14.4	38.5	10.0	7.4	32.6	0.0	12.4	25.7	9.4
Cycle Q Clear(g_c), s	9.4	11.0	0.0	14.4	38.5	10.0	7.4	32.6	0.0	12.4	25.7	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	1586		384	661	560	108	1122		180	1275	569
V/C Ratio(X)	1.29	0.45		1.34	0.97	0.40	1.17	0.94		1.34	0.77	0.38
Avail Cap(c_a), veh/h	251	1611		384	671	568	108	1170		180	1323	590
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	25.1	0.0	48.1	27.5	20.8	53.4	30.4	0.0	49.6	24.0	20.1
Incr Delay (d2), s/veh	155.2	0.2	0.0	171.6	27.0	0.5	139.8	13.6	0.0	186.2	2.8	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	3.9	0.0	14.2	17.9	3.3	7.1	12.8	0.0	14.1	8.4	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	207.1	25.3	0.0	219.8	54.6	21.2	193.2	44.0	0.0	235.8	26.8	20.5
LnGrp LOS	F	C		F	D	C	F	D		F	C	C
Approach Vol, veh/h		1031			1383			1178			1447	
Approach Delay, s/veh		82.1			110.8			60.0			60.8	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	41.2	19.0	40.6	12.0	46.2	14.0	45.6
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	12.4	38.2	14.4	36.6	7.4	43.2	9.4	41.6
Max Q Clear Time (g_c+I1), s	14.4	34.6	16.4	13.0	9.4	27.7	11.4	40.5
Green Ext Time (p_c), s	0.0	2.1	0.0	4.4	0.0	6.1	0.0	0.6

Intersection Summary	
HCM 7th Control Delay, s/veh	78.7
HCM 7th LOS	E

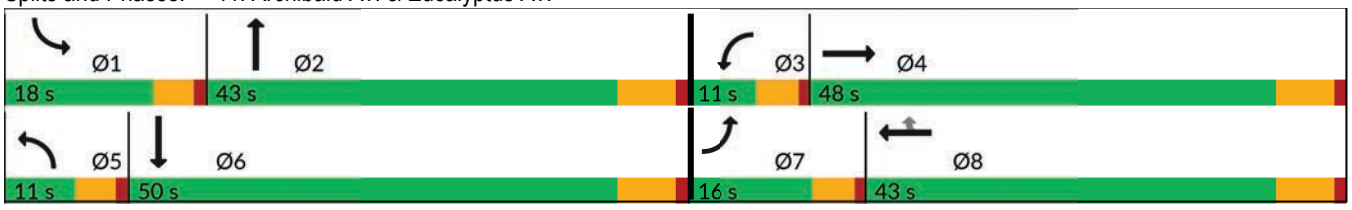
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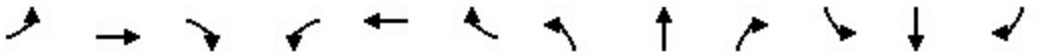
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	122	347	107	107	72	128	1460	142	1321
Future Volume (vph)	122	347	107	107	72	128	1460	142	1321
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	42.2	9.6	42.2	42.2	9.6	32.2	9.6	32.2
Total Split (s)	16.0	48.0	11.0	43.0	43.0	11.0	43.0	18.0	50.0
Total Split (%)	13.3%	40.0%	9.2%	35.8%	35.8%	9.2%	35.8%	15.0%	41.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.5	28.1	6.3	25.9	25.9	6.5	35.8	9.4	38.6
Actuated g/C Ratio	0.08	0.28	0.06	0.25	0.25	0.06	0.35	0.09	0.38
v/c Ratio	0.49	0.78	0.58	0.12	0.14	0.68	0.70	0.52	0.81
Control Delay (s/veh)	53.4	33.1	62.3	30.4	0.5	67.0	31.1	52.8	32.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.4	33.1	62.3	30.4	0.5	67.0	31.1	52.8	32.2
LOS	D	C	E	C	A	E	C	D	C
Approach Delay (s/veh)		36.0		34.8			33.9		34.0
Approach LOS		D		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.6	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 34.4	Intersection LOS: C
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 41: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	347	408	107	107	72	128	1460	55	142	1321	172
Future Volume (veh/h)	122	347	408	107	107	72	128	1460	55	142	1321	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
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	1700	1900	1900	1700	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	128	365	427	113	113	38	135	1537	44	149	1391	153
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	185	559	499	166	1096	482	190	2355	67	208	1723	189
Arrive On Green	0.06	0.31	0.31	0.05	0.30	0.30	0.06	0.36	0.36	0.07	0.36	0.36
Sat Flow, veh/h	3141	1805	1610	3141	3610	1588	3141	6577	188	3141	4735	521
Grp Volume(v), veh/h	128	365	427	113	113	38	135	1145	436	149	1016	528
Grp Sat Flow(s),veh/h/ln	1570	1805	1610	1570	1805	1588	1570	1634	1863	1570	1729	1798
Q Serve(g_s), s	4.1	17.7	25.3	3.6	2.3	1.7	4.3	19.8	19.9	4.7	26.8	26.8
Cycle Q Clear(g_c), s	4.1	17.7	25.3	3.6	2.3	1.7	4.3	19.8	19.9	4.7	26.8	26.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.29
Lane Grp Cap(c), veh/h	185	559	499	166	1096	482	190	1755	667	208	1258	654
V/C Ratio(X)	0.69	0.65	0.86	0.68	0.10	0.08	0.71	0.65	0.65	0.71	0.81	0.81
Avail Cap(c_a), veh/h	353	744	664	198	1311	577	198	1780	676	415	1494	777
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	30.3	32.9	47.2	25.4	25.2	46.7	27.3	27.3	46.4	29.0	29.0
Incr Delay (d2), s/veh	1.7	1.3	8.4	4.6	0.0	0.1	8.9	0.8	2.2	1.7	2.9	5.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	7.5	10.4	1.5	0.9	0.6	1.8	7.1	8.4	1.8	10.5	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.5	31.6	41.3	51.8	25.4	25.2	55.7	28.1	29.5	48.1	31.9	34.5
LnGrp LOS	D	C	D	D	C	C	E	C	C	D	C	C
Approach Vol, veh/h		920			264			1716			1693	
Approach Delay, s/veh		38.4			36.7			30.6			34.1	
Approach LOS		D			D			C			C	

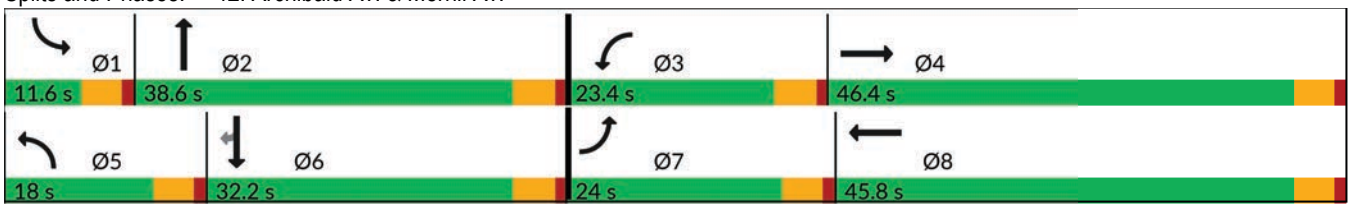
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	42.5	10.0	37.6	10.7	43.1	10.6	37.0
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	13.4	36.8	6.4	41.8	6.4	43.8	11.4	36.8
Max Q Clear Time (g_c+I1), s	6.7	21.9	5.6	27.3	6.3	28.8	6.1	4.3
Green Ext Time (p_c), s	0.1	8.1	0.0	4.1	0.0	8.0	0.1	0.7

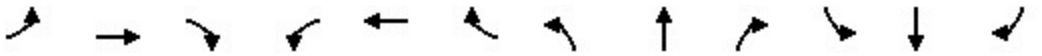
Intersection Summary	
HCM 7th Control Delay, s/veh	33.8
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	851	383	632	141	185	545	676	76	815	582
Future Volume (vph)	851	383	632	141	185	545	676	76	815	582
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			Free							6
Detector Phase	7	4		3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	44.8		9.6	45.8	9.6	32.5	9.6	31.5	31.5
Total Split (s)	24.0	46.4		23.4	45.8	18.0	38.6	11.6	32.2	32.2
Total Split (%)	20.0%	38.7%		19.5%	38.2%	15.0%	32.2%	9.7%	26.8%	26.8%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	None	None
Act Effct Green (s)	19.7	22.1	95.2	13.1	15.5	13.6	36.9	6.8	27.9	27.9
Actuated g/C Ratio	0.21	0.23	1.00	0.14	0.16	0.14	0.39	0.07	0.29	0.29
v/c Ratio	1.35	0.46	0.42	0.63	0.40	1.25	0.30	0.35	0.77	0.69
Control Delay (s/veh)	197.2	33.1	0.8	52.5	30.9	164.2	21.4	49.1	37.8	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	197.2	33.1	0.8	52.5	30.9	164.2	21.4	49.1	37.8	7.6
LOS	F	C	A	D	C	F	C	D	D	A
Approach Delay (s/veh)		97.0			38.9		78.6		26.4	
Approach LOS		F			D		E		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay (s/veh): 67.3	Intersection LOS: E
Intersection Capacity Utilization 93.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 42: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	851	383	632	141	185	54	545	676	141	76	815	582
Future Volume (veh/h)	851	383	632	141	185	54	545	676	141	76	815	582
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	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	1700	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	896	403	0	148	195	37	574	712	100	80	858	587
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	699	888		181	383	71	483	2665	364	156	1167	494
Arrive On Green	0.32	0.35	0.00	0.16	0.19	0.19	0.22	0.61	0.61	0.07	0.46	0.46
Sat Flow, veh/h	3238	3800	1610	1714	3106	576	3238	6532	892	3238	3800	1609
Grp Volume(v), veh/h	896	403	0	148	118	114	574	619	193	80	858	587
Grp Sat Flow(s),veh/h/ln	1619	1900	1610	1714	1900	1782	1619	1900	1725	1619	1900	1609
Q Serve(g_s), s	19.4	7.4	0.0	7.5	5.0	5.2	13.4	4.5	4.7	2.1	16.6	27.6
Cycle Q Clear(g_c), s	19.4	7.4	0.0	7.5	5.0	5.2	13.4	4.5	4.7	2.1	16.6	27.6
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	699	888		181	235	220	483	2326	704	156	1167	494
V/C Ratio(X)	1.28	0.45		0.82	0.50	0.52	1.19	0.27	0.27	0.51	0.74	1.19
Avail Cap(c_a), veh/h	699	1767		359	871	817	483	2326	704	252	1167	494
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	24.8	0.0	37.0	34.1	34.2	34.9	11.2	11.2	40.7	21.3	24.2
Incr Delay (d2), s/veh	137.8	0.4	0.0	8.7	1.7	1.9	104.3	0.1	0.2	2.6	2.5	103.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.3	3.0	0.0	3.3	2.2	2.2	11.4	1.6	1.5	0.8	5.8	21.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	168.2	25.1	0.0	45.7	35.8	36.1	139.2	11.3	11.4	43.3	23.7	127.9
LnGrp LOS	F	C		D	D	D	F	B	B	D	C	F
Approach Vol, veh/h		1299			380			1386			1525	
Approach Delay, s/veh		123.8			39.8			64.3			64.9	
Approach LOS		F			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	41.3	14.1	25.6	18.0	32.2	24.0	15.7
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	7.0	34.0	18.8	41.8	13.4	27.6	19.4	41.2
Max Q Clear Time (g_c+I1), s	4.1	6.7	9.5	9.4	15.4	29.6	21.4	7.2
Green Ext Time (p_c), s	0.0	5.0	0.2	2.5	0.0	0.0	0.0	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	79.3
HCM 7th LOS	E

Notes

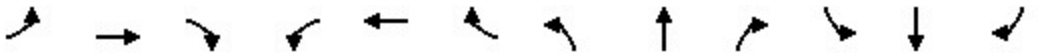
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	202	762	84	431	685	539	61	517	320	546	715	195
Future Volume (vph)	202	762	84	431	685	539	61	517	320	546	715	195
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	14.6	9.6	45.6	9.6	9.6	47.6	9.6	9.6	37.6	37.6
Total Split (s)	10.0	32.6	32.6	23.0	45.6	15.0	10.6	49.4	23.0	15.0	53.8	53.8
Total Split (%)	8.3%	27.2%	27.2%	19.2%	38.0%	12.5%	8.8%	41.2%	19.2%	12.5%	44.8%	44.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.5	27.0	27.0	17.9	39.4	50.0	5.8	22.5	40.4	10.6	29.6	29.6
Actuated g/C Ratio	0.06	0.28	0.28	0.19	0.41	0.52	0.06	0.23	0.42	0.11	0.31	0.31
v/c Ratio	1.20	0.80	0.16	0.78	0.49	0.38	0.34	0.65	0.48	1.68	0.47	0.32
Control Delay (s/veh)	173.4	40.4	1.8	49.7	23.8	7.9	52.7	36.8	16.4	349.0	28.8	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	173.4	40.4	1.8	49.7	23.8	7.9	52.7	36.8	16.4	349.0	28.8	5.4
LOS	F	D	A	D	C	A	D	D	B	F	C	A
Approach Delay (s/veh)		63.0			25.4			30.6			145.8	
Approach LOS		E			C			C			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.68	
Intersection Signal Delay (s/veh): 68.8	Intersection LOS: E
Intersection Capacity Utilization 83.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 43: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	762	84	431	685	539	61	517	320	546	715	195
Future Volume (veh/h)	202	762	84	431	685	539	61	517	320	546	715	195
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1700	1900	1900	1700	1900	1800	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	213	802	71	454	721	480	64	544	265	575	753	133
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	206	966	431	527	1336	1331	147	777	609	396	1528	474
Arrive On Green	0.10	0.40	0.40	0.25	0.56	0.56	0.07	0.32	0.32	0.19	0.44	0.44
Sat Flow, veh/h	3141	3610	1610	3141	3610	2683	3141	3610	1573	3141	5187	1610
Grp Volume(v), veh/h	213	802	71	454	721	480	64	544	265	575	753	133
Grp Sat Flow(s),veh/h/ln	1570	1805	1610	1570	1805	1341	1570	1805	1573	1570	1729	1610
Q Serve(g_s), s	5.4	16.4	2.3	11.4	10.5	7.2	1.6	10.9	9.9	10.4	8.5	4.3
Cycle Q Clear(g_c), s	5.4	16.4	2.3	11.4	10.5	7.2	1.6	10.9	9.9	10.4	8.5	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	966	431	527	1336	1331	147	777	609	396	1528	474
V/C Ratio(X)	1.04	0.83	0.16	0.86	0.54	0.36	0.44	0.70	0.44	1.45	0.49	0.28
Avail Cap(c_a), veh/h	206	1226	547	701	1795	1673	229	1962	1125	396	3096	961
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	23.0	18.8	29.9	13.9	8.7	37.3	25.6	16.2	33.4	18.6	17.4
Incr Delay (d2), s/veh	72.3	4.0	0.2	6.7	0.3	0.2	0.8	1.2	0.5	216.7	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.8	0.8	4.1	3.3	1.6	0.6	3.9	0.1	15.3	2.8	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	109.4	26.9	18.9	36.6	14.2	8.8	38.1	26.8	16.7	250.1	18.9	17.8
LnGrp LOS	F	C	B	D	B	A	D	C	B	F	B	B
Approach Vol, veh/h		1086			1655			873			1461	
Approach Delay, s/veh		42.6			18.8			24.5			109.8	
Approach LOS		D			B			C			F	

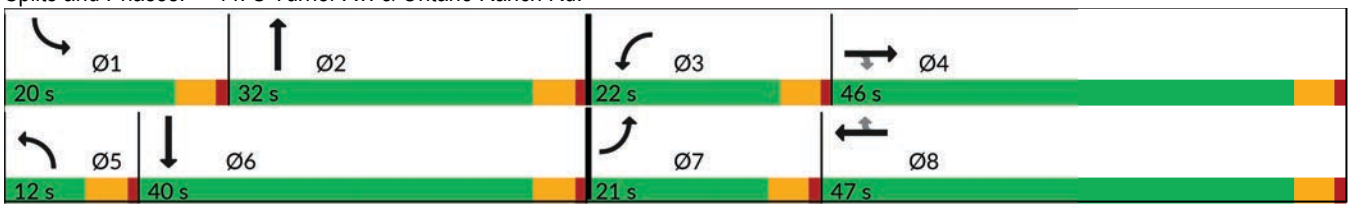
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	22.3	18.4	26.7	8.4	28.9	10.0	35.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	10.4	44.8	18.4	28.0	6.0	49.2	5.4	41.0
Max Q Clear Time (g_c+I1), s	12.4	12.9	13.4	18.4	3.6	10.5	7.4	12.5
Green Ext Time (p_c), s	0.0	4.3	0.5	3.6	0.0	5.5	0.0	7.3

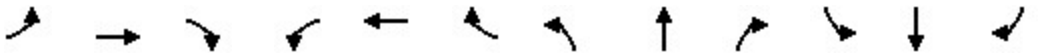
Intersection Summary	
HCM 7th Control Delay, s/veh	51.1
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	215	1418	231	185	1340	172	257	334	231	396
Future Volume (vph)	215	1418	231	185	1340	172	257	334	231	396
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.8	23.8	9.6	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	21.0	46.0	46.0	22.0	47.0	47.0	12.0	32.0	20.0	40.0
Total Split (%)	17.5%	38.3%	38.3%	18.3%	39.2%	39.2%	10.0%	26.7%	16.7%	33.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.4	42.8	42.8	16.0	42.4	42.4	7.4	27.4	15.4	35.4
Actuated g/C Ratio	0.14	0.36	0.36	0.13	0.35	0.35	0.06	0.23	0.13	0.30
v/c Ratio	0.97	1.10	0.37	0.86	1.05	0.26	2.58	1.35	1.11	1.32
Control Delay (s/veh)	103.7	94.6	13.9	82.4	77.3	4.8	761.1	207.5	141.3	189.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	103.7	94.6	13.9	82.4	77.3	4.8	761.1	207.5	141.3	189.2
LOS	F	F	B	F	E	A	F	F	F	F
Approach Delay (s/veh)		85.7			70.5			385.5		177.0
Approach LOS		F			E			F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.58	
Intersection Signal Delay (s/veh): 142.1	Intersection LOS: F
Intersection Capacity Utilization 118.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	1418	231	185	1340	172	257	334	209	231	396	283
Future Volume (veh/h)	215	1418	231	185	1340	172	257	334	209	231	396	283
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	226	1493	235	195	1411	178	271	352	194	243	417	286
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	234	1373	582	221	1343	569	106	263	145	220	308	211
Arrive On Green	0.14	0.36	0.36	0.13	0.35	0.35	0.06	0.23	0.23	0.13	0.30	0.30
Sat Flow, veh/h	1714	3800	1610	1714	3800	1610	1714	1150	634	1714	1043	715
Grp Volume(v), veh/h	226	1493	235	195	1411	178	271	0	546	243	0	703
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	1900	1610	1714	0	1784	1714	0	1758
Q Serve(g_s), s	15.7	43.4	13.1	13.4	42.4	9.6	7.4	0.0	27.4	15.4	0.0	35.4
Cycle Q Clear(g_c), s	15.7	43.4	13.1	13.4	42.4	9.6	7.4	0.0	27.4	15.4	0.0	35.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		0.41
Lane Grp Cap(c), veh/h	234	1373	582	221	1343	569	106	0	407	220	0	519
V/C Ratio(X)	0.96	1.09	0.40	0.88	1.05	0.31	2.56	0.00	1.34	1.10	0.00	1.36
Avail Cap(c_a), veh/h	234	1373	582	249	1343	569	106	0	407	220	0	519
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.5	38.3	28.7	51.4	38.8	28.2	56.3	0.0	46.3	52.3	0.0	42.3
Incr Delay (d2), s/veh	48.4	51.8	0.5	25.2	39.1	0.3	730.5	0.0	169.0	91.5	0.0	172.2
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(50%),veh/ln	9.7	28.9	5.0	7.2	26.0	3.6	24.6	0.0	30.8	12.0	0.0	39.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	100.0	90.1	29.1	76.6	77.9	28.5	786.8	0.0	215.3	143.8	0.0	214.5
LnGrp LOS	F	F	C	E	F	C	F		F	F		F
Approach Vol, veh/h		1954			1784			817			946	
Approach Delay, s/veh		83.9			72.8			404.8			196.3	
Approach LOS		F			E			F			F	

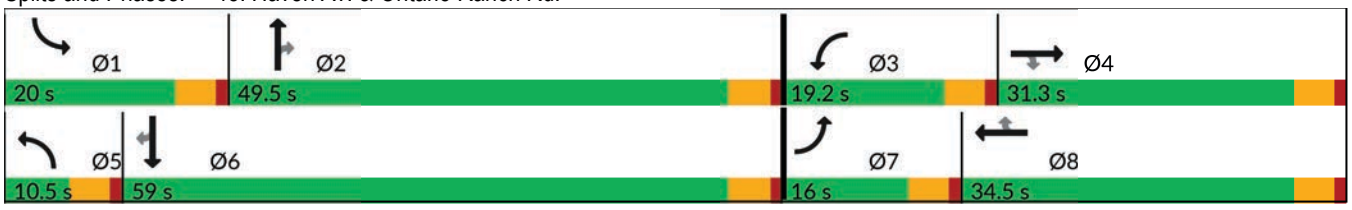
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	32.0	20.0	48.0	12.0	40.0	21.0	47.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	27.4	17.4	41.4	7.4	35.4	16.4	42.4
Max Q Clear Time (g_c+I1), s	17.4	29.4	15.4	45.4	9.4	37.4	17.7	44.4
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0

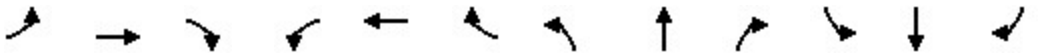
Intersection Summary	
HCM 7th Control Delay, s/veh	147.3
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	1164	190	420	1266	268	76	437	176	272	457	71
Future Volume (vph)	216	1164	190	420	1266	268	76	437	176	272	457	71
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	34.5	34.5	9.6	47.8	47.8	9.6	45.8	45.8
Total Split (s)	16.0	31.3	31.3	19.2	34.5	34.5	10.5	49.5	49.5	20.0	59.0	59.0
Total Split (%)	13.3%	26.1%	26.1%	16.0%	28.8%	28.8%	8.8%	41.3%	41.3%	16.7%	49.2%	49.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.5	26.8	26.8	14.7	30.1	30.1	5.9	31.1	31.1	15.5	40.6	40.6
Actuated g/C Ratio	0.11	0.25	0.25	0.14	0.28	0.28	0.06	0.29	0.29	0.15	0.38	0.38
v/c Ratio	1.24	0.94	0.36	1.03	0.72	0.44	0.85	0.83	0.31	1.15	0.66	0.11
Control Delay (s/veh)	186.4	54.2	8.4	96.5	38.2	6.4	110.8	48.5	5.2	147.4	31.9	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	186.4	54.2	8.4	96.5	38.2	6.4	110.8	48.5	5.2	147.4	31.9	2.4
LOS	F	D	A	F	D	A	F	D	A	F	C	A
Approach Delay (s/veh)		66.8			46.4			44.3			68.5	
Approach LOS		E			D			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay (s/veh): 56.0	Intersection LOS: E
Intersection Capacity Utilization 90.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 45: Haven Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	1164	190	420	1266	268	76	437	176	272	457	71
Future Volume (veh/h)	216	1164	190	420	1266	268	76	437	176	272	457	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	227	1225	174	442	1333	199	80	460	141	286	481	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	188	1325	411	442	1871	456	98	528	447	255	702	592
Arrive On Green	0.11	0.26	0.26	0.14	0.29	0.29	0.06	0.28	0.28	0.15	0.37	0.37
Sat Flow, veh/h	1714	5187	1610	3141	6536	1593	1714	1900	1610	1714	1900	1601
Grp Volume(v), veh/h	227	1225	174	442	1333	199	80	460	141	286	481	57
Grp Sat Flow(s),veh/h/ln	1714	1729	1610	1570	1634	1593	1714	1900	1610	1714	1900	1601
Q Serve(g_s), s	11.4	23.9	9.4	14.6	19.0	10.6	4.8	23.9	7.2	15.4	22.2	2.4
Cycle Q Clear(g_c), s	11.4	23.9	9.4	14.6	19.0	10.6	4.8	23.9	7.2	15.4	22.2	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	188	1325	411	442	1871	456	98	528	447	255	702	592
V/C Ratio(X)	1.20	0.92	0.42	1.00	0.71	0.44	0.82	0.87	0.32	1.12	0.69	0.10
Avail Cap(c_a), veh/h	188	1335	415	442	1884	459	98	823	697	255	997	840
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	37.6	32.2	44.6	33.2	30.2	48.4	35.7	29.6	44.2	27.6	21.4
Incr Delay (d2), s/veh	131.5	11.0	0.7	42.7	1.3	0.7	38.3	6.4	0.4	93.8	1.2	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(50%),veh/ln	11.5	10.8	3.5	8.0	7.1	3.8	3.0	11.4	2.6	12.9	9.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	177.7	48.6	32.9	87.3	34.5	30.8	86.7	42.1	30.0	137.9	28.8	21.4
LnGrp LOS	F	D	C	F	C	C	F	D	C	F	C	C
Approach Vol, veh/h		1626			1974			681			824	
Approach Delay, s/veh		64.9			45.9			44.8			66.2	
Approach LOS		E			D			D			E	

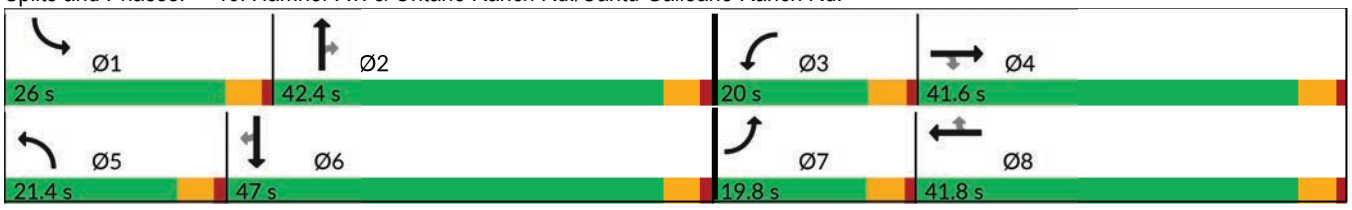
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	33.4	19.2	31.1	10.5	42.9	16.0	34.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	44.9	14.6	26.7	5.9	54.4	11.4	29.9
Max Q Clear Time (g_c+I1), s	17.4	25.9	16.6	25.9	6.8	24.2	13.4	21.0
Green Ext Time (p_c), s	0.0	2.9	0.0	0.6	0.0	3.1	0.0	5.5

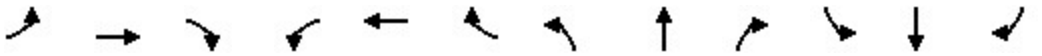
Intersection Summary	
HCM 7th Control Delay, s/veh	55.1
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	282	915	320	425	1379	348	408	864	347	582	1386	660
Future Volume (vph)	282	915	320	425	1379	348	408	864	347	582	1386	660
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6
Total Split (s)	19.8	41.6	41.6	20.0	41.8	41.8	21.4	42.4	42.4	26.0	47.0	47.0
Total Split (%)	15.2%	32.0%	32.0%	15.4%	32.2%	32.2%	16.5%	32.6%	32.6%	20.0%	36.2%	36.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.4	36.0	36.0	15.4	37.0	37.0	16.8	37.8	37.8	21.4	42.4	42.4
Actuated g/C Ratio	0.11	0.28	0.28	0.12	0.29	0.29	0.13	0.29	0.29	0.17	0.33	0.33
v/c Ratio	0.83	0.61	0.53	1.16	0.89	0.56	1.02	0.54	0.57	1.15	0.78	1.01
Control Delay (s/veh)	75.4	42.2	12.3	146.8	51.9	13.3	104.3	40.0	16.1	133.3	42.7	65.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.4	42.2	12.3	146.8	51.9	13.3	104.3	40.0	16.1	133.3	42.7	65.7
LOS	E	D	B	F	D	B	F	D	B	F	D	E
Approach Delay (s/veh)		42.0			64.4			51.1			68.6	
Approach LOS		D			E			D			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 129	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay (s/veh): 58.8	Intersection LOS: E
Intersection Capacity Utilization 92.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 46: Hamner Av. & Ontario Ranch Rd./Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	915	320	425	1379	348	408	864	347	582	1386	660
Future Volume (veh/h)	282	915	320	425	1379	348	408	864	347	582	1386	660
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
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	1700	1900	1900	1700	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	297	963	190	447	1452	208	429	909	186	613	1459	379
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	347	1536	433	414	1655	461	452	1551	433	575	1769	493
Arrive On Green	0.16	0.40	0.40	0.19	0.44	0.44	0.21	0.41	0.41	0.27	0.47	0.47
Sat Flow, veh/h	3238	5700	1608	3238	5700	1588	3238	5700	1590	3238	5700	1588
Grp Volume(v), veh/h	297	963	190	447	1452	208	429	909	186	613	1459	379
Grp Sat Flow(s),veh/h/ln	1619	1900	1608	1619	1900	1588	1619	1900	1590	1619	1900	1588
Q Serve(g_s), s	10.8	16.2	10.3	15.4	28.0	11.1	15.7	14.9	10.1	21.4	26.7	23.9
Cycle Q Clear(g_c), s	10.8	16.2	10.3	15.4	28.0	11.1	15.7	14.9	10.1	21.4	26.7	23.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	347	1536	433	414	1655	461	452	1551	433	575	1769	493
V/C Ratio(X)	0.86	0.63	0.44	1.08	0.88	0.45	0.95	0.59	0.43	1.07	0.82	0.77
Avail Cap(c_a), veh/h	409	1751	494	414	1761	491	452	1789	499	575	2007	559
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	31.0	29.3	48.7	32.0	27.3	47.2	30.4	28.9	44.2	29.3	28.6
Incr Delay (d2), s/veh	12.9	0.6	0.7	67.2	5.2	0.7	29.6	0.4	0.7	56.1	2.6	5.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	6.3	3.6	9.3	10.9	3.7	7.5	5.9	3.5	11.9	10.1	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.5	31.6	30.0	115.9	37.2	27.9	76.8	30.7	29.6	100.3	32.0	34.3
LnGrp LOS	E	C	C	F	D	C	E	C	C	F	C	C
Approach Vol, veh/h		1450			2107			1524			2451	
Approach Delay, s/veh		37.7			53.0			43.6			49.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	37.4	20.0	37.1	21.4	42.0	17.5	39.6
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	21.4	37.8	15.4	37.0	16.8	42.4	15.2	37.2
Max Q Clear Time (g_c+I1), s	23.4	16.9	17.4	18.2	17.7	28.7	12.8	30.0
Green Ext Time (p_c), s	0.0	6.3	0.0	6.3	0.0	8.6	0.1	4.9

Intersection Summary	
HCM 7th Control Delay, s/veh	47.0
HCM 7th LOS	D

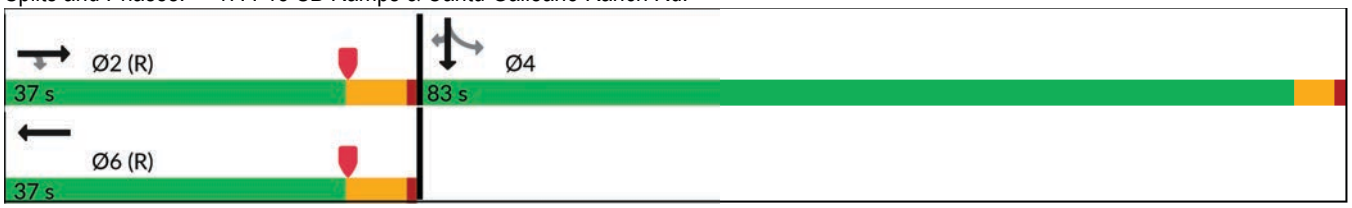
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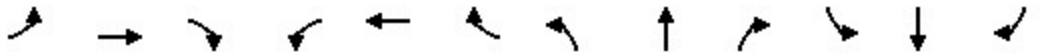
User approved pedestrian interval to be less than phase max green.

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1526	833	1116	592	332	0	1671
Future Volume (vph)	1526	833	1116	592	332	0	1671
Turn Type	NA	Perm	NA	Free	Perm	NA	Perm
Protected Phases	2		6			4	
Permitted Phases		2		Free	4		4
Detector Phase	2	2	6		4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	37.0	37.0	37.0		83.0	83.0	83.0
Total Split (%)	30.8%	30.8%	30.8%		69.2%	69.2%	69.2%
Yellow Time (s)	5.5	5.5	5.5		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5		4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Min	C-Min	C-Min		Min	Min	Min
Act Effct Green (s)	32.4	32.4	32.4	120.0	76.5	76.5	76.5
Actuated g/C Ratio	0.27	0.27	0.27	1.00	0.64	0.64	0.64
v/c Ratio	1.04	0.92	1.14	0.39	0.29	0.86	0.86
Control Delay (s/veh)	77.8	23.6	118.8	0.8	10.2	26.4	26.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.8	23.6	118.8	0.8	10.2	26.4	26.8
LOS	E	C	F	A	B	C	C
Approach Delay (s/veh)	58.7		77.9			24.2	
Approach LOS	E		E			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 8.1 (7%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 52.7	Intersection LOS: D
Intersection Capacity Utilization 109.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 47: I-15 SB Ramps & Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	1526	833	0	1116	592	0	0	0	332	0	1671
Future Volume (veh/h)	0	1526	833	0	1116	592	0	0	0	332	0	1671
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
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	0	1900	1900	0	1900	1900				1800	1900	1900
Adj Flow Rate, veh/h	0	1606	0	0	1175	0				233	0	1640
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2003		0	1335					953	0	1791
Arrive On Green	0.00	0.35	0.00	0.00	0.70	0.00				0.56	0.00	0.56
Sat Flow, veh/h	0	5700	1610	0	3800	1610				1714	0	3220
Grp Volume(v), veh/h	0	1606	0	0	1175	0				233	0	1640
Grp Sat Flow(s),veh/h/ln	0	1900	1610	0	1900	1610				1714	0	1610
Q Serve(g_s), s	0.0	30.5	0.0	0.0	28.9	0.0				8.4	0.0	55.3
Cycle Q Clear(g_c), s	0.0	30.5	0.0	0.0	28.9	0.0				8.4	0.0	55.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2003		0	1335					953	0	1791
V/C Ratio(X)	0.00	0.80		0.00	0.88					0.24	0.00	0.92
Avail Cap(c_a), veh/h	0	2003		0	1335					1120	0	2104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.55	0.00	0.00	0.78	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	35.1	0.0	0.0	15.9	0.0				13.7	0.0	24.1
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.0	6.8	0.0				0.1	0.0	6.2
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	0.0	13.5	0.0	0.0	6.8	0.0				3.1	0.0	20.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	37.1	0.0	0.0	22.7	0.0				13.8	0.0	30.3
LnGrp LOS		D			C					B		C
Approach Vol, veh/h		1606			1175						1873	
Approach Delay, s/veh		37.1			22.7						28.2	
Approach LOS		D			C						C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	48.7	71.3	48.7
Change Period (Y+Rc), s	6.5	4.6	6.5
Max Green Setting (Gmax), s	30.5	78.4	30.5
Max Q Clear Time (g_c+I1), s	32.5	57.3	30.9
Green Ext Time (p_c), s	0.0	9.4	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	29.9
HCM 7th LOS	C

Notes

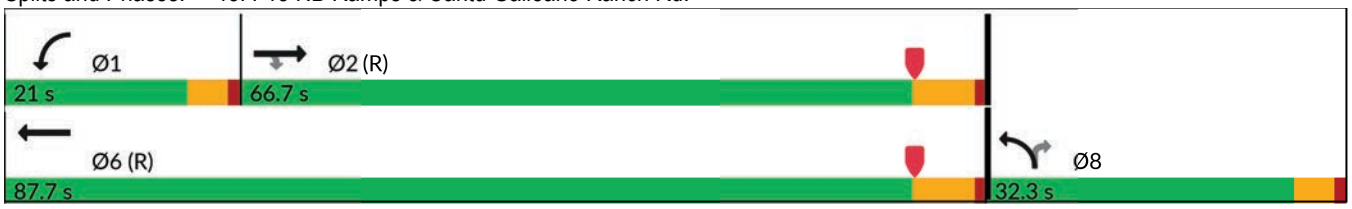
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	792	1066	411	960	745	263
Future Volume (vph)	792	1066	411	960	745	263
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	61.3	61.3	11.0	22.5	22.5	22.5
Total Split (s)	66.7	66.7	21.0	87.7	32.3	32.3
Total Split (%)	55.6%	55.6%	17.5%	73.1%	26.9%	26.9%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.6	4.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	59.4	59.4	16.4	80.4	28.5	28.5
Actuated g/C Ratio	0.50	0.50	0.14	0.67	0.24	0.24
v/c Ratio	0.30	0.99	0.98	0.26	1.00	0.43
Control Delay (s/veh)	11.2	48.0	90.5	8.1	77.0	7.2
Queue Delay	0.0	10.9	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.2	58.9	90.5	8.1	77.0	7.2
LOS	B	E	F	A	E	A
Approach Delay (s/veh)	38.6			32.8	60.6	
Approach LOS	D			C	E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 15.4 (13%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay (s/veh): 41.9	Intersection LOS: D
Intersection Capacity Utilization 96.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 48: I-15 NB Ramps & Cantu Galleano Ranch Rd.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	792	1066	411	960	745	263
Future Volume (veh/h)	792	1066	411	960	745	263
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1900	1900	1700	1900	1800	1900
Adj Flow Rate, veh/h	834	596	433	1011	784	172
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2860	807	443	3857	791	372
Arrive On Green	0.84	0.84	0.20	1.00	0.35	0.35
Sat Flow, veh/h	5700	1609	3238	5700	3429	1610
Grp Volume(v), veh/h	834	596	433	1011	784	172
Grp Sat Flow(s),veh/h/ln	1900	1609	1619	1900	1714	1610
Q Serve(g_s), s	3.8	18.9	16.0	0.0	27.3	10.0
Cycle Q Clear(g_c), s	3.8	18.9	16.0	0.0	27.3	10.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2860	807	443	3857	791	372
V/C Ratio(X)	0.29	0.74	0.98	0.26	0.99	0.46
Avail Cap(c_a), veh/h	2860	807	443	3857	791	372
HCM Platoon Ratio	1.67	1.67	1.50	1.50	1.50	1.50
Upstream Filter(I)	0.27	0.27	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.2	6.4	47.5	0.0	39.1	33.4
Incr Delay (d2), s/veh	0.1	1.7	37.0	0.2	29.6	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.2	7.9	0.1	13.1	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	5.2	8.1	84.6	0.2	68.7	34.3
LnGrp LOS	A	A	F	A	E	C
Approach Vol, veh/h	1430			1444	956	
Approach Delay, s/veh	6.4			25.5	62.5	
Approach LOS	A			C	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	21.0	66.7				87.7	32.3
Change Period (Y+Rc), s	4.6	6.5				6.5	4.6
Max Green Setting (Gmax), s	16.4	60.2				81.2	27.7
Max Q Clear Time (g_c+I1), s	18.0	20.9				2.0	29.3
Green Ext Time (p_c), s	0.0	8.8				7.5	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	27.6
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 7.3:

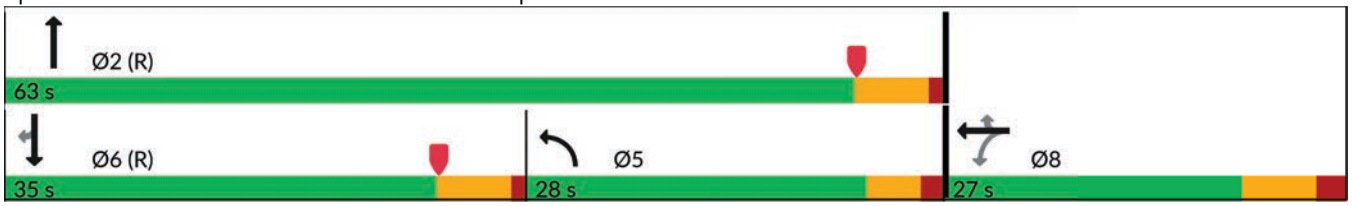
HORIZON YEAR (2050) WITH PROJECT INTERSECTION ANALYSIS

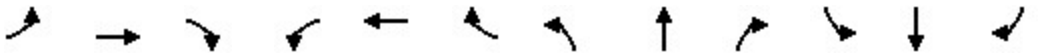
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Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	766	0	494	649	1297	1095	693
Future Volume (vph)	766	0	494	649	1297	1095	693
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.0	17.0	17.0	15.2	28.0	27.0	27.0
Total Split (s)	27.0	27.0	27.0	28.0	63.0	35.0	35.0
Total Split (%)	30.0%	30.0%	30.0%	31.1%	70.0%	38.9%	38.9%
Yellow Time (s)	5.0	5.0	5.0	3.7	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	1.5	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	5.2	6.0	6.0	6.0
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	20.0	20.0	20.0	22.8	57.0	29.0	29.0
Actuated g/C Ratio	0.22	0.22	0.22	0.25	0.63	0.32	0.32
v/c Ratio	1.27	1.02	0.98	1.58	0.60	0.99	0.84
Control Delay (s/veh)	175.8	77.1	66.5	287.2	4.1	56.0	18.3
Queue Delay	0.0	3.6	0.0	0.0	9.0	37.9	0.0
Total Delay (s/veh)	175.8	80.7	66.5	287.2	13.1	93.9	18.3
LOS	F	F	E	F	B	F	B
Approach Delay (s/veh)		109.2			104.5	64.6	
Approach LOS		F			F	E	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36.8 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.58	
Intersection Signal Delay (s/veh): 91.4	Intersection LOS: F
Intersection Capacity Utilization 133.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: Euclid Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	766	0	494	649	1297	0	0	1095	693
Future Volume (veh/h)	0	0	0	766	0	494	649	1297	0	0	1095	693
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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				1800	1900	1900	1800	1900	0	0	1900	1900
Adj Flow Rate, veh/h				926	0	257	683	1365	0	0	1153	496
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				762	0	358	750	2983	0	0	1163	504
Arrive On Green				0.22	0.00	0.22	0.88	1.00	0.00	0.00	0.32	0.32
Sat Flow, veh/h				3429	0	1610	1714	3705	0	0	3705	1564
Grp Volume(v), veh/h				926	0	257	683	1365	0	0	1153	496
Grp Sat Flow(s),veh/h/ln				1714	0	1610	1714	1805	0	0	1805	1564
Q Serve(g_s), s				20.0	0.0	13.3	22.1	0.0	0.0	0.0	28.6	28.3
Cycle Q Clear(g_c), s				20.0	0.0	13.3	22.1	0.0	0.0	0.0	28.6	28.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				762	0	358	750	2983	0	0	1163	504
V/C Ratio(X)				1.22	0.00	0.72	0.91	0.46	0.00	0.00	0.99	0.98
Avail Cap(c_a), veh/h				762	0	358	750	2983	0	0	1163	504
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	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.0	0.0	32.4	4.5	0.0	0.0	0.0	30.4	30.3
Incr Delay (d2), s/veh				108.8	0.0	7.4	1.8	0.0	0.0	0.0	24.4	36.4
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				19.6	0.0	5.8	2.1	0.0	0.0	0.0	15.3	14.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				143.8	0.0	39.8	6.4	0.0	0.0	0.0	54.7	66.7
LnGrp LOS				F		D	A	A			D	E
Approach Vol, veh/h					1183			2048			1649	
Approach Delay, s/veh					121.2			2.1			58.3	
Approach LOS					F			A			E	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	81.2		46.2	35.0		27.0						
Change Period (Y+Rc), s	6.0		6.0	* 6		7.0						
Max Green Setting (Gmax), s	57.0		22.8	* 29		20.0						
Max Q Clear Time (g_c+I1), s	2.0		24.1	30.6		22.0						
Green Ext Time (p_c), s	20.6		0.0	0.0		0.0						

Intersection Summary	
HCM 7th Control Delay, s/veh	50.0
HCM 7th LOS	D

Notes

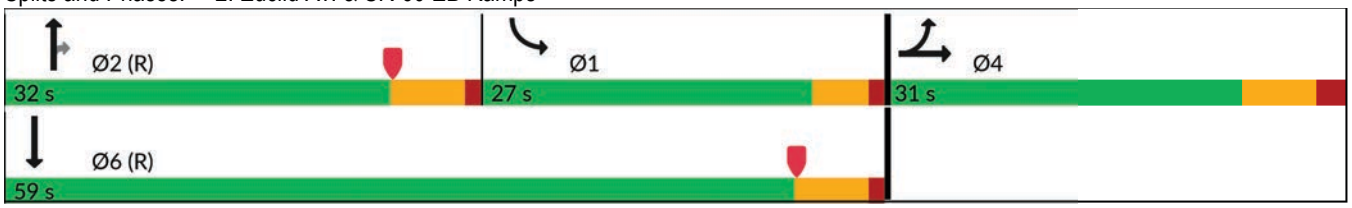
User approved volume balancing among the lanes for turning movement.

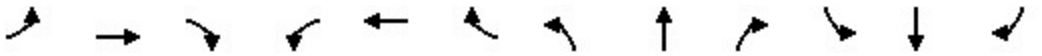
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	449	7	1498	1014	436	1426
Future Volume (vph)	449	7	1498	1014	436	1426
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	27.7	27.7	26.0	26.0	14.7	24.0
Total Split (s)	31.0	31.0	32.0	32.0	27.0	59.0
Total Split (%)	34.4%	34.4%	35.6%	35.6%	30.0%	65.6%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.7	5.0
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	24.0	24.0	26.0	26.0	22.3	53.0
Actuated g/C Ratio	0.27	0.27	0.29	0.29	0.25	0.59
v/c Ratio	0.98	1.49	1.51	1.19	1.09	0.71
Control Delay (s/veh)	74.3	259.1	263.4	112.1	79.3	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	48.5
Total Delay (s/veh)	74.3	259.1	263.4	112.1	79.3	61.5
LOS	E	F	F	F	E	E
Approach Delay (s/veh)		186.2	202.4			65.6
Approach LOS		F	F			E

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36.6 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.51	
Intersection Signal Delay (s/veh): 152.2	Intersection LOS: F
Intersection Capacity Utilization 133.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	7	570	0	0	0	0	1498	1014	436	1426	0
Future Volume (veh/h)	449	7	570	0	0	0	0	1498	1014	436	1426	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	473	7	538				0	1577	841	459	1501	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	457	6	425				0	1043	465	548	2437	0
Arrive On Green	0.27	0.27	0.27				0.00	0.29	0.29	0.64	1.00	0.00
Sat Flow, veh/h	1714	21	1593				0	3705	1610	1714	3705	0
Grp Volume(v), veh/h	473	0	545				0	1577	841	459	1501	0
Grp Sat Flow(s),veh/h/ln	1714	0	1613				0	1805	1610	1714	1805	0
Q Serve(g_s), s	24.0	0.0	24.0				0.0	26.0	26.0	18.7	0.0	0.0
Cycle Q Clear(g_c), s	24.0	0.0	24.0				0.0	26.0	26.0	18.7	0.0	0.0
Prop In Lane	1.00		0.99				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	457	0	430				0	1043	465	548	2437	0
V/C Ratio(X)	1.03	0.00	1.27				0.00	1.51	1.81	0.84	0.62	0.00
Avail Cap(c_a), veh/h	457	0	430				0	1043	465	548	2437	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	0.09	0.09	0.09	0.09	0.00
Uniform Delay (d), s/veh	33.0	0.0	33.0				0.0	32.0	32.0	14.4	0.0	0.0
Incr Delay (d2), s/veh	51.3	0.0	137.4				0.0	230.9	364.4	1.1	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(50%),veh/ln	16.1	0.0	25.5				0.0	43.9	56.4	4.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	84.3	0.0	170.4				0.0	262.9	396.4	15.6	0.1	0.0
LnGrp LOS	F		F					F	F	B	A	
Approach Vol, veh/h		1018						2418			1960	
Approach Delay, s/veh		130.4						309.3			3.7	
Approach LOS		F						F			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	34.8	32.0		31.0		66.8
Change Period (Y+Rc), s	6.0	* 6		7.0		6.0
Max Green Setting (Gmax), s	22.3	* 26		24.0		53.0
Max Q Clear Time (g_c+I1), s	20.7	28.0		26.0		2.0
Green Ext Time (p_c), s	0.3	0.0		0.0		23.4

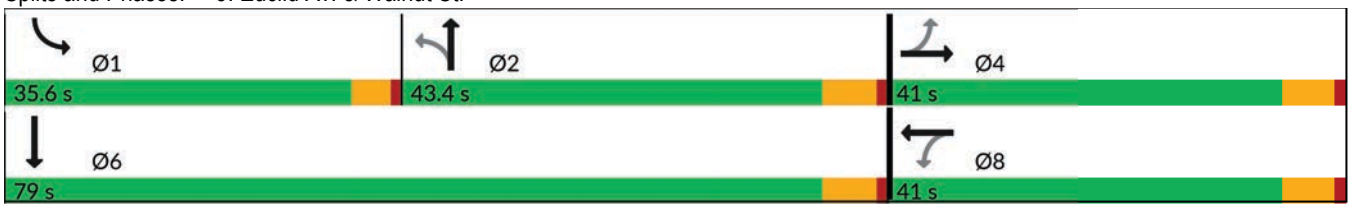
Intersection Summary		
HCM 7th Control Delay, s/veh		164.6
HCM 7th LOS		F

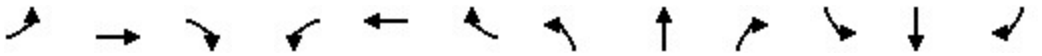
Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	321	303	62	838	167	1560	209	1624
Future Volume (vph)	321	303	62	838	167	1560	209	1624
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	41.0	41.0	41.0	41.0	43.4	43.4	35.6	79.0
Total Split (%)	34.2%	34.2%	34.2%	34.2%	36.2%	36.2%	29.7%	65.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	35.3	35.3	35.3	35.3	39.7	39.7	11.6	55.9
Actuated g/C Ratio	0.34	0.34	0.34	0.34	0.39	0.39	0.11	0.54
v/c Ratio	4.90	0.32	0.22	1.06	2.51	0.84	0.63	0.70
Control Delay (s/veh)	Error	25.1	28.6	76.6	741.0	33.6	52.1	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	Error	25.1	28.6	76.6	741.0	33.6	52.1	18.6
LOS	F	C	C	E	F	C	D	B
Approach Delay (s/veh)		841.7		74.3		100.6		22.0
Approach LOS		F		E		F		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.9	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.90	
Intersection Signal Delay (s/veh): 155.6	Intersection LOS: F
Intersection Capacity Utilization 120.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	303	70	62	838	389	167	1560	37	209	1624	224
Future Volume (veh/h)	321	303	70	62	838	389	167	1560	37	209	1624	224
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	338	319	57	65	882	408	176	1642	19	220	1709	217
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	73	1099	194	348	862	395	128	2027	23	289	2433	307
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.38	0.38	0.38	0.09	0.52	0.52
Sat Flow, veh/h	412	3060	540	969	2401	1101	223	5286	61	3141	4655	588
Grp Volume(v), veh/h	338	187	189	65	661	629	176	1074	587	220	1268	658
Grp Sat Flow(s),veh/h/ln	412	1805	1795	969	1805	1697	223	1729	1889	1570	1729	1785
Q Serve(g_s), s	0.0	7.2	7.4	5.1	35.2	35.2	23.9	27.2	27.2	6.7	27.1	27.4
Cycle Q Clear(g_c), s	35.2	7.2	7.4	12.5	35.2	35.2	37.6	27.2	27.2	6.7	27.1	27.4
Prop In Lane	1.00		0.30	1.00		0.65	1.00		0.03	1.00		0.33
Lane Grp Cap(c), veh/h	73	648	644	348	648	609	128	1326	724	289	1807	933
V/C Ratio(X)	4.60	0.29	0.29	0.19	1.02	1.03	1.38	0.81	0.81	0.76	0.70	0.71
Avail Cap(c_a), veh/h	73	648	644	348	648	609	128	1326	724	993	2582	1333
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	22.5	22.5	27.0	31.4	31.4	43.9	27.0	27.0	43.4	17.6	17.7
Incr Delay (d2), s/veh	1651.6	0.2	0.3	0.3	40.5	44.9	211.5	3.9	6.9	1.6	0.5	1.0
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(50%),veh/ln	35.4	2.9	3.0	1.1	21.3	20.8	10.5	11.0	12.6	2.6	9.5	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	1700.6	22.7	22.8	27.2	71.9	76.3	255.4	30.9	33.9	45.0	18.1	18.7
LnGrp LOS	F	C	C	C	F	F	F	C	C	D	B	B
Approach Vol, veh/h		714			1355			1837			2146	
Approach Delay, s/veh		817.0			71.8			53.4			21.1	
Approach LOS		F			E			D			C	

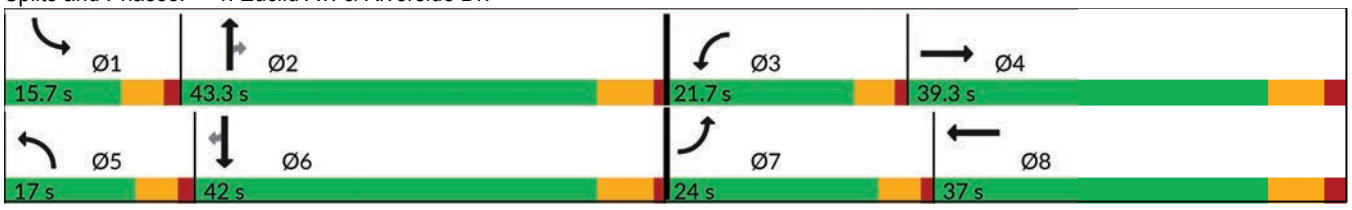
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.6	43.4		41.0		57.0		41.0				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	37.6		35.2		73.2		35.2				
Max Q Clear Time (g_c+I1), s	8.7	39.6		37.2		29.4		37.2				
Green Ext Time (p_c), s	0.4	0.0		0.0		19.8		0.0				

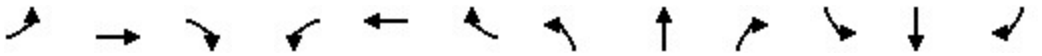
Intersection Summary		
HCM 7th Control Delay, s/veh	136.1	
HCM 7th LOS	F	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	273	351	144	896	86	1234	150	91	1514	224
Future Volume (vph)	273	351	144	896	86	1234	150	91	1514	224
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	33.0	15.2	36.0	36.0
Total Split (s)	24.0	39.3	21.7	37.0	17.0	43.3	43.3	15.7	42.0	42.0
Total Split (%)	20.0%	32.8%	18.1%	30.8%	14.2%	36.1%	36.1%	13.1%	35.0%	35.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	5.0	3.7	5.0	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	6.0	5.2	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.3	34.6	14.7	30.0	11.1	37.3	37.3	10.4	36.6	36.6
Actuated g/C Ratio	0.16	0.29	0.12	0.25	0.09	0.31	0.31	0.09	0.31	0.31
v/c Ratio	1.04	0.76	0.73	1.26	0.58	1.16	0.27	0.65	1.45	0.41
Control Delay (s/veh)	114.8	49.2	70.4	162.3	67.2	118.7	9.6	73.8	238.4	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	114.8	49.2	70.4	162.3	67.2	118.7	9.6	73.8	238.4	16.6
LOS	F	D	E	F	E	F	A	E	F	B
Approach Delay (s/veh)		76.2		151.3		104.6			203.0	
Approach LOS		E		F		F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.45	
Intersection Signal Delay (s/veh): 146.7	Intersection LOS: F
Intersection Capacity Utilization 115.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	273	351	40	144	896	169	86	1234	150	91	1514	224
Future Volume (veh/h)	273	351	40	144	896	169	86	1234	150	91	1514	224
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	287	369	19	152	943	136	91	1299	117	96	1594	170
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	278	555	29	178	796	115	137	1131	504	138	1133	499
Arrive On Green	0.16	0.31	0.31	0.10	0.25	0.25	0.08	0.31	0.31	0.08	0.31	0.31
Sat Flow, veh/h	1714	1790	92	1714	3160	456	1714	3610	1608	1714	3610	1589
Grp Volume(v), veh/h	287	0	388	152	539	540	91	1299	117	96	1594	170
Grp Sat Flow(s),veh/h/ln	1714	0	1882	1714	1805	1810	1714	1805	1608	1714	1805	1589
Q Serve(g_s), s	19.3	0.0	21.3	10.4	30.0	30.0	6.1	37.3	6.4	6.5	37.4	9.8
Cycle Q Clear(g_c), s	19.3	0.0	21.3	10.4	30.0	30.0	6.1	37.3	6.4	6.5	37.4	9.8
Prop In Lane	1.00		0.05	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	0	584	178	455	456	137	1131	504	138	1133	499
V/C Ratio(X)	1.03	0.00	0.66	0.85	1.18	1.19	0.66	1.15	0.23	0.70	1.41	0.34
Avail Cap(c_a), veh/h	278	0	584	245	455	456	170	1131	504	151	1133	499
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.9	0.0	35.7	52.5	44.5	44.5	53.2	40.9	30.3	53.3	40.9	31.4
Incr Delay (d2), s/veh	62.8	0.0	3.2	14.6	103.4	103.6	6.8	77.6	0.2	11.8	188.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	0.0	9.9	5.1	25.9	26.0	2.8	27.6	2.4	3.2	45.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	112.7	0.0	38.9	67.1	147.9	148.1	60.0	118.5	30.5	65.1	229.3	31.8
LnGrp LOS	F		D	E	F	F	E	F	C	E	F	C
Approach Vol, veh/h		675			1231			1507			1860	
Approach Delay, s/veh		70.3			138.0			108.1			202.7	
Approach LOS		E			F			F			F	

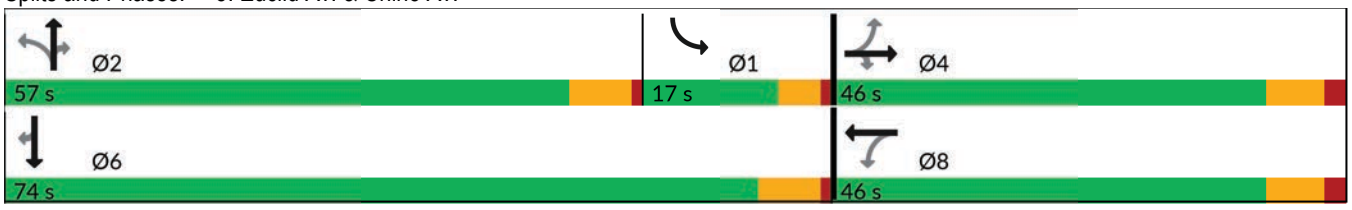
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	43.3	17.1	43.9	14.7	43.4	24.0	37.0
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	10.5	37.3	17.0	32.3	11.8	36.0	19.3	30.0
Max Q Clear Time (g_c+I1), s	8.5	39.3	12.4	23.3	8.1	39.4	21.3	32.0
Green Ext Time (p_c), s	0.0	0.0	0.1	1.9	0.1	0.0	0.0	0.0

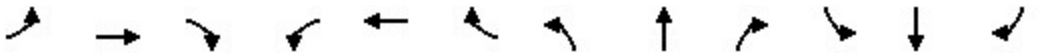
Intersection Summary	
HCM 7th Control Delay, s/veh	143.6
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	127	280	49	67	384	100	1256	103	73	1526	168
Future Volume (vph)	127	280	49	67	384	100	1256	103	73	1526	168
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	46.0	46.0	46.0	46.0	46.0	57.0	57.0	57.0	17.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	47.5%	47.5%	47.5%	14.2%	61.7%	61.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2		7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	38.9	38.9	38.9		38.9	50.7	50.7	50.7	10.9	63.0	63.0
Actuated g/C Ratio	0.34	0.34	0.34		0.34	0.44	0.44	0.44	0.09	0.54	0.54
v/c Ratio	0.72	0.46	0.09		1.11	1.72	0.84	0.14	0.48	0.82	0.19
Control Delay (s/veh)	59.4	34.1	1.6		111.9	405.8	35.6	5.7	61.3	25.6	4.8
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.4	34.1	1.6		111.9	405.8	35.6	5.7	61.3	25.6	4.8
LOS	E	C	A		F	F	D	A	E	C	A
Approach Delay (s/veh)		37.6			111.9		58.8			25.1	
Approach LOS		D			F		E			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.72	
Intersection Signal Delay (s/veh): 48.7	Intersection LOS: D
Intersection Capacity Utilization 115.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	280	49	67	384	56	100	1256	103	73	1526	168
Future Volume (veh/h)	127	280	49	67	384	56	100	1256	103	73	1526	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1800	1900	1900	1900	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	134	295	31	71	404	52	105	1322	92	77	1606	146
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	621	526	81	361	45	79	1536	685	133	2013	898
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.43	0.43	0.43	0.08	0.56	0.56
Sat Flow, veh/h	900	1900	1610	142	1106	137	264	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	134	295	31	527	0	0	105	1322	92	77	1606	146
Grp Sat Flow(s),veh/h/ln	900	1900	1610	1384	0	0	264	1805	1610	1714	1805	1610
Q Serve(g_s), s	0.0	14.7	1.6	24.1	0.0	0.0	8.4	39.4	4.1	5.1	42.1	5.2
Cycle Q Clear(g_c), s	38.8	14.7	1.6	38.8	0.0	0.0	50.5	39.4	4.1	5.1	42.1	5.2
Prop In Lane	1.00		1.00	0.13		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	621	526	487	0	0	79	1536	685	133	2013	898
V/C Ratio(X)	0.83	0.48	0.06	1.08	0.00	0.00	1.32	0.86	0.13	0.58	0.80	0.16
Avail Cap(c_a), veh/h	161	621	526	487	0	0	79	1536	685	178	2053	916
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	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	31.8	27.4	42.9	0.0	0.0	58.4	30.9	20.8	52.9	20.9	12.8
Incr Delay (d2), s/veh	29.4	0.6	0.0	64.9	0.0	0.0	209.6	5.2	0.1	1.5	2.3	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(50%),veh/ln	5.3	6.7	0.6	22.8	0.0	0.0	6.9	16.7	1.5	2.2	15.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.2	32.4	27.5	107.9	0.0	0.0	267.9	36.2	20.9	54.4	23.2	12.9
LnGrp LOS	E	C	C	F			F	D	C	D	C	B
Approach Vol, veh/h		460			527			1519			1829	
Approach Delay, s/veh		44.3			107.9			51.2			23.7	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.7	57.0		46.0		72.7		46.0				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	12.3	* 51		38.8		67.5		38.8				
Max Q Clear Time (g_c+I1), s	7.1	52.5		40.8		44.1		40.8				
Green Ext Time (p_c), s	0.0	0.0		0.0		12.5		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	45.8	
HCM 7th LOS	D	

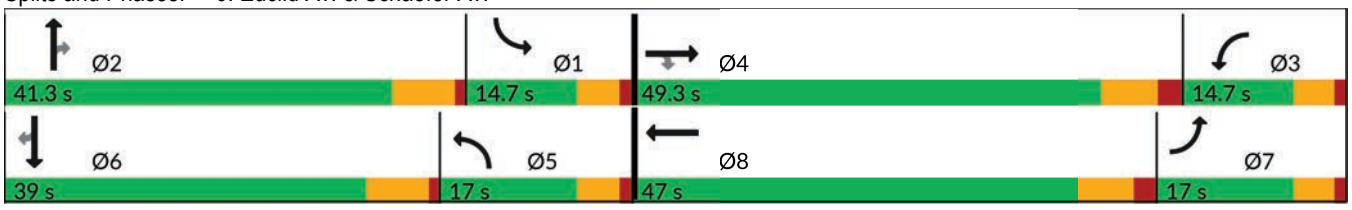
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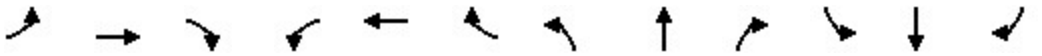
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	116	340	90	116	254	117	1043	258	276	1433	109
Future Volume (vph)	116	340	90	116	254	117	1043	258	276	1433	109
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	29.5	14.7	37.5	37.5
Total Split (s)	17.0	49.3	49.3	14.7	47.0	17.0	41.3	41.3	14.7	39.0	39.0
Total Split (%)	14.2%	41.1%	41.1%	12.3%	39.2%	14.2%	34.4%	34.4%	12.3%	32.5%	32.5%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	11.6	28.0	28.0	23.5	40.0	12.3	34.8	34.8	10.0	32.5	32.5
Actuated g/C Ratio	0.10	0.23	0.23	0.20	0.34	0.10	0.29	0.29	0.08	0.27	0.27
v/c Ratio	0.73	0.80	0.20	0.36	0.98	0.70	1.04	0.50	2.03	1.53	0.22
Control Delay (s/veh)	78.0	56.3	4.2	47.7	68.1	73.2	81.0	22.4	517.5	277.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	78.0	56.3	4.2	47.7	68.1	73.2	81.0	22.4	517.5	277.5	6.3
LOS	E	E	A	D	E	E	F	C	F	F	A
Approach Delay (s/veh)		52.3			64.7		69.7			297.7	
Approach LOS		D			E		E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.03	
Intersection Signal Delay (s/veh): 159.4	Intersection LOS: F
Intersection Capacity Utilization 108.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	340	90	116	254	326	117	1043	258	276	1433	109
Future Volume (veh/h)	116	340	90	116	254	326	117	1043	258	276	1433	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	122	358	58	122	267	324	123	1098	254	291	1508	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	405	343	364	265	322	179	1067	474	146	996	443
Arrive On Green	0.09	0.21	0.21	0.21	0.34	0.34	0.10	0.30	0.30	0.08	0.28	0.28
Sat Flow, veh/h	1714	1900	1610	1714	781	948	1714	3610	1605	1714	3610	1607
Grp Volume(v), veh/h	122	358	58	122	0	591	123	1098	254	291	1508	61
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	0	1729	1714	1805	1605	1714	1805	1607
Q Serve(g_s), s	8.3	21.5	3.5	7.1	0.0	40.0	8.2	34.8	15.6	10.0	32.5	3.4
Cycle Q Clear(g_c), s	8.3	21.5	3.5	7.1	0.0	40.0	8.2	34.8	15.6	10.0	32.5	3.4
Prop In Lane	1.00		1.00	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	405	343	364	0	587	179	1067	474	146	996	443
V/C Ratio(X)	0.83	0.88	0.17	0.34	0.00	1.01	0.69	1.03	0.54	2.00	1.51	0.14
Avail Cap(c_a), veh/h	179	682	578	364	0	587	179	1067	474	146	996	443
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	45.0	37.8	39.3	0.0	38.9	50.9	41.5	34.7	53.9	42.6	32.1
Incr Delay (d2), s/veh	19.8	6.2	0.2	0.2	0.0	38.7	8.8	35.4	1.2	473.3	236.5	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(50%),veh/ln	4.3	10.5	1.4	2.9	0.0	22.4	3.8	19.6	6.0	23.3	46.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	72.8	51.1	38.0	39.5	0.0	77.6	59.7	76.9	35.9	527.2	279.1	32.2
LnGrp LOS	E	D	D	D		F	E	F	D	F	F	C
Approach Vol, veh/h		538			713			1475			1860	
Approach Delay, s/veh		54.6			71.1			68.4			309.8	
Approach LOS		D			E			E			F	

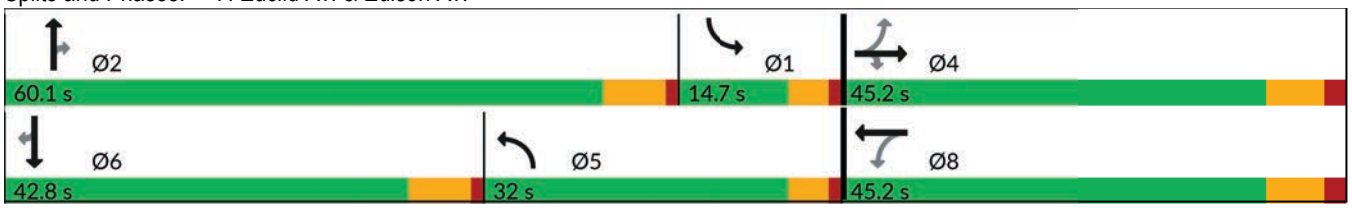
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	41.3	29.7	32.1	17.0	39.0	14.8	47.0
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	10.0	34.8	10.0	42.3	12.3	32.5	12.3	40.0
Max Q Clear Time (g_c+I1), s	12.0	36.8	9.1	23.5	10.2	34.5	10.3	42.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0

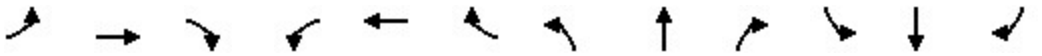
Intersection Summary	
HCM 7th Control Delay, s/veh	165.1
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	188	271	214	139	453	631	1115	36	60	1304	216
Future Volume (vph)	188	271	214	139	453	631	1115	36	60	1304	216
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	44.2	44.2	44.2	45.2	45.2	14.7	26.5	26.5	14.7	37.5	37.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	32.0	60.1	60.1	14.7	42.8	42.8
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	26.7%	50.1%	50.1%	12.3%	35.7%	35.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	38.0	38.0	38.0	38.0	38.0	26.4	51.2	51.2	14.6	36.3	36.3
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.22	0.43	0.43	0.12	0.30	0.30
v/c Ratio	2.61	0.47	0.34	0.56	0.89	0.93	0.72	0.05	0.30	1.19	0.39
Control Delay (s/veh)	785.3	35.9	5.3	43.6	56.9	65.8	32.0	0.1	52.9	130.0	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	785.3	35.9	5.3	43.6	56.9	65.8	32.0	0.1	52.9	130.0	14.8
LOS	F	D	A	D	E	E	C	A	D	F	B
Approach Delay (s/veh)		235.7			54.0		43.4			111.3	
Approach LOS		F			D		D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.61	
Intersection Signal Delay (s/veh): 95.4	Intersection LOS: F
Intersection Capacity Utilization 115.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Euclid Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	271	214	139	453	52	631	1115	36	60	1304	216
Future Volume (veh/h)	188	271	214	139	453	52	631	1115	36	60	1304	216
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	198	285	185	146	477	46	664	1174	27	63	1373	206
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	120	609	516	256	546	53	708	1336	554	297	1163	493
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.33	0.53	0.53	0.26	0.46	0.46
Sat Flow, veh/h	846	1900	1610	889	1706	164	3238	3800	1576	1714	3800	1610
Grp Volume(v), veh/h	198	285	185	146	0	523	664	1174	27	63	1373	206
Grp Sat Flow(s),veh/h/ln	846	1900	1610	889	0	1870	1619	1900	1576	1714	1900	1610
Q Serve(g_s), s	8.3	11.9	8.6	17.3	0.0	29.7	23.6	32.3	1.0	3.4	36.3	10.2
Cycle Q Clear(g_c), s	38.0	11.9	8.6	29.3	0.0	29.7	23.6	32.3	1.0	3.4	36.3	10.2
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	609	516	256	0	599	708	1336	554	297	1163	493
V/C Ratio(X)	1.65	0.47	0.36	0.57	0.00	0.87	0.94	0.88	0.05	0.21	1.18	0.42
Avail Cap(c_a), veh/h	120	609	516	256	0	599	745	1717	712	297	1163	493
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	24.0	23.2	33.9	0.0	28.7	39.1	25.8	18.4	37.6	32.1	25.0
Incr Delay (d2), s/veh	327.1	0.6	0.4	3.0	0.0	13.4	18.5	4.5	0.0	0.1	90.4	0.6
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(50%),veh/ln	14.2	4.7	3.0	3.5	0.0	12.8	9.6	11.3	0.4	1.4	27.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	374.8	24.6	23.6	36.9	0.0	42.1	57.6	30.4	18.5	37.7	122.5	25.6
LnGrp LOS	F	C	C	D		D	E	C	B	D	F	C
Approach Vol, veh/h		668			669			1865			1642	
Approach Delay, s/veh		128.1			40.9			39.9			107.1	
Approach LOS		F			D			D			F	

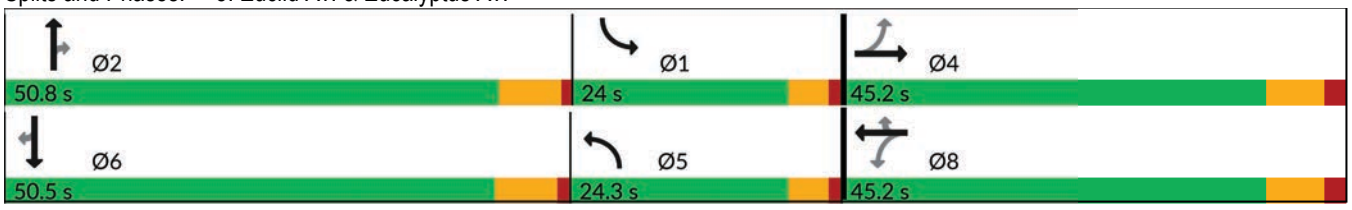
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.2	48.2		45.2	30.6	42.8		45.2				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.0	53.6		38.0	27.3	36.3		38.0				
Max Q Clear Time (g_c+I1), s	5.4	34.3		40.0	25.6	38.3		31.7				
Green Ext Time (p_c), s	0.0	7.4		0.0	0.3	0.0		2.1				

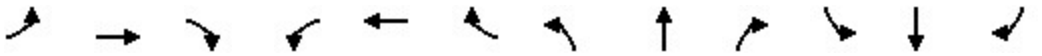
Intersection Summary		
HCM 7th Control Delay, s/veh		75.0
HCM 7th LOS		E

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	48	275	159	438	407	462	1422	310	556	1110	38
Future Volume (vph)	48	275	159	438	407	462	1422	310	556	1110	38
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	45.2	45.2	44.2	44.2	44.2	14.7	28.5	28.5	14.7	35.5	35.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	24.3	50.8	50.8	24.0	50.5	50.5
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	20.3%	42.3%	42.3%	20.0%	42.1%	42.1%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	32.8	32.8	32.8	32.8	32.8	23.7	44.4	44.4	19.4	40.1	40.1
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.29	0.21	0.39	0.39	0.17	0.35	0.35
v/c Ratio	0.56	0.49	0.90	0.85	0.63	0.73	1.02	0.50	1.08	0.88	0.07
Control Delay (s/veh)	60.0	22.6	83.9	54.5	12.3	52.4	64.6	23.7	106.9	44.1	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.0	22.6	83.9	54.5	12.3	52.4	64.6	23.7	106.9	44.1	0.6
LOS	E	C	F	D	B	D	E	C	F	D	A
Approach Delay (s/veh)		25.9		42.1			56.2			63.6	
Approach LOS		C		D			E			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay (s/veh): 52.8	Intersection LOS: D
Intersection Capacity Utilization 118.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Euclid Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	275	233	159	438	407	462	1422	310	556	1110	38
Future Volume (veh/h)	48	275	233	159	438	407	462	1422	310	556	1110	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	0.99		0.91	0.96		0.97	1.00		0.99	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	51	289	204	167	461	408	486	1497	303	585	1168	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	130	641	431	239	599	494	631	1405	592	522	1277	536
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.29	0.55	0.55	0.24	0.50	0.50
Sat Flow, veh/h	610	2033	1366	838	1900	1566	3238	3800	1601	3238	3800	1596
Grp Volume(v), veh/h	51	269	224	167	461	408	486	1497	303	585	1168	29
Grp Sat Flow(s),veh/h/ln	610	1900	1499	838	1900	1566	1619	1900	1601	1619	1900	1596
Q Serve(g_s), s	9.5	11.4	12.1	23.1	24.1	27.0	16.4	44.3	14.1	19.3	33.9	1.1
Cycle Q Clear(g_c), s	33.6	11.4	12.1	35.3	24.1	27.0	16.4	44.3	14.1	19.3	33.9	1.1
Prop In Lane	1.00		0.91	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	599	473	239	599	494	631	1405	592	522	1277	536
V/C Ratio(X)	0.39	0.45	0.47	0.70	0.77	0.83	0.77	1.07	0.51	1.12	0.91	0.05
Avail Cap(c_a), veh/h	131	603	476	241	603	497	631	1405	592	522	1396	586
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	24.6	24.8	36.8	27.9	28.7	39.9	26.7	19.9	45.4	28.1	20.0
Incr Delay (d2), s/veh	1.4	0.4	0.5	7.9	5.7	10.7	5.6	43.4	0.7	77.1	9.1	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(50%),veh/ln	1.3	4.5	3.8	4.6	9.5	9.4	6.1	22.4	4.3	12.2	13.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.3	25.0	25.3	44.7	33.7	39.4	45.5	70.1	20.7	122.5	37.2	20.0
LnGrp LOS	D	C	C	D	C	D	D	F	C	F	D	C
Approach Vol, veh/h		544			1036			2286			1782	
Approach Delay, s/veh		26.9			37.7			58.3			64.9	
Approach LOS		C			D			E			E	

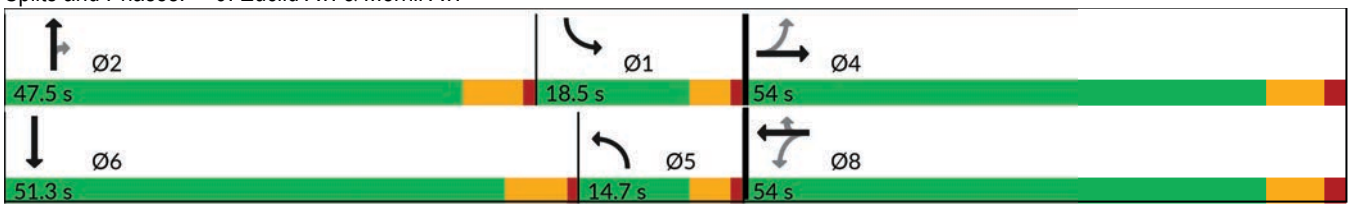
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.0	50.8		45.0	28.0	46.8		45.0				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	19.3	44.3		38.0	19.6	44.0		38.0				
Max Q Clear Time (g_c+I1), s	21.3	46.3		35.6	18.4	35.9		37.3				
Green Ext Time (p_c), s	0.0	0.0		0.7	0.2	4.4		0.4				

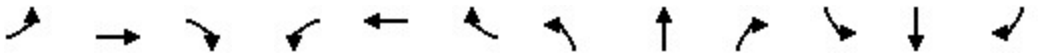
Intersection Summary	
HCM 7th Control Delay, s/veh	53.6
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	8	1	542	40	559	58	1229	481	350	1067
Future Volume (vph)	8	1	542	40	559	58	1229	481	350	1067
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		4		8		5	2		1	6
Permitted Phases	4		8		8			2		
Detector Phase	4	4	8	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	47.2	47.2	47.2	14.7	28.5	28.5	14.7	28.5
Total Split (s)	54.0	54.0	54.0	54.0	54.0	14.7	47.5	47.5	18.5	51.3
Total Split (%)	45.0%	45.0%	45.0%	45.0%	45.0%	12.3%	39.6%	39.6%	15.4%	42.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		46.8	46.8	46.8	46.8	10.2	41.0	41.0	13.8	47.6
Actuated g/C Ratio		0.39	0.39	0.39	0.39	0.09	0.34	0.34	0.12	0.40
v/c Ratio		0.03	1.09	0.06	0.78	0.42	1.05	0.78	1.02	0.84
Control Delay (s/veh)		14.6	103.0	23.3	27.9	61.8	78.3	32.6	105.5	39.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		14.6	103.0	23.3	27.9	61.8	78.3	32.6	105.5	39.8
LOS		B	F	C	C	E	E	C	F	D
Approach Delay (s/veh)		14.6		63.4			65.3			55.4
Approach LOS		B		E			E			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay (s/veh): 61.3	Intersection LOS: E
Intersection Capacity Utilization 98.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: Euclid Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	10	542	40	559	58	1229	481	350	1067	63
Future Volume (veh/h)	8	1	10	542	40	559	58	1229	481	350	1067	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	8	1	10	571	42	432	61	1294	485	368	1123	65
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	235	43	261	589	741	620	178	1233	539	361	1222	71
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.10	0.34	0.34	0.12	0.35	0.35
Sat Flow, veh/h	492	110	669	1351	1900	1590	1714	3610	1576	3141	3463	200
Grp Volume(v), veh/h	19	0	0	571	42	432	61	1294	485	368	585	603
Grp Sat Flow(s),veh/h/ln	1271	0	0	1351	1900	1590	1714	1805	1576	1570	1805	1858
Q Serve(g_s), s	0.0	0.0	0.0	46.0	1.7	27.3	4.0	41.0	35.1	13.8	37.2	37.3
Cycle Q Clear(g_c), s	0.8	0.0	0.0	46.8	1.7	27.3	4.0	41.0	35.1	13.8	37.2	37.3
Prop In Lane	0.42		0.53	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	538	0	0	589	741	620	178	1233	539	361	637	656
V/C Ratio(X)	0.04	0.00	0.00	0.97	0.06	0.70	0.34	1.05	0.90	1.02	0.92	0.92
Avail Cap(c_a), veh/h	538	0	0	589	741	620	178	1233	539	361	674	694
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	0.0	38.2	22.8	30.7	50.0	39.5	37.6	53.1	37.2	37.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	29.2	0.0	2.9	0.4	39.5	18.2	52.2	17.2	16.9
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(50%),veh/ln	0.3	0.0	0.0	21.1	0.7	10.3	1.7	23.6	15.3	7.8	18.2	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.6	0.0	0.0	67.4	22.8	33.5	50.4	79.0	55.7	105.3	54.3	54.1
LnGrp LOS	C			E	C	C	D	F	E	F	D	D
Approach Vol, veh/h		19			1045			1840			1556	
Approach Delay, s/veh		22.6			51.6			71.9			66.3	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.5	47.5		54.0	17.1	48.9		54.0				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	13.8	41.0		46.8	10.0	44.8		46.8				
Max Q Clear Time (g_c+I1), s	15.8	43.0		2.8	6.0	39.3		48.8				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	3.1		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	65.0	
HCM 7th LOS	E	

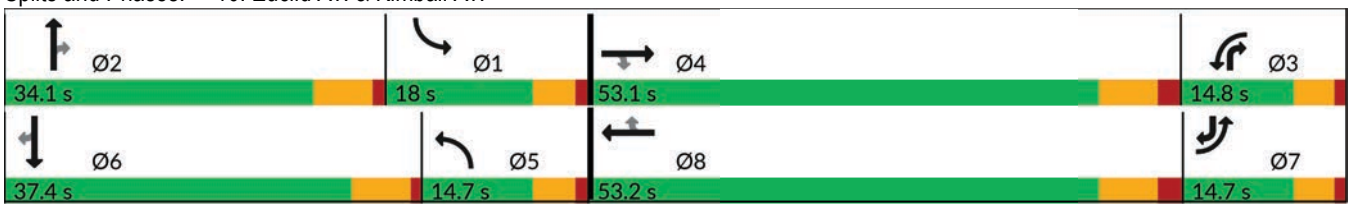
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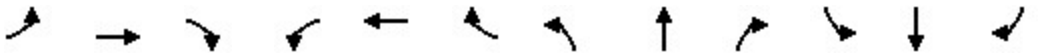
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	382	576	86	63	1288	508	83	926	63	295	867	410
Future Volume (vph)	382	576	86	63	1288	508	83	926	63	295	867	410
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	14.7	37.4	14.7
Total Split (s)	14.7	53.1	53.1	14.8	53.2	53.2	14.7	34.1	14.8	18.0	37.4	14.7
Total Split (%)	12.3%	44.3%	44.3%	12.3%	44.3%	44.3%	12.3%	28.4%	12.3%	15.0%	31.2%	12.3%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	3.7	5.4	3.7
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	4.7	6.4	4.7
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.0	36.3	36.3	22.6	46.0	46.0	10.0	27.6	55.8	13.3	31.0	42.7
Actuated g/C Ratio	0.08	0.30	0.30	0.19	0.38	0.38	0.08	0.23	0.47	0.11	0.26	0.36
v/c Ratio	1.54	0.55	0.16	0.20	0.98	0.71	0.61	1.17	0.08	0.90	0.98	0.70
Control Delay (s/veh)	298.2	39.1	3.2	42.8	56.8	23.1	72.0	132.3	3.2	81.0	69.4	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	298.2	39.1	3.2	42.8	56.8	23.1	72.0	132.3	3.2	81.0	69.4	32.0
LOS	F	D	A	D	E	C	E	F	A	F	E	C
Approach Delay (s/veh)		130.9			47.2			120.1			61.8	
Approach LOS		F			D			F			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.54	
Intersection Signal Delay (s/veh): 81.2	Intersection LOS: F
Intersection Capacity Utilization 102.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	382	576	86	63	1288	508	83	926	63	295	867	410
Future Volume (veh/h)	382	576	86	63	1288	508	83	926	63	295	867	410
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1700	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	402	606	72	66	1356	366	87	975	34	311	913	378
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	262	761	339	439	1384	609	143	830	783	348	933	544
Arrive On Green	0.08	0.21	0.21	0.26	0.38	0.38	0.08	0.23	0.23	0.11	0.26	0.26
Sat Flow, veh/h	3141	3610	1608	1714	3610	1588	1714	3610	1610	3141	3610	1588
Grp Volume(v), veh/h	402	606	72	66	1356	366	87	975	34	311	913	378
Grp Sat Flow(s),veh/h/ln	1570	1805	1608	1714	1805	1588	1714	1805	1610	1570	1805	1588
Q Serve(g_s), s	10.0	19.1	4.4	3.6	44.5	22.2	5.9	27.6	0.0	11.7	30.1	14.5
Cycle Q Clear(g_c), s	10.0	19.1	4.4	3.6	44.5	22.2	5.9	27.6	0.0	11.7	30.1	14.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	761	339	439	1384	609	143	830	783	348	933	544
V/C Ratio(X)	1.54	0.80	0.21	0.15	0.98	0.60	0.61	1.17	0.04	0.89	0.98	0.69
Avail Cap(c_a), veh/h	262	1381	615	439	1384	609	143	830	783	348	933	544
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.0	44.9	39.1	34.5	36.5	29.7	53.1	46.2	16.2	52.7	44.2	34.0
Incr Delay (d2), s/veh	259.4	2.0	0.3	0.2	19.4	1.2	5.3	91.0	0.0	23.4	24.3	3.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.3	8.4	1.7	1.5	21.9	8.2	2.6	22.2	0.5	5.6	15.8	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	314.4	46.9	39.4	34.7	56.0	30.8	58.5	137.2	16.2	76.1	68.5	37.8
LnGrp LOS	F	D	D	C	E	C	E	F	B	E	E	D
Approach Vol, veh/h		1080			1788			1096			1602	
Approach Delay, s/veh		146.0			50.0			127.2			62.7	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	34.1	35.4	32.5	14.7	37.4	14.7	53.2
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	13.3	27.6	10.1	45.9	10.0	31.0	10.0	46.0
Max Q Clear Time (g_c+I1), s	13.7	29.6	5.6	21.1	7.9	32.1	12.0	46.5
Green Ext Time (p_c), s	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0

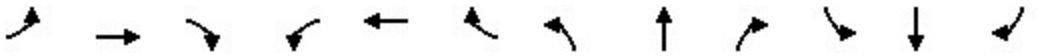
Intersection Summary	
HCM 7th Control Delay, s/veh	87.5
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	31	440	847	563	88	537	568	58	745
Future Volume (vph)	31	440	847	563	88	537	568	58	745
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	15.7	41.7	25.0	51.0	15.0	38.6	25.0	14.7	38.3
Total Split (%)	13.1%	34.8%	20.8%	42.5%	12.5%	32.2%	20.8%	12.3%	31.9%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.0	34.7	19.3	50.6	10.2	31.9	57.7	10.0	28.6
Actuated g/C Ratio	0.09	0.30	0.17	0.43	0.09	0.27	0.49	0.09	0.24
v/c Ratio	0.23	1.00	1.67	0.78	0.62	0.54	0.67	0.42	0.89
Control Delay (s/veh)	55.2	79.6	341.7	38.9	71.3	39.3	19.2	61.1	54.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.2	79.6	341.7	38.9	71.3	39.3	19.2	61.1	54.8
LOS	E	E	F	D	E	D	B	E	D
Approach Delay (s/veh)		78.3		215.8		32.1			55.3
Approach LOS		E		F		C			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.67	
Intersection Signal Delay (s/veh): 109.2	Intersection LOS: F
Intersection Capacity Utilization 105.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	440	89	847	563	40	88	537	568	58	745	36
Future Volume (veh/h)	31	440	89	847	563	40	88	537	568	58	745	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	33	463	0	892	593	41	93	565	598	61	784	34
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	503		548	663	46	142	1069	726	129	987	43
Arrive On Green	0.09	0.40	0.00	0.25	0.57	0.57	0.12	0.42	0.42	0.11	0.41	0.41
Sat Flow, veh/h	1714	1900	0	3238	1757	121	1714	3800	1610	1714	3611	157
Grp Volume(v), veh/h	33	463	0	892	0	634	93	565	598	61	412	406
Grp Sat Flow(s),veh/h/ln	1714	1900	0	1619	0	1878	1714	1900	1610	1714	1900	1868
Q Serve(g_s), s	2.1	26.4	0.0	19.3	0.0	33.9	5.9	12.6	32.1	3.8	21.7	21.7
Cycle Q Clear(g_c), s	2.1	26.4	0.0	19.3	0.0	33.9	5.9	12.6	32.1	3.8	21.7	21.7
Prop In Lane	1.00		0.00	1.00		0.06	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	97	503		548	0	709	142	1069	726	129	519	510
V/C Ratio(X)	0.34	0.92		1.63	0.00	0.89	0.65	0.53	0.82	0.47	0.79	0.79
Avail Cap(c_a), veh/h	150	578		548	0	724	155	1069	726	150	530	521
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	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	50.2	33.2	0.0	42.6	0.0	22.8	48.4	27.3	23.0	48.5	30.8	30.9
Incr Delay (d2), s/veh	0.8	19.4	0.0	291.0	0.0	13.8	6.1	0.2	7.2	1.0	7.3	7.5
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(50%),veh/ln	0.9	12.7	0.0	28.7	0.0	13.1	2.6	4.9	12.7	1.6	8.8	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.9	52.6	0.0	333.5	0.0	36.6	54.5	27.6	30.2	49.5	38.2	38.3
LnGrp LOS	D	D		F		D	D	C	C	D	D	D
Approach Vol, veh/h		496			1526			1256			879	
Approach Delay, s/veh		52.5			210.2			30.8			39.0	
Approach LOS		D			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	38.6	25.0	37.2	14.2	37.7	12.2	50.0
Change Period (Y+Rc), s	4.7	6.5	5.7	7.0	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.0	32.1	19.3	34.7	10.3	31.8	10.0	44.0
Max Q Clear Time (g_c+I1), s	5.8	34.1	21.3	28.4	7.9	23.7	4.1	35.9
Green Ext Time (p_c), s	0.0	0.0	0.0	1.8	0.0	1.8	0.0	3.1

Intersection Summary	
HCM 7th Control Delay, s/veh	101.0
HCM 7th LOS	F

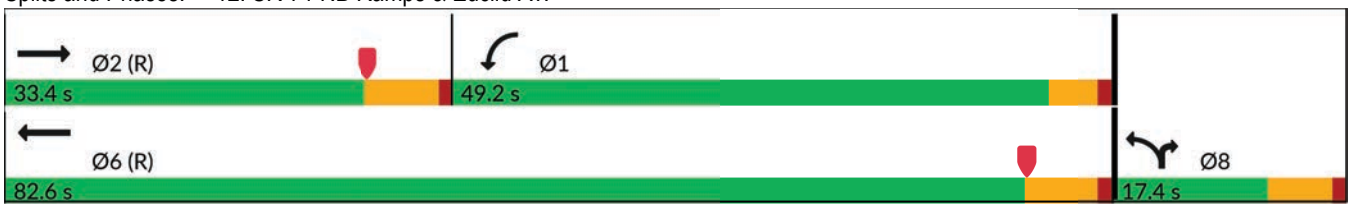
Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	529	795	850	73	804
Future Volume (vph)	529	795	850	73	804
Turn Type	NA	Prot	NA	Prot	Prot
Protected Phases	2	1	6	8	8
Permitted Phases					
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	31.5	12.7	14.5	13.8	13.8
Total Split (s)	33.4	49.2	82.6	17.4	17.4
Total Split (%)	33.4%	49.2%	82.6%	17.4%	17.4%
Yellow Time (s)	5.5	3.7	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.7	6.5	5.8	5.8
Lead/Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	None
Act Effct Green (s)	25.0	46.4	76.1	11.6	11.6
Actuated g/C Ratio	0.25	0.46	0.76	0.12	0.12
v/c Ratio	0.86	1.06	0.33	0.21	1.05
Control Delay (s/veh)	37.7	76.2	4.2	41.7	57.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.7	76.2	4.2	41.7	57.0
LOS	D	E	A	D	E
Approach Delay (s/veh)	37.7		39.0	55.7	
Approach LOS	D		D	E	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay (s/veh): 43.2	Intersection LOS: D
Intersection Capacity Utilization 88.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: SR-71 NB Ramps & Euclid Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	529	211	795	850	73	804
Future Volume (veh/h)	529	211	795	850	73	804
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1900	1900	1800	1900	1700	1900
Adj Flow Rate, veh/h	557	0	837	895	77	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	669		953	2911	222	
Arrive On Green	0.25	0.00	0.56	0.81	0.07	0.00
Sat Flow, veh/h	3800	0	1714	3705	3141	1610
Grp Volume(v), veh/h	557	0	837	895	77	0
Grp Sat Flow(s),veh/h/ln	1805	0	1714	1805	1570	1610
Q Serve(g_s), s	14.6	0.0	42.4	6.4	2.3	0.0
Cycle Q Clear(g_c), s	14.6	0.0	42.4	6.4	2.3	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	669		953	2911	222	
V/C Ratio(X)	0.83		0.88	0.31	0.35	
Avail Cap(c_a), veh/h	971		953	2911	364	
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	36.2	0.0	19.3	2.5	44.3	0.0
Incr Delay (d2), s/veh	8.8	0.0	9.0	0.3	0.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	16.0	0.9	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	45.0	0.0	28.3	2.8	45.2	0.0
LnGrp LOS	D		C	A	D	
Approach Vol, veh/h	557			1732	77	
Approach Delay, s/veh	45.0			15.1	45.2	
Approach LOS	D			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	62.1	25.0				87.1	12.9
Change Period (Y+Rc), s	6.5	* 6.5				6.5	5.8
Max Green Setting (Gmax), s	44.5	* 27				76.1	11.6
Max Q Clear Time (g_c+I1), s	44.4	16.6				8.4	4.3
Green Ext Time (p_c), s	0.0	1.9				4.9	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	23.1
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

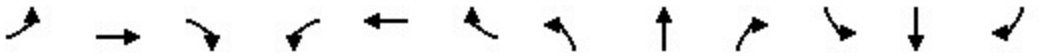
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	423	195	278	64	260	538	76	52
Future Volume (vph)	423	195	278	64	260	538	76	52
Turn Type	NA	Prot	NA	Prot	Prot	Split	NA	Perm
Protected Phases	2	1	6	3	3	4	4	
Permitted Phases								4
Detector Phase	2	1	6	3	3	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	25.2	12.7	27.2	13.5	13.5	34.8	34.8	34.8
Total Split (s)	28.7	18.2	46.9	18.1	18.1	35.0	35.0	35.0
Total Split (%)	28.7%	18.2%	46.9%	18.1%	18.1%	35.0%	35.0%	35.0%
Yellow Time (s)	5.2	3.7	5.2	4.5	4.5	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	4.7	6.2	5.5	5.5	5.8	5.8	5.8
Lead/Lag	Lead	Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	28.4	15.2	48.3	9.7	9.7	24.4	24.4	24.4
Actuated g/C Ratio	0.28	0.15	0.48	0.10	0.10	0.24	0.24	0.24
v/c Ratio	0.49	0.79	0.19	0.40	0.68	0.82	0.76	0.11
Control Delay (s/veh)	32.7	58.8	13.9	49.3	14.9	51.8	46.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.7	58.8	13.9	49.3	14.9	51.8	46.6	0.4
LOS	C	E	B	D	B	D	D	A
Approach Delay (s/veh)	32.7		31.2				45.4	
Approach LOS	C		C				D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay (s/veh): 34.8	Intersection LOS: C
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Euclid Av. & SR-71 SB Off-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	423	50	195	278	32	64	0	260	538	76	52
Future Volume (veh/h)	0	423	50	195	278	32	64	0	260	538	76	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	0	1900	1900	1800	1900	1900	1800	0	1900	1800	1900	1900
Adj Flow Rate, veh/h	0	445	38	205	293	0	67	0	169	623	0	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	535	46	770	2419		0	0	0	720	0	338
Arrive On Green	0.00	0.16	0.16	0.90	1.00	0.00	0.00	0.00	0.00	0.21	0.00	0.21
Sat Flow, veh/h	0	3462	286	1714	3705	0		0		3429	0	1610
Grp Volume(v), veh/h	0	238	245	205	293	0		0.0		623	0	36
Grp Sat Flow(s),veh/h/ln	0	1805	1848	1714	1805	0				1714	0	1610
Q Serve(g_s), s	0.0	12.8	12.9	1.6	0.0	0.0				17.5	0.0	1.8
Cycle Q Clear(g_c), s	0.0	12.8	12.9	1.6	0.0	0.0				17.5	0.0	1.8
Prop In Lane	0.00		0.15	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	287	294	770	2419					720	0	338
V/C Ratio(X)	0.00	0.83	0.83	0.27	0.12					0.87	0.00	0.11
Avail Cap(c_a), veh/h	0	406	416	770	2419					1001	0	470
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	40.7	40.8	2.9	0.0	0.0				38.1	0.0	31.9
Incr Delay (d2), s/veh	0.0	23.3	23.5	0.1	0.1	0.0				5.4	0.0	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	0.0	7.3	7.5	0.5	0.0	0.0				7.8	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	64.1	64.3	3.0	0.1	0.0				43.5	0.0	32.0
LnGrp LOS		E	E	A	A					D		C
Approach Vol, veh/h		483			498						659	
Approach Delay, s/veh		64.2			1.3						42.9	
Approach LOS		E			A						D	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	51.1	22.1		26.8		73.2						
Change Period (Y+Rc), s	6.2	* 6.2		5.8		6.2						
Max Green Setting (Gmax), s	13.5	* 23		29.2		40.7						
Max Q Clear Time (g_c+I1), s	3.6	14.9		19.5		2.0						
Green Ext Time (p_c), s	0.2	1.0		1.5		1.1						

Intersection Summary		
HCM 7th Control Delay, s/veh		36.5
HCM 7th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	16

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	243	35	136	610	45	40	8	29	59	40	20
Future Vol, veh/h	15	243	35	136	610	45	40	8	29	59	40	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	256	37	143	642	47	42	8	31	62	42	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	689	0	0	293	0	0	1255	1282	274	1244	1276	666
Stage 1	-	-	-	-	-	-	306	306	-	952	952	-
Stage 2	-	-	-	-	-	-	949	976	-	292	324	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	914	-	-	1281	-	-	150	167	769	153	168	463
Stage 1	-	-	-	-	-	-	708	665	-	314	341	-
Stage 2	-	-	-	-	-	-	315	332	-	721	653	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	914	-	-	1281	-	-	84	134	769	111	135	463
Mov Cap-2 Maneuver	-	-	-	-	-	-	84	134	-	111	135	-
Stage 1	-	-	-	-	-	-	694	652	-	257	278	-
Stage 2	-	-	-	-	-	-	209	271	-	669	640	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.46	1.4	66.32	118.52
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	134	90	-	-	305	-	-	137
HCM Lane V/C Ratio	0.605	0.017	-	-	0.112	-	-	0.917
HCM Ctrl Dly (s/v)	66.3	9	0	-	8.2	0	-	118.5
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	3.1	0.1	-	-	0.4	-	-	6.2

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	7	3	1	26
Future Vol, veh/h	3	0	7	3	1	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	0	7	3	1	27

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	38	5	0	0	11	0
Stage 1	9	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	977	1083	-	-	1622	-
Stage 1	1018	-	-	-	-	-
Stage 2	998	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	976	1083	-	-	1622	-
Mov Cap-2 Maneuver	944	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.83	0	0.27
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	944	1622	-
HCM Lane V/C Ratio	-	-	0.003	0.001	-
HCM Ctrl Dly (s/v)	-	-	8.8	7.2	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	896	1138	18	7	6
Future Vol, veh/h	11	896	1138	18	7	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	943	1198	19	7	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1217	0	-	0	2174	1207
Stage 1	-	-	-	-	1207	-
Stage 2	-	-	-	-	966	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	580	-	-	-	52	225
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	372	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	580	-	-	-	50	225
Mov Cap-2 Maneuver	-	-	-	-	213	-
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	372	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.14	0	22.02
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	22	-	-	-	213	225
HCM Lane V/C Ratio	0.02	-	-	-	0.035	0.028
HCM Ctrl Dly (s/v)	11.3	0	-	-	22.5	21.4
HCM Lane LOS	B	A	-	-	C	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.1

Intersection	
Intersection Delay, s/veh	397.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	403	47	30	317	61	83	711	54	67	439	75
Future Vol, veh/h	39	403	47	30	317	61	83	711	54	67	439	75
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	41	424	49	32	334	64	87	748	57	71	462	79
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	230.6	149	657	334.5
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	8%	7%	12%
Vol Thru, %	84%	82%	78%	76%
Vol Right, %	6%	10%	15%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	848	489	408	581
LT Vol	83	39	30	67
Through Vol	711	403	317	439
RT Vol	54	47	61	75
Lane Flow Rate	893	515	429	612
Geometry Grp	1	1	1	1
Degree of Util (X)	2.375	1.366	1.131	1.621
Departure Headway (Hd)	13.217	16.102	17.536	15.741
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	286	232	210	239
Service Time	11.217	14.102	15.536	13.741
HCM Lane V/C Ratio	3.122	2.22	2.043	2.561
HCM Control Delay, s/veh	657	230.6	149	334.5
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	51.5	17	11.2	23.6

Intersection	
Intersection Delay, s/veh	204.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	164	56	80	468	27	72	344	50	49	452	85
Future Vol, veh/h	44	164	56	80	468	27	72	344	50	49	452	85
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	46	173	59	84	493	28	76	362	53	52	476	89
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	45.9	259.5	149.6	266.7
HCM LOS	E	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	17%	14%	8%
Vol Thru, %	74%	62%	81%	77%
Vol Right, %	11%	21%	5%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	466	264	575	586
LT Vol	72	44	80	49
Through Vol	344	164	468	452
RT Vol	50	56	27	85
Lane Flow Rate	491	278	605	617
Geometry Grp	1	1	1	1
Degree of Util (X)	1.196	0.734	1.482	1.498
Departure Headway (Hd)	11.711	13.357	10.674	10.815
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	314	272	345	339
Service Time	9.711	11.357	8.674	8.815
HCM Lane V/C Ratio	1.564	1.022	1.754	1.82
HCM Control Delay, s/veh	149.6	45.9	259.5	266.7
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	16.1	5.2	27.2	27.5

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	7	1	4	10	8	4	145	6	15	729	2
Future Vol, veh/h	0	7	1	4	10	8	4	145	6	15	729	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	7	1	4	11	8	4	153	6	16	767	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	966	967	768	967	965	156	769	0	0	159	0	0
Stage 1	800	800	-	164	164	-	-	-	-	-	-	-
Stage 2	166	167	-	803	801	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	236	256	405	236	257	895	854	-	-	1433	-	-
Stage 1	382	400	-	843	766	-	-	-	-	-	-	-
Stage 2	840	764	-	380	400	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	219	250	405	223	251	895	854	-	-	1433	-	-
Mov Cap-2 Maneuver	219	250	-	223	251	-	-	-	-	-	-	-
Stage 1	374	392	-	838	762	-	-	-	-	-	-	-
Stage 2	817	760	-	365	392	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	19.18	16.76	0.24	0.15
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	46	-	-	262	329	36	-	-
HCM Lane V/C Ratio	0.005	-	-	0.032	0.07	0.011	-	-
HCM Ctrl Dly (s/v)	9.2	0	-	19.2	16.8	7.5	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	722.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	104	717	81	66	841	180	38	30	26	288	172	331
Future Vol, veh/h	104	717	81	66	841	180	38	30	26	288	172	331
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	109	755	85	69	885	189	40	32	27	303	181	348

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1075	0	0	840	0	0	2131	2230	797	2108	2178	980
Stage 1	-	-	-	-	-	-	1016	1016	-	1119	1119	-
Stage 2	-	-	-	-	-	-	1115	1214	-	989	1059	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	656	-	-	804	-	-	~ 36	43	389	~ 38	~ 47	~ 306
Stage 1	-	-	-	-	-	-	289	318	-	~ 253	285	-
Stage 2	-	-	-	-	-	-	255	257	-	~ 299	304	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	656	-	-	804	-	-	-	~ 28	389	~ 15	~ 30	~ 306
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	70	-	~ 79	~ 105	-
Stage 1	-	-	-	-	-	-	241	265	-	~ 196	220	-
Stage 2	-	-	-	-	-	-	-	199	-	~ 204	253	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.34	0.6		$ 2623.47
HCM LOS			-	F

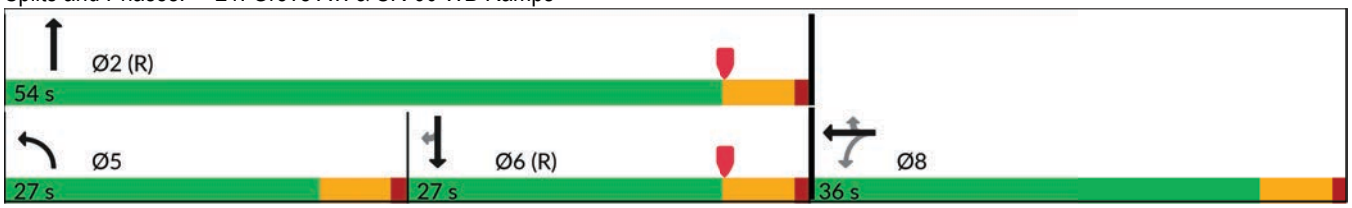
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	656	-	-	106	-	-	125
HCM Lane V/C Ratio	-	0.167	-	-	0.086	-	-	6.68
HCM Ctrl Dly (s/v)	-	11.6	-	-	9.9	0		$ 2623.5
HCM Lane LOS	-	B	-	-	A	A	-	F
HCM 95th %tile Q(veh)	-	0.6	-	-	0.3	-	-	91.9

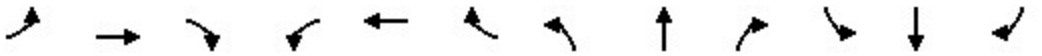
Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	694	338	1433	674	522
Future Volume (vph)	1	694	338	1433	674	522
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	15.8	24.8	15.8	15.8
Total Split (s)	36.0	36.0	27.0	54.0	27.0	27.0
Total Split (%)	40.0%	40.0%	30.0%	60.0%	30.0%	30.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	30.9	30.9	20.4	47.5	21.3	21.3
Actuated g/C Ratio	0.34	0.34	0.23	0.53	0.24	0.24
v/c Ratio	0.41	1.17	0.92	0.79	0.83	0.69
Control Delay (s/veh)	25.5	120.4	50.3	17.5	42.6	8.0
Queue Delay	0.0	0.0	0.0	4.6	0.0	0.0
Total Delay (s/veh)	25.5	120.4	50.3	22.2	42.6	8.0
LOS	C	F	D	C	D	A
Approach Delay (s/veh)	95.6			27.5	27.5	
Approach LOS	F			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay (s/veh): 43.9	Intersection LOS: D
Intersection Capacity Utilization 119.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 21: Grove Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	244	1	694	338	1433	0	0	674	522
Future Volume (veh/h)	0	0	0	244	1	694	338	1433	0	0	674	522
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
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	1900	1900	1800	1900	0	0	1900	1900
Adj Flow Rate, veh/h				257	1	652	356	1508	0	0	709	472
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				605	2	540	379	1933	0	0	902	400
Arrive On Green				0.34	0.34	0.34	0.44	1.00	0.00	0.00	0.25	0.25
Sat Flow, veh/h				1803	7	1610	1714	3705	0	0	3705	1601
Grp Volume(v), veh/h				258	0	652	356	1508	0	0	709	472
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1714	1805	0	0	1805	1601
Q Serve(g_s), s				9.9	0.0	30.2	17.8	0.0	0.0	0.0	16.5	22.5
Cycle Q Clear(g_c), s				9.9	0.0	30.2	17.8	0.0	0.0	0.0	16.5	22.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				607	0	540	379	1933	0	0	902	400
V/C Ratio(X)				0.42	0.00	1.21	0.94	0.78	0.00	0.00	0.79	1.18
Avail Cap(c_a), veh/h				607	0	540	404	1933	0	0	902	400
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	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				23.2	0.0	29.9	24.5	0.0	0.0	0.0	31.5	33.8
Incr Delay (d2), s/veh				0.4	0.0	109.5	4.4	0.3	0.0	0.0	6.8	104.1
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				4.0	0.0	27.0	5.2	0.1	0.0	0.0	7.6	19.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				23.5	0.0	139.4	28.9	0.3	0.0	0.0	38.4	137.9
LnGrp LOS				C		F	C	A			D	F
Approach Vol, veh/h					910			1864			1181	
Approach Delay, s/veh					106.6			5.8			78.1	
Approach LOS					F			A			E	

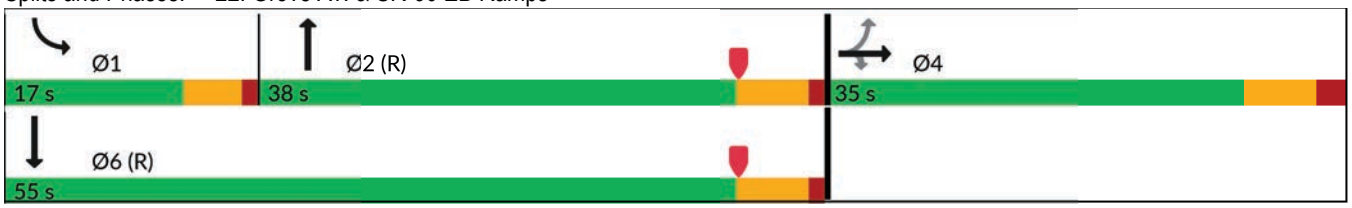
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		54.0			25.7	28.3		36.0				
Change Period (Y+Rc), s		5.8			5.8	5.8		5.8				
Max Green Setting (Gmax), s		48.2			21.2	21.2		30.2				
Max Q Clear Time (g_c+I1), s		2.0			19.8	24.5		32.2				
Green Ext Time (p_c), s		11.9			0.1	0.0		0.0				

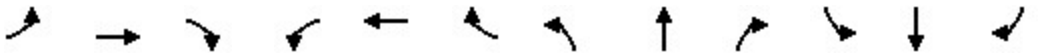
Intersection Summary		
HCM 7th Control Delay, s/veh	50.6	
HCM 7th LOS	D	

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	3	284	1090	346	571
Future Volume (vph)	3	284	1090	346	571
Turn Type	NA	Perm	NA	Prot	NA
Protected Phases	4		2	1	6
Permitted Phases		4			
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	31.8	15.0	25.8
Total Split (s)	35.0	35.0	38.0	17.0	55.0
Total Split (%)	38.9%	38.9%	42.2%	18.9%	61.1%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	5.8	5.0	5.8
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	28.2	28.2	32.2	12.0	49.2
Actuated g/C Ratio	0.31	0.31	0.36	0.13	0.55
v/c Ratio	1.27	0.44	1.32	1.60	0.30
Control Delay (s/veh)	165.0	7.1	176.4	314.1	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	165.0	7.1	176.4	314.1	13.0
LOS	F	A	F	F	B
Approach Delay (s/veh)	118.7		176.4		126.6
Approach LOS	F		F		F

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.60	
Intersection Signal Delay (s/veh): 147.3	Intersection LOS: F
Intersection Capacity Utilization 119.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	682	3	284	0	0	0	0	1090	521	346	571	0
Future Volume (veh/h)	682	3	284	0	0	0	0	1090	521	346	571	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	718	3	152				0	1147	274	364	601	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	565	2	505				0	1035	245	229	1973	0
Arrive On Green	0.47	0.47	0.47				0.00	0.54	0.54	0.27	1.00	0.00
Sat Flow, veh/h	1802	8	1610				0	2988	685	1714	3705	0
Grp Volume(v), veh/h	721	0	152				0	712	709	364	601	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1805	1773	1714	1805	0
Q Serve(g_s), s	28.2	0.0	5.2				0.0	32.2	32.2	12.0	0.0	0.0
Cycle Q Clear(g_c), s	28.2	0.0	5.2				0.0	32.2	32.2	12.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.39	1.00		0.00
Lane Grp Cap(c), veh/h	567	0	505				0	646	634	229	1973	0
V/C Ratio(X)	1.27	0.00	0.30				0.00	1.10	1.12	1.59	0.30	0.00
Avail Cap(c_a), veh/h	567	0	505				0	646	634	229	1973	0
HCM Platoon Ratio	1.50	1.50	1.50				1.00	1.50	1.50	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.45	0.45	0.00
Uniform Delay (d), s/veh	23.9	0.0	17.8				0.0	20.8	20.9	33.0	0.0	0.0
Incr Delay (d2), s/veh	135.5	0.0	0.1				0.0	66.7	72.7	275.8	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	29.8	0.0	1.7				0.0	20.7	21.3	21.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	159.4	0.0	17.9				0.0	87.5	93.6	308.8	0.2	0.0
LnGrp LOS	F		B					F	F	F	A	
Approach Vol, veh/h		873						1421			965	
Approach Delay, s/veh		134.7						90.5			116.6	
Approach LOS		F						F			F	

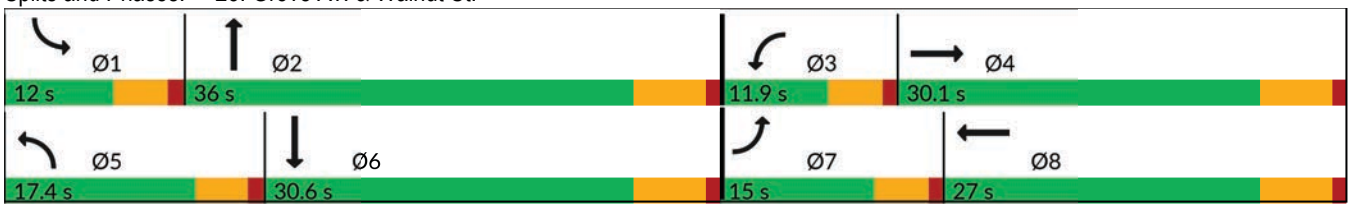
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.0	38.0		35.0		55.0
Change Period (Y+Rc), s	5.0	5.8		6.8		5.8
Max Green Setting (Gmax), s	12.0	32.2		28.2		49.2
Max Q Clear Time (g_c+I1), s	14.0	34.2		30.2		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		3.2

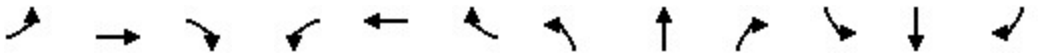
Intersection Summary	
HCM 7th Control Delay, s/veh	110.1
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	210	409	53	646	210	1078	93	514
Future Volume (vph)	210	409	53	646	210	1078	93	514
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	9.6	23.8
Total Split (s)	15.0	30.1	11.9	27.0	17.4	36.0	12.0	30.6
Total Split (%)	16.7%	33.4%	13.2%	30.0%	19.3%	40.0%	13.3%	34.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.4	27.3	6.6	21.3	12.6	30.4	7.1	22.6
Actuated g/C Ratio	0.12	0.31	0.08	0.24	0.14	0.35	0.08	0.26
v/c Ratio	1.09	0.50	0.44	1.14	0.90	1.02	0.72	0.70
Control Delay (s/veh)	129.4	26.4	50.8	106.9	76.6	61.0	69.1	32.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	129.4	26.4	50.8	106.9	76.6	61.0	69.1	32.7
LOS	F	C	D	F	E	E	E	C
Approach Delay (s/veh)		55.7		104.0		63.3		37.5
Approach LOS		E		F		E		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 87.7	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 67.9	Intersection LOS: E
Intersection Capacity Utilization 97.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 23: Grove Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	409	118	53	646	322	210	1078	125	93	514	102
Future Volume (veh/h)	210	409	118	53	646	322	210	1078	125	93	514	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	221	431	121	56	680	312	221	1135	127	98	541	89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	200	870	242	72	569	261	247	1111	124	123	830	136
Arrive On Green	0.12	0.31	0.31	0.04	0.24	0.24	0.14	0.34	0.34	0.07	0.27	0.27
Sat Flow, veh/h	1714	2779	773	1714	2389	1096	1714	3274	366	1714	3104	509
Grp Volume(v), veh/h	221	278	274	56	514	478	221	625	637	98	314	316
Grp Sat Flow(s),veh/h/ln	1714	1805	1747	1714	1805	1680	1714	1805	1834	1714	1805	1808
Q Serve(g_s), s	10.4	11.2	11.4	2.9	21.2	21.2	11.3	30.2	30.2	5.0	13.7	13.8
Cycle Q Clear(g_c), s	10.4	11.2	11.4	2.9	21.2	21.2	11.3	30.2	30.2	5.0	13.7	13.8
Prop In Lane	1.00		0.44	1.00		0.65	1.00		0.20	1.00		0.28
Lane Grp Cap(c), veh/h	200	565	547	72	430	400	247	613	622	123	483	483
V/C Ratio(X)	1.10	0.49	0.50	0.78	1.19	1.20	0.90	1.02	1.02	0.80	0.65	0.65
Avail Cap(c_a), veh/h	200	565	547	141	430	400	247	613	622	143	503	504
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	24.8	24.9	42.2	33.9	33.9	37.4	29.4	29.4	40.7	28.9	28.9
Incr Delay (d2), s/veh	93.9	0.7	0.7	6.5	108.5	109.8	30.8	41.6	42.1	19.9	2.8	2.9
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(50%),veh/ln	9.4	4.5	4.5	1.3	21.6	20.2	6.6	18.9	19.3	2.7	6.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	133.2	25.5	25.6	48.7	142.4	143.7	68.2	71.0	71.5	60.6	31.7	31.8
LnGrp LOS	F	C	C	D	F	F	E	F	F	E	C	C
Approach Vol, veh/h		773			1048			1483			728	
Approach Delay, s/veh		56.3			138.0			70.8			35.6	
Approach LOS		E			F			E			D	

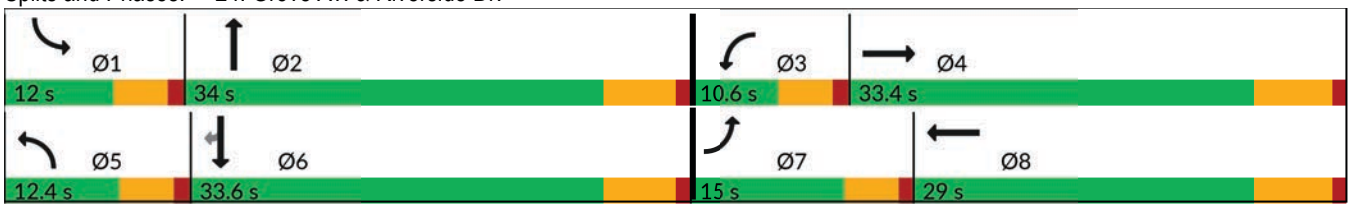
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	36.0	8.3	33.7	17.4	29.6	15.0	27.0
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	7.4	30.2	7.3	24.3	12.8	24.8	10.4	21.2
Max Q Clear Time (g_c+I1), s	7.0	32.2	4.9	13.4	13.3	15.8	12.4	23.2
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	2.4	0.0	0.0

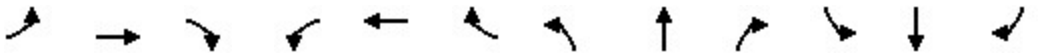
Intersection Summary	
HCM 7th Control Delay, s/veh	79.1
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	110	472	175	981	132	1164	69	512	132
Future Volume (vph)	110	472	175	981	132	1164	69	512	132
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	15.0	33.4	10.6	29.0	12.4	34.0	12.0	33.6	33.6
Total Split (%)	16.7%	37.1%	11.8%	32.2%	13.8%	37.8%	13.3%	37.3%	37.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.2	27.2	6.0	26.3	7.8	30.0	6.8	27.0	27.0
Actuated g/C Ratio	0.10	0.30	0.07	0.29	0.09	0.34	0.08	0.30	0.30
v/c Ratio	0.66	1.00	1.60	1.18	0.93	2.32	0.56	0.94	0.23
Control Delay (s/veh)	57.1	69.3	337.6	121.4	100.8	617.5	57.0	57.1	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.1	69.3	337.6	121.4	100.8	617.5	57.0	57.1	4.6
LOS	E	E	F	F	F	F	E	E	A
Approach Delay (s/veh)		67.2		149.4		572.6		47.4	
Approach LOS		E		F		F		D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 89.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.32	
Intersection Signal Delay (s/veh): 271.2	Intersection LOS: F
Intersection Capacity Utilization 136.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	472	70	175	981	195	132	1164	222	69	512	132
Future Volume (veh/h)	110	472	70	175	981	195	132	1164	222	69	512	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	116	497	71	184	1033	194	139	1225	223	73	539	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	144	494	71	115	871	163	150	527	96	93	576	488
Arrive On Green	0.08	0.30	0.30	0.07	0.29	0.29	0.09	0.34	0.34	0.05	0.30	0.30
Sat Flow, veh/h	1714	1621	232	1714	3027	567	1714	1564	285	1714	1900	1610
Grp Volume(v), veh/h	116	0	568	184	615	612	139	0	1448	73	539	100
Grp Sat Flow(s),veh/h/ln	1714	0	1852	1714	1805	1789	1714	0	1849	1714	1900	1610
Q Serve(g_s), s	5.9	0.0	27.2	6.0	25.7	25.7	7.2	0.0	30.1	3.8	24.6	4.1
Cycle Q Clear(g_c), s	5.9	0.0	27.2	6.0	25.7	25.7	7.2	0.0	30.1	3.8	24.6	4.1
Prop In Lane	1.00		0.13	1.00		0.32	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	144	0	564	115	519	515	150	0	622	93	576	488
V/C Ratio(X)	0.80	0.00	1.01	1.60	1.18	1.19	0.93	0.00	2.33	0.79	0.94	0.20
Avail Cap(c_a), veh/h	200	0	564	115	519	515	150	0	622	142	592	501
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	0.0	31.0	41.6	31.8	31.8	40.5	0.0	29.6	41.7	30.2	23.1
Incr Delay (d2), s/veh	10.5	0.0	39.5	305.4	101.1	103.1	51.8	0.0	602.0	7.1	22.1	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(50%),veh/ln	2.8	0.0	17.1	12.2	24.7	24.8	5.0	0.0	116.2	1.7	13.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.6	0.0	70.5	347.1	132.9	134.9	92.2	0.0	631.6	48.8	52.4	23.3
LnGrp LOS	D		F	F	F	F	F		F	D	D	C
Approach Vol, veh/h		684			1411			1587			712	
Approach Delay, s/veh		67.1			161.7			584.4			47.9	
Approach LOS		E			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	35.9	10.6	33.4	12.4	32.9	12.1	31.9
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	7.4	28.2	6.0	27.2	7.8	27.8	10.4	22.8
Max Q Clear Time (g_c+I1), s	5.8	32.1	8.0	29.2	9.2	26.6	7.9	27.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	281.2
HCM 7th LOS	F

Intersection	
Intersection Delay, s/veh	956.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	753	59	8	1041	99	133	1047	31	30	724	20
Future Vol, veh/h	78	753	59	8	1041	99	133	1047	31	30	724	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	82	793	62	8	1096	104	140	1102	33	32	762	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	782.2	1079.6	1162	652
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	9%	1%	4%
Vol Thru, %	86%	85%	91%	94%
Vol Right, %	3%	7%	9%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1211	890	1148	774
LT Vol	133	78	8	30
Through Vol	1047	753	1041	724
RT Vol	31	59	99	20
Lane Flow Rate	1275	937	1208	815
Geometry Grp	1	1	1	1
Degree of Util (X)	3.401	2.492	3.205	2.17
Departure Headway (Hd)	33.301	42.734	35.357	46.751
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	127	94	121	90
Service Time	31.301	40.734	33.357	44.751
HCM Lane V/C Ratio	10.039	9.968	9.983	9.056
HCM Control Delay, s/veh	1162	782.2	1079.6	652
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	36.2	19.7	31.9	15.3

Intersection	
Intersection Delay, s/veh	582.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	461	96	182	363	77	28	838	29	98	705	42
Future Vol, veh/h	63	461	96	182	363	77	28	838	29	98	705	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	66	485	101	192	382	81	29	882	31	103	742	44
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	404.6	411.2	735.9	676.7
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	10%	29%	12%
Vol Thru, %	94%	74%	58%	83%
Vol Right, %	3%	15%	12%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	895	620	622	845
LT Vol	28	63	182	98
Through Vol	838	461	363	705
RT Vol	29	96	77	42
Lane Flow Rate	942	653	655	889
Geometry Grp	1	1	1	1
Degree of Util (X)	2.508	1.727	1.743	2.37
Departure Headway (Hd)	20.984	24.332	24.254	21.711
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	188	157	157	178
Service Time	18.984	22.332	22.254	19.711
HCM Lane V/C Ratio	5.011	4.159	4.172	4.994
HCM Control Delay, s/veh	735.9	404.6	411.2	676.7
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	36.7	18.6	18.9	32.9

Intersection	
Intersection Delay, s/veh	404.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	144	29	14	451	146	16	341	3	84	789	113
Future Vol, veh/h	84	144	29	14	451	146	16	341	3	84	789	113
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	88	152	31	15	475	154	17	359	3	88	831	119
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	48.7	279.4	78.6	693.7
HCM LOS	E	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	33%	2%	9%
Vol Thru, %	95%	56%	74%	80%
Vol Right, %	1%	11%	24%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	360	257	611	986
LT Vol	16	84	14	84
Through Vol	341	144	451	789
RT Vol	3	29	146	113
Lane Flow Rate	379	271	643	1038
Geometry Grp	1	1	1	1
Degree of Util (X)	0.918	0.698	1.519	2.476
Departure Headway (Hd)	14.485	15.794	11.967	10.042
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	254	233	309	374
Service Time	12.485	13.794	9.967	8.042
HCM Lane V/C Ratio	1.492	1.163	2.081	2.775
HCM Control Delay, s/veh	78.6	48.7	279.4	693.7
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	8.1	4.5	26.1	70.8

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	12	3	4	10	2	14	353	11	10	786	16
Future Vol, veh/h	3	12	3	4	10	2	14	353	11	10	786	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	0	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	13	3	4	11	2	15	372	12	11	827	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1263	1269	836	1256	1266	372	844	0	0	383	0	0
Stage 1	857	857	-	401	401	-	-	-	-	-	-	-
Stage 2	406	413	-	855	865	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	148	170	370	150	170	679	801	-	-	1186	-	-
Stage 1	355	377	-	630	604	-	-	-	-	-	-	-
Stage 2	625	597	-	356	374	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	138	165	370	138	166	679	801	-	-	1186	-	-
Mov Cap-2 Maneuver	259	277	-	248	271	-	-	-	-	-	-	-
Stage 1	352	374	-	618	593	-	-	-	-	-	-	-
Stage 2	601	586	-	338	370	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	18.5	18.37	0.35	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	801	-	-	286	286	1186	-	-
HCM Lane V/C Ratio	0.018	-	-	0.066	0.059	0.009	-	-
HCM Ctrl Dly (s/v)	9.6	-	-	18.5	18.4	8.1	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.2	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	484	94	153	955	362	127	138	129	394	291	197
Future Vol, veh/h	75	484	94	153	955	362	127	138	129	394	291	197
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	79	509	99	161	1005	381	134	145	136	415	306	207

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1386	0	0	608	0	0	2197	2425	559	2258	2284	1196
Stage 1	-	-	-	-	-	-	717	717	-	1518	1518	-
Stage 2	-	-	-	-	-	-	1481	1708	-	740	766	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	500	-	-	980	-	-	~ 33	~ 33	532	~ 30	~ 40	229
Stage 1	-	-	-	-	-	-	424	437	-	~ 150	~ 183	-
Stage 2	-	-	-	-	-	-	158	148	-	~ 412	415	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	500	-	-	980	-	-	-	~ 3	532	-	~ 4	229
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	~ 19	-
Stage 1	-	-	-	-	-	-	357	368	-	~ 19	~ 23	-
Stage 2	-	-	-	-	-	-	-	~ 18	-	~ 156	349	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.55	0.98		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	-	500	-	-	178	-	-	-	19	40
HCM Lane V/C Ratio	-	0.158	-	-	0.164	-	-	-	8.018	8.923
HCM Ctrl Dly (s/v)	-	13.5	-	-	9.4	0	-	-	$ 3553.3	$ 3757.1
HCM Lane LOS	-	B	-	-	A	A	-	-	F	F
HCM 95th %tile Q(veh)	-	0.6	-	-	0.6	-	-	-	19.7	43.1

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

Intersection	
Intersection Delay, s/veh	598.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	334	365	243	65	170	52	325	633	49	97	349	164
Future Vol, veh/h	334	365	243	65	170	52	325	633	49	97	349	164
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	352	384	256	68	179	55	342	666	52	102	367	173
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	706.1	90.9	800.1	336.8
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	35%	23%	16%
Vol Thru, %	63%	39%	59%	57%
Vol Right, %	5%	26%	18%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1007	942	287	610
LT Vol	325	334	65	97
Through Vol	633	365	170	349
RT Vol	49	243	52	164
Lane Flow Rate	1060	992	302	642
Geometry Grp	1	1	1	1
Degree of Util (X)	2.683	2.477	0.8	1.596
Departure Headway (Hd)	15.627	14.673	26.077	19.965
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	244	258	142	193
Service Time	13.627	12.673	24.077	17.965
HCM Lane V/C Ratio	4.344	3.845	2.127	3.326
HCM Control Delay, s/veh	800.1	706.1	90.9	336.8
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	52.8	49.9	4.9	19.1

Intersection	
Intersection Delay, s/veh	586.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	175	4	421	400	167	51	389	229	216	656	166
Future Vol, veh/h	29	175	4	421	400	167	51	389	229	216	656	166
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	31	184	4	443	421	176	54	409	241	227	691	175
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	59.6	692.8	344	746.7
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	14%	43%	21%
Vol Thru, %	58%	84%	40%	63%
Vol Right, %	34%	2%	17%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	669	208	988	1038
LT Vol	51	29	421	216
Through Vol	389	175	400	656
RT Vol	229	4	167	166
Lane Flow Rate	704	219	1040	1093
Geometry Grp	1	1	1	1
Degree of Util (X)	1.629	0.585	2.456	2.569
Departure Headway (Hd)	17.738	25.613	13.12	14.566
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	211	145	291	262
Service Time	15.738	23.613	11.12	12.566
HCM Lane V/C Ratio	3.336	1.51	3.574	4.172
HCM Control Delay, s/veh	344	59.6	692.8	746.7
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	21.7	3	54.6	53

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	4	12	490	656	22
Future Vol, veh/h	20	4	12	490	656	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	21	4	13	516	691	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1243	702	714	0	-	0
Stage 1	702	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	194	442	896	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	192	442	896	-	-	-
Mov Cap-2 Maneuver	395	-	-	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	587	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.55	0.22	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	896	-	402	-	-
HCM Lane V/C Ratio	0.014	-	0.063	-	-
HCM Ctrl Dly (s/v)	9.1	-	14.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Intersection Delay, s/veh	262.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	201	291	77	20	381	97	194	218	13	82	278	423
Future Vol, veh/h	201	291	77	20	381	97	194	218	13	82	278	423
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	212	306	81	21	401	102	204	229	14	86	293	445
Number of Lanes	1	1	0	0	1	0	1	1	1	1	1	0

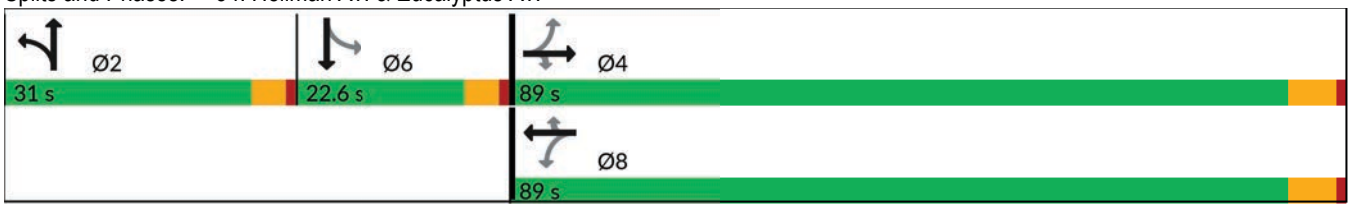
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	1	2
HCM Control Delay, s/veh	95.7	306.5	43.2	474.7
HCM LOS	F	F	E	F

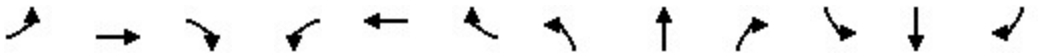
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	4%	100%	0%
Vol Thru, %	0%	100%	0%	0%	79%	77%	0%	40%
Vol Right, %	0%	0%	100%	0%	21%	19%	0%	60%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	218	13	201	368	498	82	701
LT Vol	194	0	0	201	0	20	82	0
Through Vol	0	218	0	0	291	381	0	278
RT Vol	0	0	13	0	77	97	0	423
Lane Flow Rate	204	229	14	212	387	524	86	738
Geometry Grp	6	6	6	6	6	6	6	6
Degree of Util (X)	0.641	0.689	0.038	0.638	1.099	1.574	0.267	2.091
Departure Headway (Hd)	15.563	15.019	14.258	14.879	14.174	13.239	13.038	12.035
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	235	243	253	245	260	278	277	310
Service Time	13.263	12.719	11.958	12.579	11.874	10.939	10.738	9.735
HCM Lane V/C Ratio	0.868	0.942	0.055	0.865	1.488	1.885	0.31	2.381
HCM Control Delay, s/veh	42.4	45.5	17.5	40.6	125.8	306.5	20.4	527.8
HCM Lane LOS	E	E	C	E	F	F	C	F
HCM 95th-tile Q	3.9	4.5	0.1	3.9	11.9	25.7	1	45.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	22	70	156	143	864	102	61	110	34	171
Future Volume (vph)	22	70	156	143	864	102	61	110	34	171
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Split	NA	Perm	NA
Protected Phases		4			8		2	2		6
Permitted Phases	4		4	8		8			6	
Detector Phase	4	4	4	8	8	8	2	2	6	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	24.2	28.6	28.6	22.6	22.6
Total Split (s)	89.0	89.0	89.0	89.0	89.0	89.0	31.0	31.0	22.6	22.6
Total Split (%)	62.4%	62.4%	62.4%	62.4%	62.4%	62.4%	21.7%	21.7%	15.8%	15.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	6.2	4.6	4.6		4.6
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	56.2	56.2	56.2	56.2	56.2	56.2	13.6	13.6		18.9
Actuated g/C Ratio	0.54	0.54	0.54	0.54	0.54	0.54	0.13	0.13		0.18
v/c Ratio	0.29	0.04	0.17	0.22	0.89	0.12	0.29	0.60		0.90
Control Delay (s/veh)	24.3	11.3	2.2	13.5	33.5	7.3	49.1	54.2		74.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay (s/veh)	24.3	11.3	2.2	13.5	33.5	7.3	49.1	54.2		74.6
LOS	C	B	A	B	C	A	D	D		E
Approach Delay (s/veh)		6.7			28.5			52.6		74.6
Approach LOS		A			C			D		E

Intersection Summary	
Cycle Length: 142.6	
Actuated Cycle Length: 104.8	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay (s/veh): 35.0	Intersection LOS: D
Intersection Capacity Utilization 80.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 34: Hellman Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	70	156	143	864	102	61	110	30	34	171	66
Future Volume (veh/h)	22	70	156	143	864	102	61	110	30	34	171	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	23	74	163	151	909	107	64	116	13	36	180	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	157	1972	880	674	1038	880	161	158	18	41	207	79
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.09	0.09	0.09	0.18	0.18	0.18
Sat Flow, veh/h	564	3610	1610	1100	1900	1610	1714	1678	188	229	1143	438
Grp Volume(v), veh/h	23	74	163	151	909	107	64	0	129	285	0	0
Grp Sat Flow(s),veh/h/ln	564	1805	1610	1100	1900	1610	1714	0	1866	1810	0	0
Q Serve(g_s), s	3.2	0.8	4.4	6.4	35.9	2.8	3.0	0.0	5.8	13.2	0.0	0.0
Cycle Q Clear(g_c), s	39.1	0.8	4.4	7.2	35.9	2.8	3.0	0.0	5.8	13.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	0.13		0.24
Lane Grp Cap(c), veh/h	157	1972	880	674	1038	880	161	0	176	327	0	0
V/C Ratio(X)	0.15	0.04	0.19	0.22	0.88	0.12	0.40	0.00	0.73	0.87	0.00	0.00
Avail Cap(c_a), veh/h	390	3467	1546	1130	1825	1546	525	0	571	378	0	0
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.0	9.1	9.9	10.7	17.0	9.5	36.7	0.0	38.0	34.3	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.2	2.5	0.1	0.6	0.0	2.2	17.5	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(50%),veh/ln	0.4	0.3	1.4	1.3	13.5	0.9	1.2	0.0	2.6	7.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.4	9.1	10.0	10.9	19.5	9.6	37.3	0.0	40.2	51.9	0.0	0.0
LnGrp LOS	C	A	A	B	B	A	D		D	D		
Approach Vol, veh/h		260			1167			193			285	
Approach Delay, s/veh		11.9			17.5			39.3			51.9	
Approach LOS		B			B			D			D	

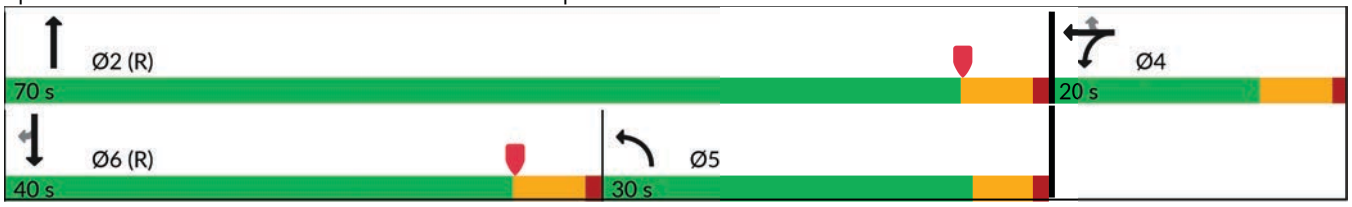
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		12.7		53.3		20.2		53.3				
Change Period (Y+Rc), s		4.6		6.2		4.6		6.2				
Max Green Setting (Gmax), s		26.4		82.8		18.0		82.8				
Max Q Clear Time (g_c+I1), s		7.8		41.1		15.2		37.9				
Green Ext Time (p_c), s		0.4		1.2		0.4		9.2				

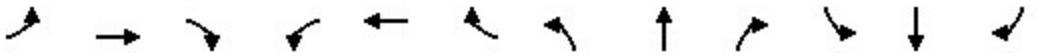
Intersection Summary												
HCM 7th Control Delay, s/veh			24.1									
HCM 7th LOS			C									

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	506	5	452	1059	2036	807	136
Future Volume (vph)	506	5	452	1059	2036	807	136
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4	4		5	2	6	
Permitted Phases			4				6
Detector Phase	4	4	4	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	8.0	8.0	8.0
Minimum Split (s)	10.8	10.8	10.8	10.0	43.8	38.8	38.8
Total Split (s)	20.0	20.0	20.0	30.0	70.0	40.0	40.0
Total Split (%)	22.2%	22.2%	22.2%	33.3%	77.8%	44.4%	44.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.0	5.8	5.8	5.8
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	14.2	14.2	14.2	37.9	64.2	21.3	21.3
Actuated g/C Ratio	0.16	0.16	0.16	0.42	0.71	0.24	0.24
v/c Ratio	1.38	1.31	0.97	0.85	0.58	0.55	0.29
Control Delay (s/veh)	223.8	195.8	70.1	24.6	1.6	30.8	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.8	0.0	0.0
Total Delay (s/veh)	223.8	195.8	70.1	24.6	2.4	30.8	5.6
LOS	F	F	E	C	A	C	A
Approach Delay (s/veh)		166.0			10.0	27.2	
Approach LOS		F			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 35.6 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.38	
Intersection Signal Delay (s/veh): 43.3	Intersection LOS: D
Intersection Capacity Utilization 93.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 35: Archibald Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	506	5	452	1059	2036	0	0	807	136
Future Volume (veh/h)	0	0	0	506	5	452	1059	2036	0	0	807	136
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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				1800	1900	1900	1700	1900	0	0	1900	1900
Adj Flow Rate, veh/h				620	0	184	1115	2143	0	0	849	112
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				541	0	254	1385	3700	0	0	1358	325
Arrive On Green				0.16	0.00	0.16	0.44	0.71	0.00	0.00	0.21	0.21
Sat Flow, veh/h				3429	0	1610	3141	5358	0	0	6802	1563
Grp Volume(v), veh/h				620	0	184	1115	2143	0	0	849	112
Grp Sat Flow(s),veh/h/ln				1714	0	1610	1570	1729	0	0	1634	1563
Q Serve(g_s), s				14.2	0.0	9.8	27.7	18.2	0.0	0.0	10.6	5.5
Cycle Q Clear(g_c), s				14.2	0.0	9.8	27.7	18.2	0.0	0.0	10.6	5.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				541	0	254	1385	3700	0	0	1358	325
V/C Ratio(X)				1.15	0.00	0.72	0.80	0.58	0.00	0.00	0.63	0.34
Avail Cap(c_a), veh/h				541	0	254	1385	3700	0	0	2484	594
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	1.00	0.22	0.22	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.9	0.0	36.0	21.8	6.3	0.0	0.0	32.5	30.4
Incr Delay (d2), s/veh				85.8	0.0	9.8	0.7	0.1	0.0	0.0	2.2	2.9
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				12.1	0.0	9.2	9.1	4.5	0.0	0.0	4.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				123.7	0.0	45.8	22.5	6.4	0.0	0.0	34.6	33.3
LnGrp LOS				F		D	C	A			C	C
Approach Vol, veh/h					804			3258			961	
Approach Delay, s/veh					105.9			12.0			34.5	
Approach LOS					F			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	70.0	20.0	45.5	24.5
Change Period (Y+Rc), s	5.8	5.8	5.8	* 5.8
Max Green Setting (Gmax), s	64.2	14.2	25.0	* 34
Max Q Clear Time (g_c+I1), s	20.2	16.2	29.7	12.6
Green Ext Time (p_c), s	24.8	0.0	0.0	5.9

Intersection Summary	
HCM 7th Control Delay, s/veh	31.3
HCM 7th LOS	C

Notes

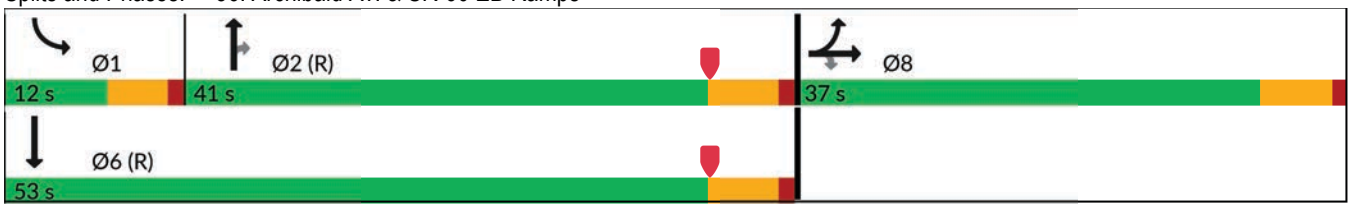
User approved volume balancing among the lanes for turning movement.

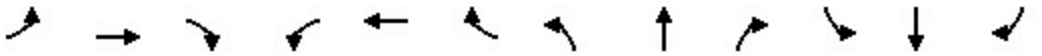
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	531	8	525	2537	545	192	1092
Future Volume (vph)	531	8	525	2537	545	192	1092
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8	8		2		1	6
Permitted Phases			8		2		
Detector Phase	8	8	8	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	10.8	10.8	10.8	32.8	32.8	10.0	33.8
Total Split (s)	37.0	37.0	37.0	41.0	41.0	12.0	53.0
Total Split (%)	41.1%	41.1%	41.1%	45.6%	45.6%	13.3%	58.9%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.0	5.8
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	27.3	27.3	27.3	38.1	38.1	8.0	51.1
Actuated g/C Ratio	0.30	0.30	0.30	0.42	0.42	0.09	0.57
v/c Ratio	0.79	0.73	0.67	0.97	0.58	0.73	0.39
Control Delay (s/veh)	40.9	32.0	25.6	37.9	5.3	67.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.9	32.0	25.6	37.9	5.3	67.4	0.9
LOS	D	C	C	D	A	E	A
Approach Delay (s/veh)		33.1		32.1			10.8
Approach LOS		C		C			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 35.6 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay (s/veh): 27.3	Intersection LOS: C
Intersection Capacity Utilization 93.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 36: Archibald Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	531	8	525	0	0	0	0	2537	545	192	1092	0
Future Volume (veh/h)	531	8	525	0	0	0	0	2537	545	192	1092	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	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	1800	1900	1900				0	1900	1900	1700	1900	0
Adj Flow Rate, veh/h	686	0	269				0	2671	472	202	1149	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	835	0	392				0	3230	778	244	3255	0
Arrive On Green	0.24	0.00	0.24				0.00	0.49	0.49	0.16	1.00	0.00
Sat Flow, veh/h	3429	0	1610				0	6802	1574	3141	5358	0
Grp Volume(v), veh/h	686	0	269				0	2671	472	202	1149	0
Grp Sat Flow(s),veh/h/ln	1714	0	1610				0	1634	1574	1570	1729	0
Q Serve(g_s), s	17.0	0.0	13.7				0.0	31.5	19.5	5.6	0.0	0.0
Cycle Q Clear(g_c), s	17.0	0.0	13.7				0.0	31.5	19.5	5.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	835	0	392				0	3230	778	244	3255	0
V/C Ratio(X)	0.82	0.00	0.69				0.00	0.83	0.61	0.83	0.35	0.00
Avail Cap(c_a), veh/h	1189	0	558				0	3230	778	244	3255	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	0.52	0.52	0.00
Uniform Delay (d), s/veh	32.2	0.0	30.9				0.0	19.5	16.4	37.4	0.0	0.0
Incr Delay (d2), s/veh	3.2	0.0	2.1				0.0	2.6	3.5	10.9	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	6.9	0.0	5.2				0.0	10.6	6.7	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.4	0.0	33.0				0.0	22.1	19.9	48.3	0.2	0.0
LnGrp LOS	D		C					C	B	D	A	
Approach Vol, veh/h		955						3143			1351	
Approach Delay, s/veh		34.7						21.7			7.4	
Approach LOS		C						C			A	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	12.0	50.3				62.3		27.7				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	7.0	35.2				47.2		31.2				
Max Q Clear Time (g_c+I1), s	7.6	33.5				2.0		19.0				
Green Ext Time (p_c), s	0.0	1.7				9.1		2.9				

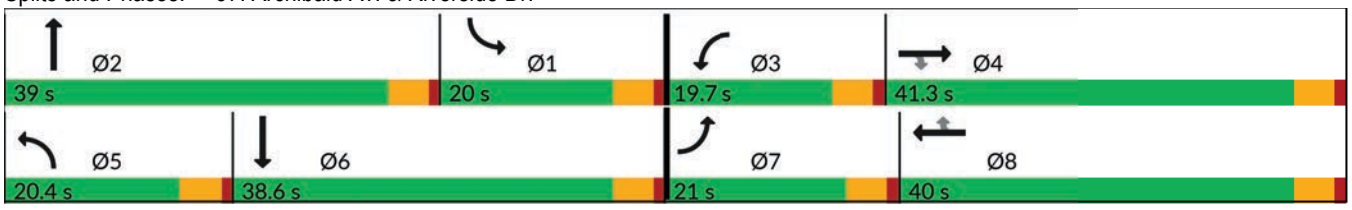
Intersection Summary			
HCM 7th Control Delay, s/veh			20.4
HCM 7th LOS			C

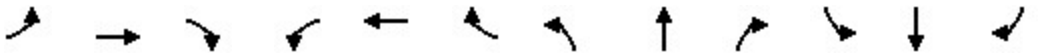
Notes
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	466	390	132	100	463	769	200	1611	429	729
Future Volume (vph)	466	390	132	100	463	769	200	1611	429	729
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.2	38.2	9.6	38.2	38.2	9.6	32.2	9.6	33.2
Total Split (s)	21.0	41.3	41.3	19.7	40.0	40.0	20.4	39.0	20.0	38.6
Total Split (%)	17.5%	34.4%	34.4%	16.4%	33.3%	33.3%	17.0%	32.5%	16.7%	32.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.4	40.4	40.4	11.4	35.4	35.4	15.8	34.4	15.4	34.0
Actuated g/C Ratio	0.14	0.34	0.34	0.10	0.30	0.30	0.13	0.29	0.13	0.28
v/c Ratio	2.11	0.34	0.22	0.65	0.46	1.21	0.94	1.17	2.06	0.82
Control Delay (s/veh)	539.2	31.4	5.8	70.2	36.2	135.4	98.5	124.6	521.5	41.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	539.2	31.4	5.8	70.2	36.2	135.4	98.5	124.6	521.5	41.5
LOS	F	C	A	E	D	F	F	F	F	D
Approach Delay (s/veh)		267.5			96.0			121.8		172.3
Approach LOS		F			F			F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.11	
Intersection Signal Delay (s/veh): 154.7	Intersection LOS: F
Intersection Capacity Utilization 118.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 37: Archibald Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	466	390	132	100	463	769	200	1611	43	429	729	418
Future Volume (veh/h)	466	390	132	100	463	769	200	1611	43	429	729	418
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	491	411	94	105	487	716	211	1696	39	452	767	394
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	255	1107	485	130	845	370	238	1624	37	239	1079	502
Arrive On Green	0.15	0.31	0.31	0.08	0.23	0.23	0.14	0.31	0.31	0.14	0.31	0.31
Sat Flow, veh/h	1714	3610	1582	1714	3610	1582	1714	5214	120	1714	3458	1609
Grp Volume(v), veh/h	491	411	94	105	487	716	211	1125	610	452	767	394
Grp Sat Flow(s),veh/h/ln	1714	1805	1582	1714	1805	1582	1714	1729	1876	1714	1729	1609
Q Serve(g_s), s	16.4	9.8	4.8	6.7	13.2	18.3	13.3	34.4	34.4	15.4	21.7	24.6
Cycle Q Clear(g_c), s	16.4	9.8	4.8	6.7	13.2	18.3	13.3	34.4	34.4	15.4	21.7	24.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	255	1107	485	130	845	370	238	1077	584	239	1079	502
V/C Ratio(X)	1.93	0.37	0.19	0.81	0.58	1.93	0.89	1.04	1.04	1.89	0.71	0.79
Avail Cap(c_a), veh/h	255	1200	526	234	1157	507	245	1077	584	239	1079	502
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	29.9	28.2	50.3	37.5	21.3	46.7	38.0	38.0	47.5	33.6	34.6
Incr Delay (d2), s/veh	432.2	0.2	0.2	4.5	0.6	430.2	28.2	39.7	49.4	416.4	2.2	8.0
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(50%),veh/ln	37.2	4.1	1.8	2.9	5.6	50.5	7.3	19.5	22.7	33.9	8.9	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	479.2	30.2	28.4	54.7	38.1	451.5	74.9	77.7	87.5	463.9	35.8	42.6
LnGrp LOS	F	C	C	D	D	F	E	F	F	F	D	D
Approach Vol, veh/h		996			1308			1946			1613	
Approach Delay, s/veh		251.4			265.7			80.5			157.4	
Approach LOS		F			F			F			F	

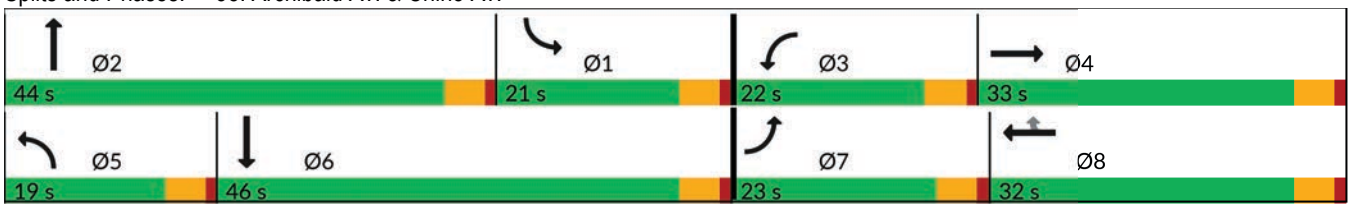
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	39.0	13.0	38.5	19.9	39.1	21.0	30.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	34.4	15.1	36.7	15.8	34.0	16.4	35.4
Max Q Clear Time (g_c+I1), s	17.4	36.4	8.7	11.8	15.3	26.6	18.4	20.3
Green Ext Time (p_c), s	0.0	0.0	0.1	2.7	0.0	3.9	0.0	5.2

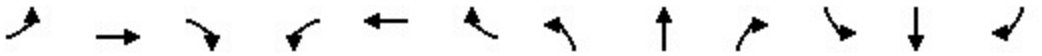
Intersection Summary	
HCM 7th Control Delay, s/veh	172.0
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	217	181	217	57	300	58	1084	127	560
Future Volume (vph)	217	181	217	57	300	58	1084	127	560
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	23.0	33.0	22.0	32.0	32.0	19.0	44.0	21.0	46.0
Total Split (%)	19.2%	27.5%	18.3%	26.7%	26.7%	15.8%	36.7%	17.5%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.4	23.7	17.1	23.3	23.3	9.3	32.8	13.1	39.3
Actuated g/C Ratio	0.16	0.22	0.16	0.22	0.22	0.09	0.31	0.12	0.37
v/c Ratio	0.81	0.84	0.82	0.14	0.54	0.41	0.74	0.64	0.44
Control Delay (s/veh)	67.2	55.1	70.0	36.8	8.7	57.4	35.4	60.7	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.2	55.1	70.0	36.8	8.7	57.4	35.4	60.7	27.5
LOS	E	E	E	D	A	E	D	E	C
Approach Delay (s/veh)		59.8		34.6			36.4		33.3
Approach LOS		E		C			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 105.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay (s/veh): 39.5	Intersection LOS: D
Intersection Capacity Utilization 78.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 38: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	181	153	217	57	300	58	1084	155	127	560	35
Future Volume (veh/h)	217	181	153	217	57	300	58	1084	155	127	560	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	228	191	148	228	60	209	61	1141	159	134	589	28
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	265	221	171	265	423	354	78	1547	215	167	1328	63
Arrive On Green	0.15	0.22	0.22	0.15	0.22	0.22	0.05	0.32	0.32	0.10	0.37	0.37
Sat Flow, veh/h	1714	991	768	1714	1900	1589	1714	4878	679	1714	3598	171
Grp Volume(v), veh/h	228	0	339	228	60	209	61	889	411	134	311	306
Grp Sat Flow(s),veh/h/ln	1714	0	1759	1714	1900	1589	1714	1900	1757	1714	1900	1869
Q Serve(g_s), s	11.5	0.0	16.4	11.5	2.2	7.7	3.1	18.4	18.5	6.8	10.9	10.9
Cycle Q Clear(g_c), s	11.5	0.0	16.4	11.5	2.2	7.7	3.1	18.4	18.5	6.8	10.9	10.9
Prop In Lane	1.00		0.44	1.00		1.00	1.00		0.39	1.00		0.09
Lane Grp Cap(c), veh/h	265	0	393	265	423	354	78	1205	557	167	701	690
V/C Ratio(X)	0.86	0.00	0.86	0.86	0.14	0.59	0.78	0.74	0.74	0.80	0.44	0.44
Avail Cap(c_a), veh/h	357	0	565	337	588	492	279	1692	783	318	889	875
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	0.0	33.1	36.5	27.6	16.9	41.8	26.9	26.9	39.1	21.1	21.1
Incr Delay (d2), s/veh	14.6	0.0	9.4	16.5	0.2	1.6	15.6	1.1	2.3	8.7	0.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	7.6	5.8	1.0	3.8	1.6	7.6	7.2	3.1	4.4	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.1	0.0	42.4	53.0	27.7	18.5	57.4	28.0	29.2	47.8	21.5	21.5
LnGrp LOS	D		D	D	C	B	E	C	C	D	C	C
Approach Vol, veh/h		567			497			1361			751	
Approach Delay, s/veh		45.9			35.4			29.7			26.2	
Approach LOS		D			D			C			C	

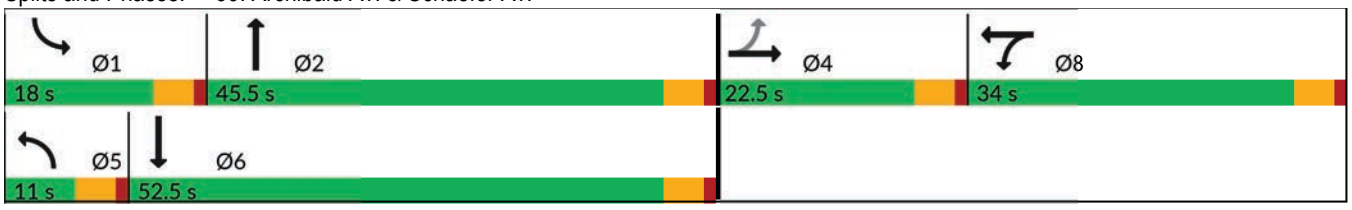
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	32.7	18.3	24.4	8.6	37.2	18.3	24.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	16.4	39.4	17.4	28.4	14.4	41.4	18.4	27.4
Max Q Clear Time (g_c+I1), s	8.8	20.5	13.5	18.4	5.1	12.9	13.5	9.7
Green Ext Time (p_c), s	0.2	7.6	0.2	1.4	0.1	3.4	0.3	0.9

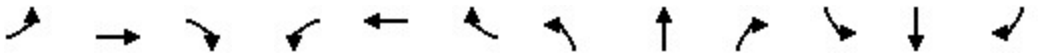
Intersection Summary	
HCM 7th Control Delay, s/veh	32.7
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	231	73	77	50	75	977	92	915
Future Volume (vph)	231	73	77	50	75	977	92	915
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	22.5	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	22.5	22.5	34.0	34.0	11.0	45.5	18.0	52.5
Total Split (%)	18.8%	18.8%	28.3%	28.3%	9.2%	37.9%	15.0%	43.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		18.4	12.2	12.2	6.6	33.1	9.5	33.4
Actuated g/C Ratio		0.21	0.14	0.14	0.07	0.37	0.11	0.37
v/c Ratio		4.66	0.35	0.55	0.63	0.56	0.54	0.81
Control Delay (s/veh)		Error	40.4	26.0	68.0	25.4	52.8	30.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		Error	40.4	26.0	68.0	25.4	52.8	30.7
LOS		F	D	C	E	C	D	C
Approach Delay (s/veh)		1676.9		30.7		28.4		32.5
Approach LOS		F		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.6	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.66	
Intersection Signal Delay (s/veh): 222.3	Intersection LOS: F
Intersection Capacity Utilization 75.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	73	19	77	50	108	75	977	45	92	915	110
Future Volume (veh/h)	231	73	19	77	50	108	75	977	45	92	915	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	243	77	20	81	53	101	79	1028	47	97	963	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	274	87	23	213	73	138	100	1825	83	123	1210	146
Arrive On Green	0.21	0.21	0.21	0.12	0.12	0.12	0.06	0.36	0.36	0.07	0.37	0.37
Sat Flow, veh/h	1298	411	107	1714	585	1115	1714	5077	232	1714	3244	391
Grp Volume(v), veh/h	340	0	0	81	0	154	79	700	375	97	536	543
Grp Sat Flow(s),veh/h/ln	1816	0	0	1714	0	1699	1714	1729	1850	1714	1805	1830
Q Serve(g_s), s	14.3	0.0	0.0	3.4	0.0	6.9	3.6	12.8	12.8	4.4	20.8	20.8
Cycle Q Clear(g_c), s	14.3	0.0	0.0	3.4	0.0	6.9	3.6	12.8	12.8	4.4	20.8	20.8
Prop In Lane	0.71		0.06	1.00		0.66	1.00		0.13	1.00		0.21
Lane Grp Cap(c), veh/h	383	0	0	213	0	211	100	1243	665	123	673	682
V/C Ratio(X)	0.89	0.00	0.00	0.38	0.00	0.73	0.79	0.56	0.56	0.79	0.80	0.80
Avail Cap(c_a), veh/h	413	0	0	640	0	635	139	1797	962	292	1099	1114
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	30.1	0.0	0.0	31.7	0.0	33.2	36.6	20.2	20.3	35.9	22.0	22.0
Incr Delay (d2), s/veh	19.4	0.0	0.0	1.1	0.0	4.8	18.1	0.4	0.8	4.2	2.2	2.2
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(50%),veh/ln	7.8	0.0	0.0	1.4	0.0	2.9	1.9	4.5	4.8	1.8	7.8	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.6	0.0	0.0	32.8	0.0	38.0	54.7	20.6	21.0	40.1	24.2	24.2
LnGrp LOS	D			C		D	D	C	C	D	C	C
Approach Vol, veh/h		340			235			1154			1176	
Approach Delay, s/veh		49.6			36.2			23.1			25.5	
Approach LOS		D			D			C			C	

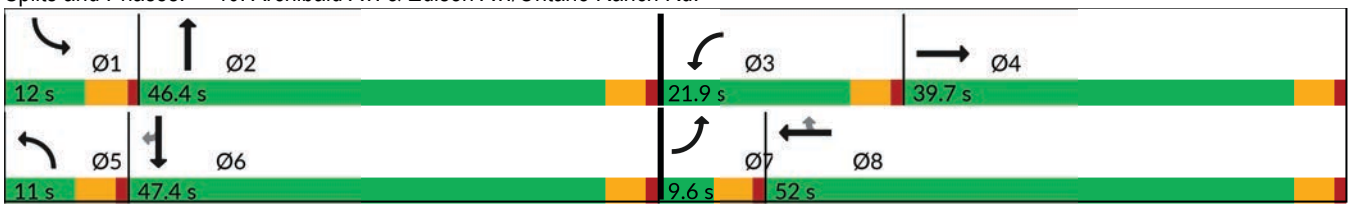
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	32.9		21.2	9.2	33.9		14.4				
Change Period (Y+Rc), s	4.6	4.6		4.6	4.6	4.6		4.6				
Max Green Setting (Gmax), s	13.4	40.9		17.9	6.4	47.9		29.4				
Max Q Clear Time (g_c+I1), s	6.4	14.8		16.3	5.6	22.8		8.9				
Green Ext Time (p_c), s	0.0	6.6		0.3	0.0	6.5		0.9				

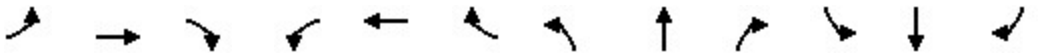
Intersection Summary		
HCM 7th Control Delay, s/veh	28.2	
HCM 7th LOS	C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	871	136	425	953	197	155	760	398	189	742	143
Future Volume (vph)	85	871	136	425	953	197	155	760	398	189	742	143
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	9.6	39.7		21.9	52.0	52.0	11.0	46.4		12.0	47.4	47.4
Total Split (%)	8.0%	33.1%		18.3%	43.3%	43.3%	9.2%	38.7%		10.0%	39.5%	39.5%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.0	35.2	108.5	17.4	47.5	47.5	6.4	30.1	108.5	7.4	31.1	31.1
Actuated g/C Ratio	0.05	0.32	1.00	0.16	0.44	0.44	0.06	0.28	1.00	0.07	0.29	0.29
v/c Ratio	0.62	0.54	0.09	0.89	1.21	0.27	1.61	0.80	0.26	1.72	0.76	0.27
Control Delay (s/veh)	71.0	32.2	0.1	66.9	133.3	10.6	353.8	43.0	0.4	385.0	40.2	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.0	32.2	0.1	66.9	133.3	10.6	353.8	43.0	0.4	385.0	40.2	6.9
LOS	E	C	A	E	F	B	F	D	A	F	D	A
Approach Delay (s/veh)		31.2			100.1			66.7			96.4	
Approach LOS		C			F			E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.72	
Intersection Signal Delay (s/veh): 75.8	Intersection LOS: E
Intersection Capacity Utilization 101.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 40: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	871	136	425	953	197	155	760	398	189	742	143
Future Volume (veh/h)	85	871	136	425	953	197	155	760	398	189	742	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	89	917	0	447	1003	195	163	800	0	199	781	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	138	1737		496	853	714	104	949		120	984	439
Arrive On Green	0.07	0.50	0.00	0.24	0.67	0.67	0.09	0.39	0.00	0.11	0.41	0.41
Sat Flow, veh/h	3141	5187	1610	3141	1900	1590	1714	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	89	917	0	447	1003	195	163	800	0	199	781	93
Grp Sat Flow(s),veh/h/ln	1570	1729	1610	1570	1900	1590	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	2.9	12.6	0.0	14.6	47.4	5.2	6.4	21.2	0.0	7.4	20.0	3.9
Cycle Q Clear(g_c), s	2.9	12.6	0.0	14.6	47.4	5.2	6.4	21.2	0.0	7.4	20.0	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	1737		496	853	714	104	949		120	984	439
V/C Ratio(X)	0.65	0.53		0.90	1.18	0.27	1.57	0.84		1.66	0.79	0.21
Avail Cap(c_a), veh/h	149	1737		515	853	714	104	1429		120	1463	653
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	20.6	0.0	39.5	17.3	10.4	48.0	30.0	0.0	47.3	28.6	23.9
Incr Delay (d2), s/veh	6.0	0.3	0.0	18.0	91.5	0.2	297.2	3.0	0.0	329.4	1.9	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(50%),veh/ln	1.2	4.2	0.0	6.1	31.9	1.6	11.1	7.5	0.0	13.9	6.9	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.5	20.9	0.0	57.5	108.7	10.6	345.2	33.0	0.0	376.6	30.5	24.1
LnGrp LOS	D	C		E	F	B	F	C		F	C	C
Approach Vol, veh/h		1006			1645			963			1073	
Approach Delay, s/veh		23.9			83.2			85.9			94.1	
Approach LOS		C			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	32.4	21.3	40.0	11.0	33.4	9.2	52.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	7.4	41.8	17.3	35.1	6.4	42.8	5.0	47.4
Max Q Clear Time (g_c+I1), s	9.4	23.2	16.6	14.6	8.4	22.0	4.9	49.4
Green Ext Time (p_c), s	0.0	4.5	0.1	5.7	0.0	4.9	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	73.5
HCM 7th LOS	E

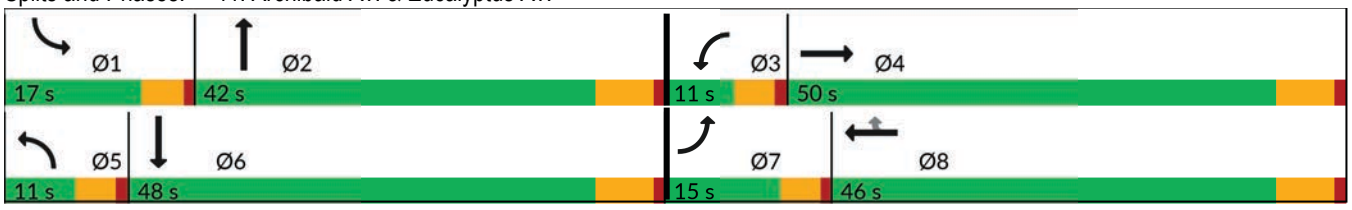
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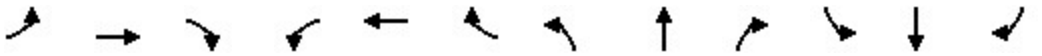
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	118	103	67	308	221	471	936	128	930
Future Volume (vph)	118	103	67	308	221	471	936	128	930
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	42.2	9.6	42.2	42.2	9.6	32.2	9.6	32.2
Total Split (s)	15.0	50.0	11.0	46.0	46.0	11.0	42.0	17.0	48.0
Total Split (%)	12.5%	41.7%	9.2%	38.3%	38.3%	9.2%	35.0%	14.2%	40.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.9	20.6	6.1	16.4	16.4	6.7	26.8	8.4	28.5
Actuated g/C Ratio	0.10	0.25	0.07	0.20	0.20	0.08	0.33	0.10	0.35
v/c Ratio	0.41	0.26	0.30	0.45	0.53	1.95	0.53	0.42	0.72
Control Delay (s/veh)	43.3	12.8	45.3	31.2	15.7	464.6	24.0	42.3	25.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.3	12.8	45.3	31.2	15.7	464.6	24.0	42.3	25.1
LOS	D	B	D	C	B	F	C	D	C
Approach Delay (s/veh)		23.2		27.0			159.7		26.7
Approach LOS		C		C			F		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 82	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.95	
Intersection Signal Delay (s/veh): 79.8	Intersection LOS: E
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 41: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	103	127	67	308	221	471	936	123	128	930	283
Future Volume (veh/h)	118	103	127	67	308	221	471	936	123	128	930	283
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.99
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	1700	1900	1900	1700	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	124	108	116	71	324	140	496	985	121	135	979	250
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	213	297	261	173	547	240	305	2279	277	218	1463	373
Arrive On Green	0.07	0.16	0.16	0.06	0.15	0.15	0.10	0.38	0.38	0.07	0.36	0.36
Sat Flow, veh/h	3141	1805	1586	3141	3610	1584	3141	5938	721	3141	4107	1046
Grp Volume(v), veh/h	124	108	116	71	324	140	496	811	295	135	824	405
Grp Sat Flow(s),veh/h/ln	1570	1805	1586	1570	1805	1584	1570	1634	1757	1570	1729	1695
Q Serve(g_s), s	2.5	3.5	4.4	1.4	5.5	5.4	6.4	8.1	8.2	2.8	13.3	13.3
Cycle Q Clear(g_c), s	2.5	3.5	4.4	1.4	5.5	5.4	6.4	8.1	8.2	2.8	13.3	13.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		0.62
Lane Grp Cap(c), veh/h	213	297	261	173	547	240	305	1881	674	218	1232	604
V/C Ratio(X)	0.58	0.36	0.45	0.41	0.59	0.58	1.63	0.43	0.44	0.62	0.67	0.67
Avail Cap(c_a), veh/h	495	1198	1053	305	2177	955	305	2659	953	590	2190	1074
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	24.5	24.9	30.1	26.1	26.1	29.8	15.0	15.1	29.9	18.0	18.0
Incr Delay (d2), s/veh	0.9	0.7	1.2	0.6	1.0	2.2	297.2	0.2	0.4	1.1	0.6	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.4	1.6	0.5	2.2	2.0	14.7	2.4	2.7	1.0	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.8	25.3	26.1	30.7	27.1	28.3	327.0	15.2	15.5	30.9	18.6	19.3
LnGrp LOS	C	C	C	C	C	C	F	B	B	C	B	B
Approach Vol, veh/h		348			535			1602			1364	
Approach Delay, s/veh		27.5			27.9			111.8			20.0	
Approach LOS		C			C			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	31.5	8.2	17.0	11.0	29.7	9.1	16.2
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	12.4	35.8	6.4	43.8	6.4	41.8	10.4	39.8
Max Q Clear Time (g_c+I1), s	4.8	10.2	3.4	6.4	8.4	15.3	4.5	7.5
Green Ext Time (p_c), s	0.1	7.0	0.0	1.3	0.0	8.1	0.1	2.4

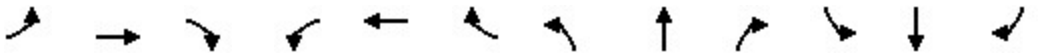
Intersection Summary	
HCM 7th Control Delay, s/veh	60.0
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	438	151	596	156	359	692	807	45	560	475
Future Volume (vph)	438	151	596	156	359	692	807	45	560	475
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			Free							6
Detector Phase	7	4		3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	44.8		9.6	45.8	9.6	32.5	9.6	31.5	31.5
Total Split (s)	17.0	45.7		17.1	45.8	24.0	47.4	9.8	33.2	33.2
Total Split (%)	14.2%	38.1%		14.3%	38.2%	20.0%	39.5%	8.2%	27.7%	27.7%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	None	None
Act Effct Green (s)	12.7	19.1	91.5	12.6	19.0	19.8	40.2	5.3	21.1	21.1
Actuated g/C Ratio	0.14	0.21	1.00	0.14	0.21	0.22	0.44	0.06	0.23	0.23
v/c Ratio	1.03	0.20	0.39	0.70	0.59	1.04	0.31	0.25	0.67	0.78
Control Delay (s/veh)	91.8	30.2	0.7	57.6	33.6	82.0	17.9	49.8	37.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	91.8	30.2	0.7	57.6	33.6	82.0	17.9	49.8	37.0	19.5
LOS	F	C	A	E	C	F	B	D	D	B
Approach Delay (s/veh)		38.1			39.8		44.5		29.8	
Approach LOS		D			D		D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay (s/veh): 38.7	Intersection LOS: D
Intersection Capacity Utilization 79.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 42: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	438	151	596	156	359	83	692	807	168	45	560	475
Future Volume (veh/h)	438	151	596	156	359	83	692	807	168	45	560	475
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	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	1700	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	461	159	0	164	378	49	728	849	120	47	589	489
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	431	661		194	507	65	674	3114	431	122	1167	494
Arrive On Green	0.20	0.26	0.00	0.17	0.23	0.23	0.31	0.72	0.72	0.06	0.46	0.46
Sat Flow, veh/h	3238	3800	1610	1714	3293	424	3238	6521	903	3238	3800	1610
Grp Volume(v), veh/h	461	159	0	164	217	210	728	740	229	47	589	489
Grp Sat Flow(s),veh/h/ln	1619	1900	1610	1714	1900	1817	1619	1900	1724	1619	1900	1610
Q Serve(g_s), s	12.4	3.1	0.0	8.6	9.9	10.0	19.4	4.3	4.4	1.3	10.1	28.0
Cycle Q Clear(g_c), s	12.4	3.1	0.0	8.6	9.9	10.0	19.4	4.3	4.4	1.3	10.1	28.0
Prop In Lane	1.00		1.00	1.00		0.23	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	431	661		194	293	280	674	2722	823	122	1167	494
V/C Ratio(X)	1.07	0.24		0.84	0.74	0.75	1.08	0.27	0.28	0.38	0.50	0.99
Avail Cap(c_a), veh/h	431	1677		230	840	804	674	2722	823	181	1167	494
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	29.6	0.0	37.9	34.1	34.2	32.0	7.5	7.5	42.9	20.1	25.0
Incr Delay (d2), s/veh	63.1	0.2	0.0	21.2	3.7	4.0	58.1	0.1	0.2	2.0	0.4	37.5
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(50%),veh/ln	8.1	1.3	0.0	4.4	4.3	4.2	11.3	1.4	1.3	0.5	3.7	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	100.4	29.8	0.0	59.1	37.8	38.2	90.1	7.6	7.7	44.9	20.5	62.5
LnGrp LOS	F	C		E	D	D	F	A	A	D	C	E
Approach Vol, veh/h		620			591			1697			1125	
Approach Delay, s/veh		82.3			43.8			43.0			39.8	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	49.1	15.2	20.8	24.0	33.2	17.0	18.9
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	5.2	42.8	12.5	41.1	19.4	28.6	12.4	41.2
Max Q Clear Time (g_c+I1), s	3.3	6.4	10.6	5.1	21.4	30.0	14.4	12.0
Green Ext Time (p_c), s	0.0	6.4	0.1	0.9	0.0	0.0	0.0	2.3

Intersection Summary	
HCM 7th Control Delay, s/veh	48.3
HCM 7th LOS	D

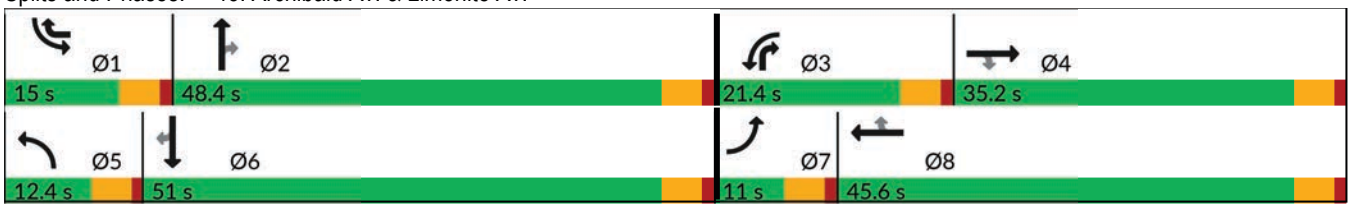
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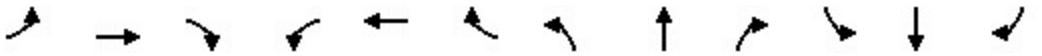
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	763	71	347	697	614	96	753	376	497	508	186
Future Volume (vph)	204	763	71	347	697	614	96	753	376	497	508	186
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	14.6	9.6	45.6	9.6	9.6	47.6	9.6	9.6	37.6	37.6
Total Split (s)	11.0	35.2	35.2	21.4	45.6	15.0	12.4	48.4	21.4	15.0	51.0	51.0
Total Split (%)	9.2%	29.3%	29.3%	17.8%	38.0%	12.5%	10.3%	40.3%	17.8%	12.5%	42.5%	42.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.5	26.5	26.5	14.9	34.9	45.5	7.0	28.4	48.1	10.6	34.5	34.5
Actuated g/C Ratio	0.07	0.27	0.27	0.15	0.35	0.46	0.07	0.29	0.48	0.11	0.35	0.35
v/c Ratio	1.01	0.79	0.14	0.75	0.55	0.45	0.44	0.73	0.49	1.52	0.27	0.29
Control Delay (s/veh)	114.5	41.4	0.5	52.9	28.2	14.4	54.4	36.5	16.9	279.4	25.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	114.5	41.4	0.5	52.9	28.2	14.4	54.4	36.5	16.9	279.4	25.1	4.8
LOS	F	D	A	D	C	B	D	D	B	F	C	A
Approach Delay (s/veh)		53.0			28.3			31.9			128.0	
Approach LOS		D			C			C			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.52	
Intersection Signal Delay (s/veh): 57.4	Intersection LOS: E
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 43: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	763	71	347	697	614	96	753	376	497	508	186
Future Volume (veh/h)	204	763	71	347	697	614	96	753	376	497	508	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1700	1900	1900	1700	1900	1800	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	215	803	69	365	734	580	101	793	279	523	535	118
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	239	988	419	438	1222	1333	170	1036	657	388	1937	547
Arrive On Green	0.11	0.39	0.39	0.20	0.48	0.48	0.08	0.41	0.41	0.18	0.51	0.51
Sat Flow, veh/h	3238	3800	1610	3238	3800	3007	3238	3800	1610	3238	5700	1609
Grp Volume(v), veh/h	215	803	69	365	734	580	101	793	279	523	535	118
Grp Sat Flow(s),veh/h/ln	1619	1900	1610	1619	1900	1503	1619	1900	1610	1619	1900	1609
Q Serve(g_s), s	5.7	16.4	2.4	9.4	12.2	10.0	2.6	15.6	9.8	10.4	4.6	3.5
Cycle Q Clear(g_c), s	5.7	16.4	2.4	9.4	12.2	10.0	2.6	15.6	9.8	10.4	4.6	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	988	419	438	1222	1333	170	1036	657	388	1937	547
V/C Ratio(X)	0.90	0.81	0.16	0.83	0.60	0.44	0.59	0.77	0.42	1.35	0.28	0.22
Avail Cap(c_a), veh/h	239	1341	568	627	1796	1787	291	1919	1031	388	3050	861
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	24.6	20.3	33.6	18.4	12.5	39.0	23.3	14.7	35.6	15.2	14.9
Incr Delay (d2), s/veh	32.2	2.8	0.2	4.5	0.5	0.2	1.2	1.2	0.4	172.4	0.1	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(50%),veh/ln	3.1	6.1	0.9	3.5	4.3	2.6	1.0	5.4	2.9	12.8	1.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	70.4	27.4	20.5	38.1	18.9	12.7	40.3	24.5	15.1	207.9	15.2	15.1
LnGrp LOS	E	C	C	D	B	B	D	C	B	F	B	B
Approach Vol, veh/h		1087			1679			1173			1176	
Approach Delay, s/veh		35.5			20.9			23.6			100.9	
Approach LOS		D			C			C			F	

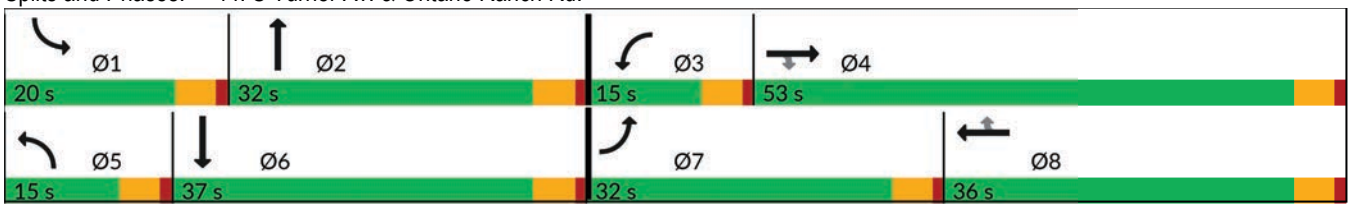
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	28.2	16.3	27.2	9.2	34.1	11.0	32.5
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	10.4	43.8	16.8	30.6	7.8	46.4	6.4	41.0
Max Q Clear Time (g_c+I1), s	12.4	17.6	11.4	18.4	4.6	6.6	7.7	14.2
Green Ext Time (p_c), s	0.0	6.1	0.4	4.2	0.0	3.7	0.0	7.9

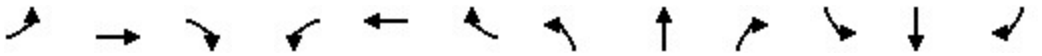
Intersection Summary	
HCM 7th Control Delay, s/veh	43.0
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	275	1586	234	169	1553	201	204	377	156	259
Future Volume (vph)	275	1586	234	169	1553	201	204	377	156	259
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.8	23.8	9.6	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	32.0	53.0	53.0	15.0	36.0	36.0	15.0	32.0	20.0	37.0
Total Split (%)	26.7%	44.2%	44.2%	12.5%	30.0%	30.0%	12.5%	26.7%	16.7%	30.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	23.3	48.4	48.4	10.4	35.5	35.5	10.4	27.6	13.9	31.1
Actuated g/C Ratio	0.20	0.41	0.41	0.09	0.30	0.30	0.09	0.23	0.12	0.26
v/c Ratio	0.86	1.08	0.34	1.19	1.44	0.35	1.43	1.39	0.82	0.92
Control Delay (s/veh)	70.1	81.4	11.7	180.3	235.8	9.4	269.5	224.3	81.4	65.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	70.1	81.4	11.7	180.3	235.8	9.4	269.5	224.3	81.4	65.7
LOS	E	F	B	F	F	A	F	F	F	E
Approach Delay (s/veh)		72.1			207.2			236.3		69.9
Approach LOS		E			F			F		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.7	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay (s/veh): 143.9	Intersection LOS: F
Intersection Capacity Utilization 115.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	1586	234	169	1553	201	204	377	192	156	259	166
Future Volume (veh/h)	275	1586	234	169	1553	201	204	377	192	156	259	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	289	1669	239	178	1635	205	215	397	176	164	273	157
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	316	1558	659	151	1193	494	151	291	129	190	292	168
Arrive On Green	0.18	0.41	0.41	0.09	0.31	0.31	0.09	0.24	0.24	0.11	0.26	0.26
Sat Flow, veh/h	1714	3800	1608	1714	3800	1574	1714	1239	549	1714	1132	651
Grp Volume(v), veh/h	289	1669	239	178	1635	205	215	0	573	164	0	430
Grp Sat Flow(s),veh/h/ln	1714	1900	1608	1714	1900	1574	1714	0	1788	1714	0	1783
Q Serve(g_s), s	19.5	48.4	12.2	10.4	37.1	12.1	10.4	0.0	27.8	11.1	0.0	27.8
Cycle Q Clear(g_c), s	19.5	48.4	12.2	10.4	37.1	12.1	10.4	0.0	27.8	11.1	0.0	27.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.37
Lane Grp Cap(c), veh/h	316	1558	659	151	1193	494	151	0	421	190	0	460
V/C Ratio(X)	0.92	1.07	0.36	1.18	1.37	0.42	1.42	0.00	1.36	0.86	0.00	0.93
Avail Cap(c_a), veh/h	398	1558	659	151	1193	494	151	0	421	224	0	489
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.3	34.8	24.1	53.8	40.5	32.0	53.8	0.0	45.1	51.6	0.0	42.8
Incr Delay (d2), s/veh	20.0	44.6	0.3	129.3	172.4	0.6	224.7	0.0	177.8	22.3	0.0	24.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	30.5	4.5	9.8	45.0	4.5	13.8	0.0	32.6	5.8	0.0	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	67.3	79.5	24.5	183.2	212.9	32.5	278.5	0.0	222.9	73.9	0.0	67.5
LnGrp LOS	E	F	C	F	F	C	F		F	E		E
Approach Vol, veh/h		2197			2018			788			594	
Approach Delay, s/veh		71.9			191.9			238.1			69.3	
Approach LOS		E			F			F			E	

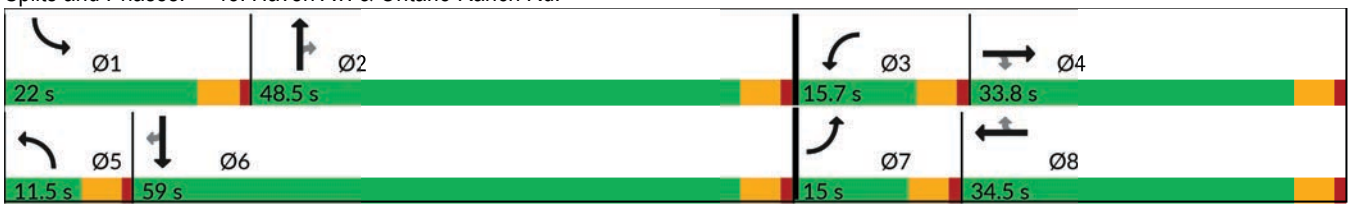
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	32.4	15.0	53.0	15.0	35.1	26.3	41.7
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	27.4	10.4	48.4	10.4	32.4	27.4	31.4
Max Q Clear Time (g_c+I1), s	13.1	29.8	12.4	50.4	12.4	29.8	21.5	39.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.0

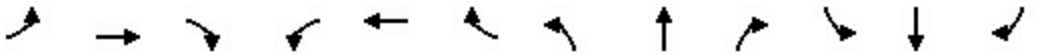
Intersection Summary	
HCM 7th Control Delay, s/veh	138.3
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	1111	72	207	1311	234	94	526	226	241	436	97
Future Volume (vph)	127	1111	72	207	1311	234	94	526	226	241	436	97
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	34.5	34.5	9.6	47.8	47.8	9.6	45.8	45.8
Total Split (s)	15.0	33.8	33.8	15.7	34.5	34.5	11.5	48.5	48.5	22.0	59.0	59.0
Total Split (%)	12.5%	28.2%	28.2%	13.1%	28.8%	28.8%	9.6%	40.4%	40.4%	18.3%	49.2%	49.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.4	28.8	28.8	10.5	28.9	28.9	6.9	37.3	37.3	17.5	47.8	47.8
Actuated g/C Ratio	0.09	0.26	0.26	0.09	0.26	0.26	0.06	0.33	0.33	0.16	0.42	0.42
v/c Ratio	0.85	0.88	0.15	0.75	0.82	0.42	0.94	0.88	0.35	0.96	0.57	0.14
Control Delay (s/veh)	94.1	49.9	0.6	67.6	44.9	6.8	128.3	52.2	5.7	94.7	27.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	94.1	49.9	0.6	67.6	44.9	6.8	128.3	52.2	5.7	94.7	27.7	4.1
LOS	F	D	A	E	D	A	F	D	A	F	C	A
Approach Delay (s/veh)		51.5			42.5			48.3			45.6	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 112.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 46.6	Intersection LOS: D
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 45: Haven Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	1111	72	207	1311	234	94	526	226	241	436	97
Future Volume (veh/h)	127	1111	72	207	1311	234	94	526	226	241	436	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	134	1169	54	218	1380	138	99	554	175	254	459	91
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	160	1356	414	273	1665	409	108	618	523	272	800	675
Arrive On Green	0.09	0.26	0.26	0.09	0.25	0.25	0.06	0.33	0.33	0.16	0.42	0.42
Sat Flow, veh/h	1714	5187	1584	3141	6536	1607	1714	1900	1607	1714	1900	1604
Grp Volume(v), veh/h	134	1169	54	218	1380	138	99	554	175	254	459	91
Grp Sat Flow(s),veh/h/ln	1714	1729	1584	1570	1634	1607	1714	1900	1607	1714	1900	1604
Q Serve(g_s), s	8.4	23.5	2.9	7.5	21.9	7.7	6.3	30.4	9.0	16.0	20.2	3.8
Cycle Q Clear(g_c), s	8.4	23.5	2.9	7.5	21.9	7.7	6.3	30.4	9.0	16.0	20.2	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	1356	414	273	1665	409	108	618	523	272	800	675
V/C Ratio(X)	0.84	0.86	0.13	0.80	0.83	0.34	0.92	0.90	0.33	0.93	0.57	0.13
Avail Cap(c_a), veh/h	163	1382	422	318	1783	438	108	761	644	272	943	796
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	38.6	30.9	49.1	38.6	33.3	51.1	35.2	28.0	45.5	24.2	19.5
Incr Delay (d2), s/veh	28.0	5.8	0.1	10.0	3.2	0.5	60.0	11.6	0.4	36.6	0.7	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(50%),veh/ln	4.7	10.1	1.0	3.2	8.5	2.9	4.4	15.3	0.1	9.3	8.7	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.9	44.3	31.1	59.1	41.8	33.8	111.1	46.9	28.4	82.1	24.9	19.6
LnGrp LOS	E	D	C	E	D	C	F	D	C	F	C	B
Approach Vol, veh/h		1357			1736			828			804	
Approach Delay, s/veh		47.0			43.4			50.6			42.4	
Approach LOS		D			D			D			D	

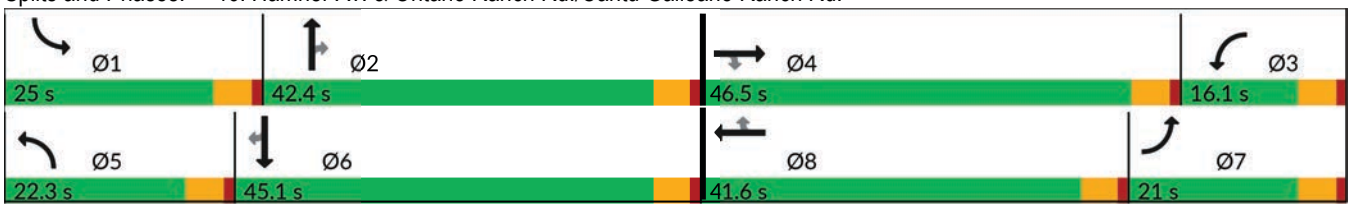
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	40.2	14.1	33.2	11.5	50.7	14.8	32.5
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	17.4	43.9	11.1	29.2	6.9	54.4	10.4	29.9
Max Q Clear Time (g_c+I1), s	18.0	32.4	9.5	25.5	8.3	22.2	10.4	23.9
Green Ext Time (p_c), s	0.0	3.0	0.1	2.3	0.0	3.0	0.0	4.1

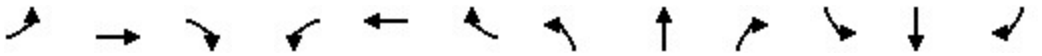
Intersection Summary	
HCM 7th Control Delay, s/veh	45.5
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	541	1837	154	284	964	301	273	1657	622	706	423	263
Future Volume (vph)	541	1837	154	284	964	301	273	1657	622	706	423	263
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6
Total Split (s)	21.0	46.5	46.5	16.1	41.6	41.6	22.3	42.4	42.4	25.0	45.1	45.1
Total Split (%)	16.2%	35.8%	35.8%	12.4%	32.0%	32.0%	17.2%	32.6%	32.6%	19.2%	34.7%	34.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.9	41.9	41.9	11.5	31.5	31.5	15.1	37.8	37.8	20.4	43.1	43.1
Actuated g/C Ratio	0.17	0.32	0.32	0.09	0.24	0.24	0.12	0.29	0.29	0.16	0.33	0.33
v/c Ratio	1.01	1.02	0.27	1.01	0.71	0.51	0.74	1.02	1.06	1.42	0.23	0.40
Control Delay (s/veh)	94.8	69.0	14.1	114.0	47.7	9.1	67.5	72.0	84.3	239.9	32.2	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	94.8	69.0	14.1	114.0	47.7	9.1	67.5	72.0	84.3	239.9	32.2	10.4
LOS	F	E	B	F	D	A	E	E	F	F	C	B
Approach Delay (s/veh)		71.2			52.4			74.5			133.4	
Approach LOS		E			D			E			F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay (s/veh): 79.4	Intersection LOS: E
Intersection Capacity Utilization 114.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 46: Hamner Av. & Ontario Ranch Rd./Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	541	1837	154	284	964	301	273	1657	622	706	423	263
Future Volume (veh/h)	541	1837	154	284	964	301	273	1657	622	706	423	263
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1768	1976	1976	1768	1976	1976	1768	1976	1976	1768	1976	1976
Adj Flow Rate, veh/h	569	1934	83	299	1015	233	287	1744	329	743	445	277
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	667	1911	540	298	1262	356	335	1724	487	528	2064	576
Arrive On Green	0.40	0.64	0.64	0.18	0.43	0.43	0.20	0.58	0.58	0.31	0.70	0.70
Sat Flow, veh/h	3368	5928	1675	3368	5928	1675	3368	5928	1675	3368	5928	1653
Grp Volume(v), veh/h	569	1934	83	299	1015	233	287	1744	329	743	445	277
Grp Sat Flow(s),veh/h/ln	1684	1976	1675	1684	1976	1675	1684	1976	1675	1684	1976	1653
Q Serve(g_s), s	20.0	41.9	1.9	11.5	19.4	10.2	10.7	37.8	13.7	20.4	3.5	5.8
Cycle Q Clear(g_c), s	20.0	41.9	1.9	11.5	19.4	10.2	10.7	37.8	13.7	20.4	3.5	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	667	1911	540	298	1262	356	335	1724	487	528	2064	576
V/C Ratio(X)	0.85	1.01	0.15	1.00	0.80	0.65	0.86	1.01	0.68	1.41	0.22	0.48
Avail Cap(c_a), veh/h	667	1911	540	298	1687	477	459	1724	487	528	2064	576
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	23.1	9.0	53.5	35.0	16.9	51.2	27.2	13.8	44.6	13.4	5.0
Incr Delay (d2), s/veh	10.0	23.6	0.1	53.1	2.2	2.0	8.8	24.6	3.7	193.8	0.1	0.6
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(50%),veh/ln	7.1	12.8	0.9	6.4	7.1	4.7	4.4	14.3	4.0	20.8	1.4	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.5	46.7	9.2	106.6	37.1	19.0	60.0	51.8	17.5	238.4	13.4	5.6
LnGrp LOS	D	F	A	F	D	B	E	F	B	F	B	A
Approach Vol, veh/h		2586			1547			2360			1465	
Approach Delay, s/veh		45.7			47.8			48.0			126.1	
Approach LOS		D			D			D			F	

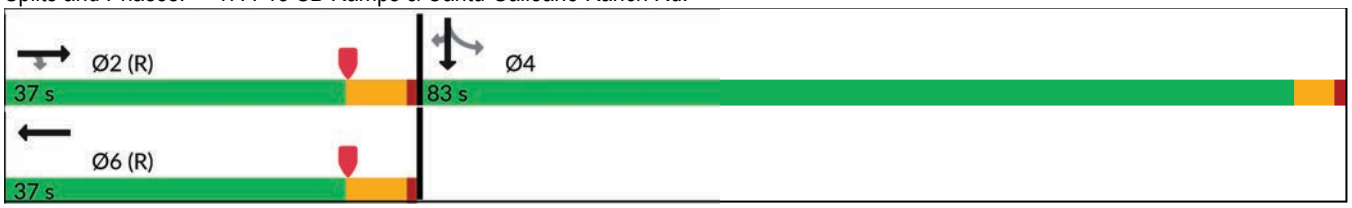
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	42.4	16.1	46.5	17.5	49.9	30.3	32.3
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	20.4	37.8	11.5	41.9	17.7	40.5	16.4	37.0
Max Q Clear Time (g_c+I1), s	22.4	39.8	13.5	43.9	12.7	7.8	22.0	21.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	3.8	0.0	6.2

Intersection Summary	
HCM 7th Control Delay, s/veh	61.6
HCM 7th LOS	E

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1625	897	941	431	326	0	1457
Future Volume (vph)	1625	897	941	431	326	0	1457
Turn Type	NA	Perm	NA	Free	Perm	NA	Perm
Protected Phases	2		6			4	
Permitted Phases		2		Free	4		4
Detector Phase	2	2	6		4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	37.0	37.0	37.0		83.0	83.0	83.0
Total Split (%)	30.8%	30.8%	30.8%		69.2%	69.2%	69.2%
Yellow Time (s)	5.5	5.5	5.5		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5		4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Min	C-Min	C-Min		Min	Min	Min
Act Effct Green (s)	36.5	36.5	36.5	120.0	72.4	72.4	72.4
Actuated g/C Ratio	0.30	0.30	0.30	1.00	0.60	0.60	0.60
v/c Ratio	0.99	0.96	0.86	0.28	0.30	0.79	0.79
Control Delay (s/veh)	61.3	30.3	54.9	0.4	11.6	23.4	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Total Delay (s/veh)	61.3	30.3	54.9	0.4	11.7	23.9	23.4
LOS	E	C	D	A	B	C	C
Approach Delay (s/veh)	50.2		37.8			21.7	
Approach LOS	D		D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 37.5 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay (s/veh): 38.3	Intersection LOS: D
Intersection Capacity Utilization 95.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 47: I-15 SB Ramps & Cantu Galleano Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	1625	897	0	941	431	0	0	0	326	0	1457
Future Volume (veh/h)	0	1625	897	0	941	431	0	0	0	326	0	1457
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
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	0	1900	1900	0	1900	1900				1800	1900	1900
Adj Flow Rate, veh/h	0	1711	0	0	991	0				229	0	1427
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2365		0	1577					844	0	1586
Arrive On Green	0.00	0.41	0.00	0.00	0.14	0.00				0.49	0.00	0.49
Sat Flow, veh/h	0	5700	1610	0	3800	1610				1714	0	3220
Grp Volume(v), veh/h	0	1711	0	0	991	0				229	0	1427
Grp Sat Flow(s),veh/h/ln	0	1900	1610	0	1900	1610				1714	0	1610
Q Serve(g_s), s	0.0	30.1	0.0	0.0	29.6	0.0				9.4	0.0	48.5
Cycle Q Clear(g_c), s	0.0	30.1	0.0	0.0	29.6	0.0				9.4	0.0	48.5
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2365		0	1577					844	0	1586
V/C Ratio(X)	0.00	0.72		0.00	0.63					0.27	0.00	0.90
Avail Cap(c_a), veh/h	0	2365		0	1577					1120	0	2104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.33	0.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.00	0.00	0.61	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	29.4	0.0	0.0	43.1	0.0				17.8	0.0	27.7
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	1.2	0.0				0.2	0.0	4.6
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	0.0	12.7	0.0	0.0	15.2	0.0				3.6	0.0	18.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	29.5	0.0	0.0	44.2	0.0				18.0	0.0	32.3
LnGrp LOS		C			D					B		C
Approach Vol, veh/h		1711			991						1656	
Approach Delay, s/veh		29.5			44.2						30.3	
Approach LOS		C			D						C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	56.3	63.7	56.3
Change Period (Y+Rc), s	6.5	4.6	6.5
Max Green Setting (Gmax), s	30.5	78.4	30.5
Max Q Clear Time (g_c+I1), s	32.1	50.5	31.6
Green Ext Time (p_c), s	0.0	8.7	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	33.2
HCM 7th LOS	C

Notes

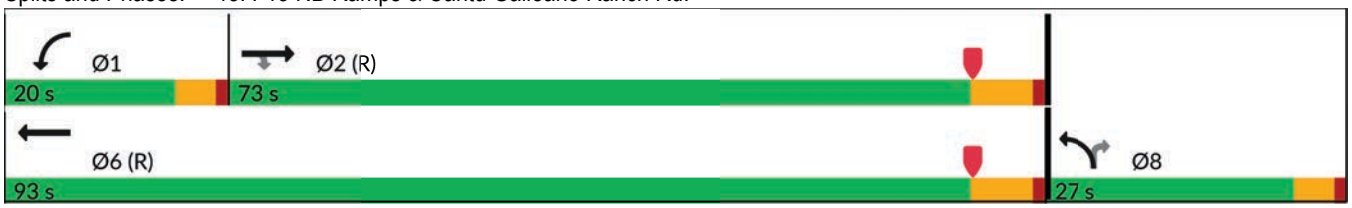
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	720	1225	493	654	656	428
Future Volume (vph)	720	1225	493	654	656	428
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	61.3	61.3	11.0	22.5	22.5	22.5
Total Split (s)	73.0	73.0	20.0	93.0	27.0	27.0
Total Split (%)	60.8%	60.8%	16.7%	77.5%	22.5%	22.5%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.6	4.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	66.5	66.5	15.4	86.5	22.4	22.4
Actuated g/C Ratio	0.55	0.55	0.13	0.72	0.19	0.19
v/c Ratio	0.24	1.10	1.25	0.17	1.22	0.61
Control Delay (s/veh)	8.5	85.8	175.6	5.4	155.4	9.4
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.5	85.9	175.6	5.4	155.4	9.4
LOS	A	F	F	A	F	A
Approach Delay (s/veh)	57.2			78.6	109.9	
Approach LOS	E			E	F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 44.8 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay (s/veh): 76.8	Intersection LOS: E
Intersection Capacity Utilization 100.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 48: I-15 NB Ramps & Cantu Galleano Ranch Rd.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	720	1225	493	654	656	428
Future Volume (veh/h)	720	1225	493	654	656	428
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		0.98	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	1900	1900	1700	1900	1800	1900
Adj Flow Rate, veh/h	758	657	519	688	691	240
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	3159	872	416	4109	640	301
Arrive On Green	0.93	0.93	0.19	1.00	0.28	0.28
Sat Flow, veh/h	5700	1574	3238	5700	3429	1610
Grp Volume(v), veh/h	758	657	519	688	691	240
Grp Sat Flow(s),veh/h/ln	1900	1574	1619	1900	1714	1610
Q Serve(g_s), s	1.5	12.3	15.4	0.0	22.4	16.6
Cycle Q Clear(g_c), s	1.5	12.3	15.4	0.0	22.4	16.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3159	872	416	4109	640	301
V/C Ratio(X)	0.24	0.75	1.25	0.17	1.08	0.80
Avail Cap(c_a), veh/h	3159	872	416	4109	640	301
HCM Platoon Ratio	1.67	1.67	1.50	1.50	1.50	1.50
Upstream Filter(I)	0.35	0.35	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.1	2.5	48.5	0.0	43.2	41.1
Incr Delay (d2), s/veh	0.1	2.2	130.7	0.1	59.0	14.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.8	13.0	0.0	13.5	6.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	2.1	4.6	179.1	0.1	102.2	55.2
LnGrp LOS	A	A	F	A	F	E
Approach Vol, veh/h	1415			1207	931	
Approach Delay, s/veh	3.3			77.1	90.1	
Approach LOS	A			E	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	20.0	73.0				93.0	27.0
Change Period (Y+Rc), s	4.6	6.5				6.5	4.6
Max Green Setting (Gmax), s	15.4	66.5				86.5	22.4
Max Q Clear Time (g_c+I1), s	17.4	14.3				2.0	24.4
Green Ext Time (p_c), s	0.0	8.9				4.6	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	51.1
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	10	3	2	27
Future Vol, veh/h	1	0	10	3	2	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	11	3	2	28

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	45	7	0	0	14	0
Stage 1	12	-	-	-	-	-
Stage 2	33	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	968	1080	-	-	1618	-
Stage 1	1015	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	967	1080	-	-	1618	-
Mov Cap-2 Maneuver	939	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	994	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.84	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	939	1618	-
HCM Lane V/C Ratio	-	-	0.001	0.001	-
HCM Ctrl Dly (s/v)	-	-	8.8	7.2	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	1	12	10	4	24
Future Vol, veh/h	5	1	12	10	4	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	1	13	11	4	25

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	52	12	0	0	23	0
Stage 1	18	-	-	-	-	-
Stage 2	34	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	959	1073	-	-	1605	-
Stage 1	1008	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	957	1073	-	-	1605	-
Mov Cap-2 Maneuver	934	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	991	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.8	0	1.04
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	955	1605	-
HCM Lane V/C Ratio	-	-	0.007	0.003	-
HCM Ctrl Dly (s/v)	-	-	8.8	7.2	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	3	19	11	11	18
Future Vol, veh/h	3	3	19	11	11	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	3	20	12	12	19

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	68	16	0	0	32	0
Stage 1	26	-	-	-	-	-
Stage 2	42	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	938	1066	-	-	1594	-
Stage 1	999	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	932	1066	-	-	1594	-
Mov Cap-2 Maneuver	919	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	978	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.67	0	2.76
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	987	1594	-
HCM Lane V/C Ratio	-	-	0.006	0.007	-
HCM Ctrl Dly (s/v)	-	-	8.7	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	5.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	3	8	1	2	5
Future Vol, veh/h	2	3	8	1	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	3	8	1	2	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	5	0	22	4
Stage 1	-	-	-	-	4	-
Stage 2	-	-	-	-	18	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1629	-	1000	1086
Stage 1	-	-	-	-	1025	-
Stage 2	-	-	-	-	1010	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1629	-	995	1086
Mov Cap-2 Maneuver	-	-	-	-	995	-
Stage 1	-	-	-	-	1025	-
Stage 2	-	-	-	-	1005	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	6.42	8.43
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1058	-	-	1600	-
HCM Lane V/C Ratio	0.007	-	-	0.005	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	890	1177	34	12	2
Future Vol, veh/h	8	890	1177	34	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	937	1239	36	13	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1275	0	-	0	2211	1257
Stage 1	-	-	-	-	1257	-
Stage 2	-	-	-	-	954	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	552	-	-	-	49	211
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	377	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	552	-	-	-	48	211
Mov Cap-2 Maneuver	-	-	-	-	210	-
Stage 1	-	-	-	-	266	-
Stage 2	-	-	-	-	377	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.1	0	23.45
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	552	-	-	-	210
HCM Lane V/C Ratio	0.015	-	-	-	0.07
HCM Ctrl Dly (s/v)	11.6	-	-	-	23.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	2	8	8	1	4
Future Vol, veh/h	5	2	8	8	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	2	8	8	1	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	7	0	32	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	25	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1626	-	987	1082
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1003	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1626	-	982	1082
Mov Cap-2 Maneuver	-	-	-	-	982	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.61	8.41
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1061	-	-	900	-
HCM Lane V/C Ratio	0.005	-	-	0.005	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	96	0	17	3	137	134	30	706	1
Future Vol, veh/h	0	0	1	96	0	17	3	137	134	30	706	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	1	101	0	18	3	144	141	32	743	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	957	1098	744	1027	1028	215	744	0	0	285	0	0
Stage 1	807	807	-	221	221	-	-	-	-	-	-	-
Stage 2	151	292	-	806	807	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	239	214	418	214	236	830	873	-	-	1289	-	-
Stage 1	378	397	-	786	724	-	-	-	-	-	-	-
Stage 2	857	675	-	378	397	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	223	205	418	204	225	830	873	-	-	1289	-	-
Mov Cap-2 Maneuver	223	205	-	204	225	-	-	-	-	-	-	-
Stage 1	362	381	-	783	721	-	-	-	-	-	-	-
Stage 2	835	672	-	362	380	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	13.63	36.25	0.1	0.32
HCM LOS	B	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	18	-	-	418	230	73	-	-
HCM Lane V/C Ratio	0.004	-	-	0.003	0.517	0.025	-	-
HCM Ctrl Dly (s/v)	9.1	0	-	13.6	36.3	7.9	0	-
HCM Lane LOS	A	A	-	B	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	2.7	0.1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	6	4	0	1	11	272	6	3	793	6
Future Vol, veh/h	2	0	6	4	0	1	11	272	6	3	793	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	0	6	4	0	1	12	286	6	3	835	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1154	1160	838	1154	1160	289	841	0	0	293	0	0
Stage 1	844	844	-	313	313	-	-	-	-	-	-	-
Stage 2	309	316	-	841	847	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	176	197	369	176	197	754	803	-	-	1281	-	-
Stage 1	361	382	-	702	661	-	-	-	-	-	-	-
Stage 2	705	659	-	362	381	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	172	193	369	169	193	754	803	-	-	1281	-	-
Mov Cap-2 Maneuver	172	193	-	169	193	-	-	-	-	-	-	-
Stage 1	359	380	-	690	649	-	-	-	-	-	-	-
Stage 2	692	647	-	354	379	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	17.93	23.48	0.36	0.03
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	68	-	-	287	200	7	-	-
HCM Lane V/C Ratio	0.014	-	-	0.029	0.026	0.002	-	-
HCM Ctrl Dly (s/v)	9.5	0	-	17.9	23.5	7.8	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	3	1	0	1	10	287	5	5	788	9
Future Vol, veh/h	2	0	3	1	0	1	10	287	5	5	788	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	0	3	1	0	1	11	302	5	5	829	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1168	1173	834	1166	1175	305	839	0	0	307	0	0
Stage 1	845	845	-	326	326	-	-	-	-	-	-	-
Stage 2	323	328	-	840	849	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	172	194	371	173	193	740	804	-	-	1265	-	-
Stage 1	360	382	-	691	652	-	-	-	-	-	-	-
Stage 2	693	650	-	363	380	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	168	189	371	167	189	740	804	-	-	1265	-	-
Mov Cap-2 Maneuver	168	189	-	167	189	-	-	-	-	-	-	-
Stage 1	358	379	-	680	642	-	-	-	-	-	-	-
Stage 2	681	640	-	357	377	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	19.72	18.31	0.32	0.05
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	59	-	-	250	273	11	-	-
HCM Lane V/C Ratio	0.013	-	-	0.021	0.008	0.004	-	-
HCM Ctrl Dly (s/v)	9.5	0	-	19.7	18.3	7.9	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	17	8	12	9	6
Future Vol, veh/h	12	17	8	12	9	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	18	8	13	9	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	31	0	51	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	29	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1595	-	963	1062
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	998	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1595	-	958	1062
Mov Cap-2 Maneuver	-	-	-	-	958	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	993	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	2.91	8.67
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	997	-	-	720	-
HCM Lane V/C Ratio	0.016	-	-	0.005	-
HCM Ctrl Dly (s/v)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	666	1224	19	3	4
Future Vol, veh/h	7	666	1224	19	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	701	1288	20	3	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1308	0	-	0	2014	1298
Stage 1	-	-	-	-	1298	-
Stage 2	-	-	-	-	716	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	536	-	-	-	65	199
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	488	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	536	-	-	-	64	199
Mov Cap-2 Maneuver	-	-	-	-	220	-
Stage 1	-	-	-	-	255	-
Stage 2	-	-	-	-	488	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.12	0	22.98
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	536	-	-	-	208
HCM Lane V/C Ratio	0.014	-	-	-	0.035
HCM Ctrl Dly (s/v)	11.8	-	-	-	23
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	16	2	8	19	1	3
Future Vol, veh/h	16	2	8	19	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	2	8	20	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	19	0	55	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1611	-	958	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	953	1067
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	986	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	2.15	8.49
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1036	-	-	533	-
HCM Lane V/C Ratio	0.004	-	-	0.005	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	654	1237	16	6	6
Future Vol, veh/h	16	654	1237	16	6	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	688	1302	17	6	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1319	0	-	0	2033	1311
Stage 1	-	-	-	-	1311	-
Stage 2	-	-	-	-	722	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	531	-	-	-	64	196
Stage 1	-	-	-	-	255	-
Stage 2	-	-	-	-	485	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	531	-	-	-	62	196
Mov Cap-2 Maneuver	-	-	-	-	213	-
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	485	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.29	0	23.76
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	531	-	-	-	204
HCM Lane V/C Ratio	0.032	-	-	-	0.062
HCM Ctrl Dly (s/v)	12	-	-	-	23.8
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	16	2	9	26	3	4
Future Vol, veh/h	16	2	9	26	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	2	9	27	3	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	19	0	64	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1611	-	947	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	941	1067
Mov Cap-2 Maneuver	-	-	-	-	941	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	975	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.86	8.59
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1009	-	-	463	-
HCM Lane V/C Ratio	0.007	-	-	0.006	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	647	1247	32	6	7
Future Vol, veh/h	12	647	1247	32	6	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	681	1313	34	6	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1346	0	-	0	2036	1329
Stage 1	-	-	-	-	1329	-
Stage 2	-	-	-	-	706	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	518	-	-	-	63	191
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	493	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	518	-	-	-	62	191
Mov Cap-2 Maneuver	-	-	-	-	212	-
Stage 1	-	-	-	-	243	-
Stage 2	-	-	-	-	493	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.22	0	24.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	518	-	-	-	200
HCM Lane V/C Ratio	0.024	-	-	-	0.068
HCM Ctrl Dly (s/v)	12.1	-	-	-	24.3
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	1	5	33	1	1
Future Vol, veh/h	18	1	5	33	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	19	1	5	35	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	65	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1609	-	946	1064
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1609	-	943	1064
Mov Cap-2 Maneuver	-	-	-	-	943	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	979	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.95	8.61
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	237	-
HCM Lane V/C Ratio	0.002	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	17	2	1	37	1	1
Future Vol, veh/h	17	2	1	37	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	18	2	1	39	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	60	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1609	-	952	1065
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	987	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1609	-	951	1065
Mov Cap-2 Maneuver	-	-	-	-	951	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	986	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.19	8.59
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1005	-	-	47	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	0	3	38	0	0
Future Vol, veh/h	18	0	3	38	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	19	0	3	40	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	19	0	65	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1611	-	945	1065
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	943	1065
Mov Cap-2 Maneuver	-	-	-	-	943	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	979	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.53	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	132	-
HCM Lane V/C Ratio	-	-	-	0.002	-
HCM Ctrl Dly (s/v)	0	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	0	0	2	28	422	0	0	797	0
Future Vol, veh/h	0	0	2	0	0	2	28	422	0	0	797	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	2	0	0	2	29	444	0	0	839	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1120	1342	419	923	1342	222	839	0	0	444	0	0
Stage 1	839	839	-	503	503	-	-	-	-	-	-	-
Stage 2	281	503	-	419	839	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	164	154	588	228	154	788	804	-	-	1127	-	-
Stage 1	331	384	-	524	545	-	-	-	-	-	-	-
Stage 2	708	545	-	587	384	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	157	148	588	219	148	788	804	-	-	1127	-	-
Mov Cap-2 Maneuver	262	268	-	341	257	-	-	-	-	-	-	-
Stage 1	331	384	-	505	525	-	-	-	-	-	-	-
Stage 2	680	525	-	585	384	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.14	9.58	0.6	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	804	-	-	588	788	1127	-	-
HCM Lane V/C Ratio	0.037	-	-	0.004	0.003	-	-	-
HCM Ctrl Dly (s/v)	9.6	-	-	11.1	9.6	0	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	0	0	2	0	422	0	0	797	0
Future Vol, veh/h	0	0	2	0	0	2	0	422	0	0	797	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	2	0	0	2	0	444	0	0	839	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	419	-	-	222	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	588	0	0	788	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	588	-	-	788	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.14	9.58	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	588	788	-	-
HCM Lane V/C Ratio	-	-	0.004	0.003	-	-
HCM Ctrl Dly (s/v)	-	-	11.1	9.6	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	26	5	0	15	1	0
Future Vol, veh/h	26	5	0	15	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	27	5	0	16	1	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	33	0	46	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1592	-	969	1050
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	1012	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1592	-	969	1050
Mov Cap-2 Maneuver	-	-	-	-	969	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	1012	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	8.72
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	969	-	-	1592	-
HCM Lane V/C Ratio	0.001	-	-	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	25	1	4	15	0	3
Future Vol, veh/h	25	1	4	15	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	1	4	16	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	27	0	51	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	24	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1599	-	963	1054
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1599	-	960	1054
Mov Cap-2 Maneuver	-	-	-	-	960	-
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.53	8.42
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1054	-	-	379	-
HCM Lane V/C Ratio	0.003	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	586	951	22	4	10
Future Vol, veh/h	29	586	951	22	4	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	31	617	1001	23	4	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1024	0	-	0	1691	1013
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	678	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	686	-	-	-	104	293
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	508	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	686	-	-	-	99	293
Mov Cap-2 Maneuver	-	-	-	-	281	-
Stage 1	-	-	-	-	338	-
Stage 2	-	-	-	-	508	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.49	0	18.12
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	686	-	-	-	289
HCM Lane V/C Ratio	0.045	-	-	-	0.051
HCM Ctrl Dly (s/v)	10.5	-	-	-	18.1
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	23	6	5	16	3	3
Future Vol, veh/h	23	6	5	16	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	6	5	17	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	31	0	55	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1595	-	958	1054
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	1000	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1595	-	955	1054
Mov Cap-2 Maneuver	-	-	-	-	955	-
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.73	8.62
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1002	-	-	429	-
HCM Lane V/C Ratio	0.006	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	19	5	6	20	2	3
Future Vol, veh/h	19	5	6	20	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	20	5	6	21	2	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	25	0	56	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1602	-	956	1060
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1602	-	952	1060
Mov Cap-2 Maneuver	-	-	-	-	952	-
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	990	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.67	8.57
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1014	-	-	415	-
HCM Lane V/C Ratio	0.005	-	-	0.004	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	575	967	22	8	5
Future Vol, veh/h	15	575	967	22	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	605	1018	23	8	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1041	0	-	0	1666	1029
Stage 1	-	-	-	-	1029	-
Stage 2	-	-	-	-	637	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	676	-	-	-	107	286
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	676	-	-	-	105	286
Mov Cap-2 Maneuver	-	-	-	-	286	-
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	531	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.27	0	18.22
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	676	-	-	-	286
HCM Lane V/C Ratio	0.023	-	-	-	0.048
HCM Ctrl Dly (s/v)	10.5	-	-	-	18.2
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	19	3	9	25	2	5
Future Vol, veh/h	19	3	9	25	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	20	3	9	26	2	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	23	0	67	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1605	-	943	1062
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1605	-	938	1062
Mov Cap-2 Maneuver	-	-	-	-	938	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	976	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.92	8.54
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1023	-	-	476	-
HCM Lane V/C Ratio	0.007	-	-	0.006	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	567	984	13	2	5
Future Vol, veh/h	16	567	984	13	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	597	1036	14	2	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1049	0	-	0	1673	1043
Stage 1	-	-	-	-	1043	-
Stage 2	-	-	-	-	631	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	671	-	-	-	106	281
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	534	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	671	-	-	-	104	281
Mov Cap-2 Maneuver	-	-	-	-	283	-
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	534	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.29	0	18.13
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	671	-	-	-	282
HCM Lane V/C Ratio	0.025	-	-	-	0.026
HCM Ctrl Dly (s/v)	10.5	-	-	-	18.1
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	3	507	605	2
Future Vol, veh/h	0	1	3	507	605	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	3	534	637	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1178	638	639	0	-	0
Stage 1	638	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	213	480	955	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	212	480	955	-	-	-
Mov Cap-2 Maneuver	418	-	-	-	-	-
Stage 1	528	-	-	-	-	-
Stage 2	588	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.51	0.05	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	955	-	480	-	-
HCM Lane V/C Ratio	0.003	-	0.002	-	-
HCM Ctrl Dly (s/v)	8.8	-	12.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	1	4	506	596	10
Future Vol, veh/h	5	1	4	506	596	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	1	4	533	627	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1174	633	638	0	-	0
Stage 1	633	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	214	484	956	-	-	-
Stage 1	533	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	213	484	956	-	-	-
Mov Cap-2 Maneuver	419	-	-	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	587	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.52	0.07	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	956	-	429	-	-
HCM Lane V/C Ratio	0.004	-	0.015	-	-
HCM Ctrl Dly (s/v)	8.8	-	13.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	5	509	594	3
Future Vol, veh/h	1	1	5	509	594	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	1	5	536	625	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1173	627	628	0	-	0
Stage 1	627	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	214	487	963	-	-	-
Stage 1	536	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	213	487	963	-	-	-
Mov Cap-2 Maneuver	419	-	-	-	-	-
Stage 1	534	-	-	-	-	-
Stage 2	584	-	-	-	-	-

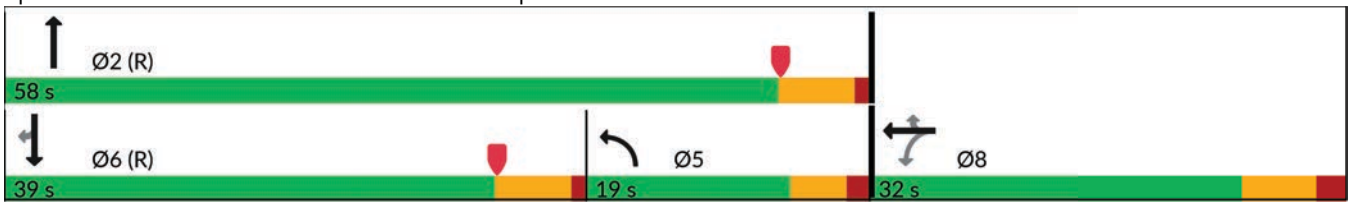
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.02	0.09	0
HCM LOS	B		

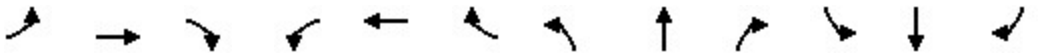
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	963	-	451	-	-
HCM Lane V/C Ratio	0.005	-	0.005	-	-
HCM Ctrl Dly (s/v)	8.8	-	13	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	955	0	527	547	1206	1292	604
Future Volume (vph)	955	0	527	547	1206	1292	604
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.0	17.0	17.0	15.2	28.0	27.0	27.0
Total Split (s)	32.0	32.0	32.0	19.0	58.0	39.0	39.0
Total Split (%)	35.6%	35.6%	35.6%	21.1%	64.4%	43.3%	43.3%
Yellow Time (s)	5.0	5.0	5.0	3.7	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	1.5	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	5.2	6.0	6.0	6.0
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	25.0	25.0	25.0	13.8	52.0	33.0	33.0
Actuated g/C Ratio	0.28	0.28	0.28	0.15	0.58	0.37	0.37
v/c Ratio	1.20	1.01	0.97	2.20	0.61	1.03	0.66
Control Delay (s/veh)	142.6	69.3	59.9	565.2	21.1	61.6	6.0
Queue Delay	0.0	2.1	0.0	0.0	4.4	0.0	0.0
Total Delay (s/veh)	142.7	71.4	59.9	565.2	25.5	61.6	6.0
LOS	F	E	E	F	C	E	A
Approach Delay (s/veh)		92.6			194.0	43.9	
Approach LOS		F			F	D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 30.8 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.20	
Intersection Signal Delay (s/veh): 109.2	Intersection LOS: F
Intersection Capacity Utilization 155.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: Euclid Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	955	0	527	547	1206	0	0	1292	604
Future Volume (veh/h)	0	0	0	955	0	527	547	1206	0	0	1292	604
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		0.97
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				1800	1900	1900	1800	1900	0	0	1900	1900
Adj Flow Rate, veh/h				1137	0	282	576	1269	0	0	1360	375
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				952	0	442	766	3177	0	0	1324	575
Arrive On Green				0.28	0.00	0.28	0.59	1.00	0.00	0.00	0.37	0.37
Sat Flow, veh/h				3429	0	1590	1714	3705	0	0	3705	1568
Grp Volume(v), veh/h				1137	0	282	576	1269	0	0	1360	375
Grp Sat Flow(s),veh/h/ln				1714	0	1590	1714	1805	0	0	1805	1568
Q Serve(g_s), s				25.0	0.0	14.0	22.2	0.0	0.0	0.0	33.0	17.9
Cycle Q Clear(g_c), s				25.0	0.0	14.0	22.2	0.0	0.0	0.0	33.0	17.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				952	0	442	766	3177	0	0	1324	575
V/C Ratio(X)				1.19	0.00	0.64	0.75	0.40	0.00	0.00	1.03	0.65
Avail Cap(c_a), veh/h				952	0	442	766	3177	0	0	1324	575
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.5	0.0	28.5	14.6	0.0	0.0	0.0	28.5	23.7
Incr Delay (d2), s/veh				97.6	0.0	3.5	0.4	0.0	0.0	0.0	32.0	5.7
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 BackOfQ(50%),veh/ln				22.9	0.0	5.6	5.8	0.0	0.0	0.0	18.7	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				130.1	0.0	32.1	15.0	0.0	0.0	0.0	60.5	29.4
LnGrp LOS				F		C	B	A			F	C
Approach Vol, veh/h					1419			1845			1735	
Approach Delay, s/veh					110.6			4.7			53.8	
Approach LOS					F			A			D	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	86.0		47.0	39.0		32.0						
Change Period (Y+Rc), s	6.0		6.0	* 6		7.0						
Max Green Setting (Gmax), s	52.0		13.8	* 33		25.0						
Max Q Clear Time (g_c+I1), s	2.0		24.2	35.0		27.0						
Green Ext Time (p_c), s	17.7		0.0	0.0		0.0						

Intersection Summary	
HCM 7th Control Delay, s/veh	51.8
HCM 7th LOS	D

Notes

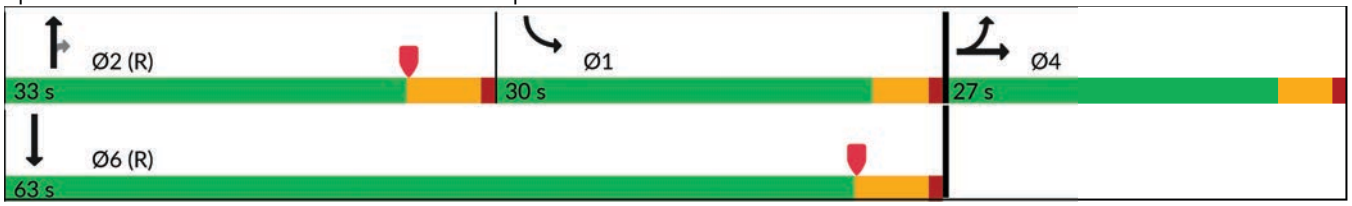
User approved volume balancing among the lanes for turning movement.

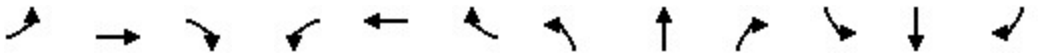
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	363	1	1389	841	394	1853
Future Volume (vph)	363	1	1389	841	394	1853
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	29.0	29.0	14.7	27.0
Total Split (s)	27.0	27.0	33.0	33.0	30.0	63.0
Total Split (%)	30.0%	30.0%	36.7%	36.7%	33.3%	70.0%
Yellow Time (s)	3.6	3.6	5.0	5.0	3.7	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	22.7	22.7	27.0	27.0	25.0	56.7
Actuated g/C Ratio	0.25	0.25	0.30	0.30	0.28	0.63
v/c Ratio	0.84	1.49	1.35	0.99	0.87	0.86
Control Delay (s/veh)	52.2	262.5	192.5	40.5	25.1	7.0
Queue Delay	0.0	0.0	0.2	0.0	0.0	1.4
Total Delay (s/veh)	52.2	262.5	192.7	40.5	25.1	8.4
LOS	D	F	F	D	C	A
Approach Delay (s/veh)		185.2	135.3			11.4
Approach LOS		F	F			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.49	
Intersection Signal Delay (s/veh): 91.7	Intersection LOS: F
Intersection Capacity Utilization 155.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	363	1	525	0	0	0	0	1389	841	394	1853	0
Future Volume (veh/h)	363	1	525	0	0	0	0	1389	841	394	1853	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99				1.00		0.97	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	1800	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	382	1	494				0	1462	726	415	1951	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	427	1	394				0	1083	470	457	2286	0
Arrive On Green	0.25	0.25	0.25				0.00	0.30	0.30	0.53	1.00	0.00
Sat Flow, veh/h	1714	3	1585				0	3705	1567	1714	3705	0
Grp Volume(v), veh/h	382	0	495				0	1462	726	415	1951	0
Grp Sat Flow(s),veh/h/ln	1714	0	1588				0	1805	1567	1714	1805	0
Q Serve(g_s), s	19.4	0.0	22.4				0.0	27.0	27.0	19.7	0.0	0.0
Cycle Q Clear(g_c), s	19.4	0.0	22.4				0.0	27.0	27.0	19.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	427	0	395				0	1083	470	457	2286	0
V/C Ratio(X)	0.90	0.00	1.25				0.00	1.35	1.54	0.91	0.85	0.00
Avail Cap(c_a), veh/h	427	0	395				0	1083	470	482	2286	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	0.09	0.09	0.09	0.09	0.00
Uniform Delay (d), s/veh	32.7	0.0	33.8				0.0	31.5	31.5	20.0	0.0	0.0
Incr Delay (d2), s/veh	20.9	0.0	132.9				0.0	158.1	245.8	2.6	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	10.3	0.0	22.9				0.0	34.5	41.5	4.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.6	0.0	166.7				0.0	189.6	277.3	22.6	0.4	0.0
LnGrp LOS	D		F					F	F	C	A	
Approach Vol, veh/h		877						2188			2366	
Approach Delay, s/veh		117.4						218.7			4.3	
Approach LOS		F						F			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	30.0	33.0		27.0		63.0
Change Period (Y+Rc), s	6.0	* 6		4.6		6.0
Max Green Setting (Gmax), s	25.3	* 27		22.4		57.0
Max Q Clear Time (g_c+I1), s	21.7	29.0		24.4		2.0
Green Ext Time (p_c), s	0.5	0.0		0.0		36.5

Intersection Summary		
HCM 7th Control Delay, s/veh		108.9
HCM 7th LOS		F

Notes

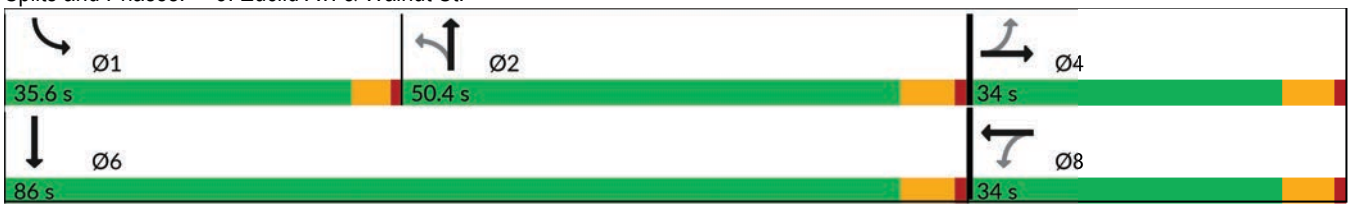
User approved volume balancing among the lanes for turning movement.

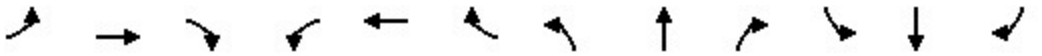
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	313	714	61	495	146	1499	382	1673
Future Volume (vph)	313	714	61	495	146	1499	382	1673
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	34.0	34.0	34.0	34.0	50.4	50.4	35.6	86.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	42.0%	42.0%	29.7%	71.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	28.2	28.2	28.2	28.2	44.6	44.6	17.9	67.2
Actuated g/C Ratio	0.26	0.26	0.26	0.26	0.42	0.42	0.17	0.63
v/c Ratio	4.91	1.05	0.96	0.83	2.30	0.76	0.77	0.64
Control Delay (s/veh)	Error	82.4	142.2	42.8	646.1	29.8	52.8	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	Error	82.4	142.2	42.8	646.1	29.8	52.8	13.0
LOS	F	F	F	D	F	C	D	B
Approach Delay (s/veh)		512.8		50.3		82.9		19.6
Approach LOS		F		D		F		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.91	
Intersection Signal Delay (s/veh): 142.7	Intersection LOS: F
Intersection Capacity Utilization 106.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	714	223	61	495	250	146	1499	53	382	1673	273
Future Volume (veh/h)	313	714	223	61	495	250	146	1499	53	382	1673	273
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	329	752	213	64	521	261	154	1578	29	402	1761	260
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	107	745	211	69	627	313	146	2233	41	471	2831	415
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.43	0.43	0.43	0.15	0.62	0.62
Sat Flow, veh/h	665	2767	784	560	2328	1162	203	5244	96	3141	4568	670
Grp Volume(v), veh/h	329	491	474	64	404	378	154	1041	566	402	1330	691
Grp Sat Flow(s),veh/h/ln	665	1805	1745	560	1805	1685	203	1729	1882	1570	1729	1779
Q Serve(g_s), s	6.0	28.2	28.2	0.0	22.0	22.2	39.6	25.9	25.9	13.1	24.9	25.3
Cycle Q Clear(g_c), s	28.2	28.2	28.2	28.2	22.0	22.2	44.6	25.9	25.9	13.1	24.9	25.3
Prop In Lane	1.00		0.45	1.00		0.69	1.00		0.05	1.00		0.38
Lane Grp Cap(c), veh/h	107	486	470	69	486	454	146	1473	802	471	2144	1103
V/C Ratio(X)	3.07	1.01	1.01	0.93	0.83	0.83	1.06	0.71	0.71	0.85	0.62	0.63
Avail Cap(c_a), veh/h	107	486	470	69	486	454	146	1473	802	930	2648	1363
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	38.3	38.3	52.4	36.0	36.1	41.9	24.7	24.7	43.4	12.3	12.4
Incr Delay (d2), s/veh	956.4	43.2	43.9	84.5	11.6	12.6	90.8	1.6	2.9	1.7	0.3	0.6
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(50%),veh/ln	31.2	17.6	17.1	3.2	10.8	10.2	7.4	10.1	11.3	5.0	8.2	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	1007.7	81.4	82.1	136.9	47.6	48.7	132.7	26.3	27.5	45.1	12.6	13.0
LnGrp LOS	F	F	F	F	D	D	F	C	C	D	B	B
Approach Vol, veh/h		1294			846			1761			2423	
Approach Delay, s/veh		317.2			54.8			36.0			18.1	
Approach LOS		F			D			D			B	

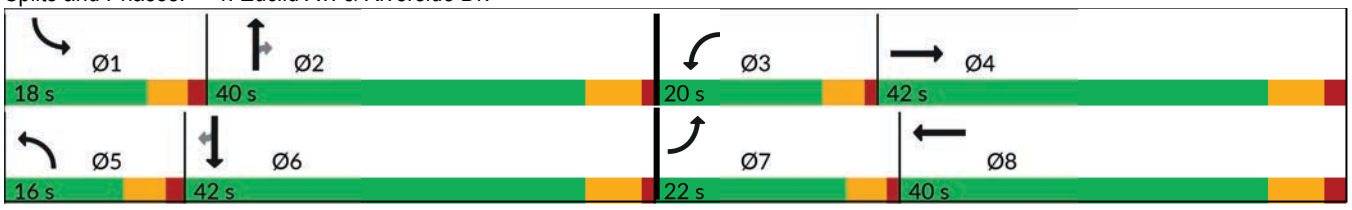
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	20.3	50.4		34.0		70.7		34.0				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	44.6		28.2		80.2		28.2				
Max Q Clear Time (g_c+I1), s	15.1	46.6		30.2		27.3		30.2				
Green Ext Time (p_c), s	0.7	0.0		0.0		23.2		0.0				

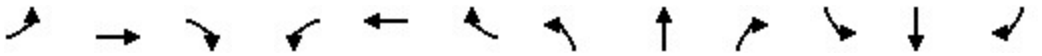
Intersection Summary												
HCM 7th Control Delay, s/veh			89.2									
HCM 7th LOS			F									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	152	452	142	560	89	1333	243	232	1290	373
Future Volume (vph)	152	452	142	560	89	1333	243	232	1290	373
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	33.0	15.2	36.0	36.0
Total Split (s)	22.0	42.0	20.0	40.0	16.0	40.0	40.0	18.0	42.0	42.0
Total Split (%)	18.3%	35.0%	16.7%	33.3%	13.3%	33.3%	33.3%	15.0%	35.0%	35.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	5.0	3.7	5.0	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	6.0	5.2	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.0	35.0	14.0	34.0	10.5	34.0	34.0	12.8	36.3	36.3
Actuated g/C Ratio	0.13	0.29	0.12	0.29	0.09	0.29	0.29	0.11	0.31	0.31
v/c Ratio	0.74	0.97	0.74	0.69	0.63	1.36	0.47	1.33	1.23	0.59
Control Delay (s/veh)	70.8	73.4	72.7	41.2	71.2	201.8	20.6	221.2	147.7	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	70.8	73.4	72.7	41.2	71.2	201.8	20.6	221.2	147.7	15.6
LOS	E	E	E	D	E	F	C	F	F	B
Approach Delay (s/veh)		72.8		46.7		168.3			130.7	
Approach LOS		E		D		F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.36	
Intersection Signal Delay (s/veh): 121.9	Intersection LOS: F
Intersection Capacity Utilization 106.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	452	59	142	560	113	89	1333	243	232	1290	373
Future Volume (veh/h)	152	452	59	142	560	113	89	1333	243	232	1290	373
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	160	476	40	149	589	80	94	1403	168	244	1358	301
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	187	506	43	177	915	124	141	1063	464	190	1166	512
Arrive On Green	0.11	0.29	0.29	0.10	0.29	0.29	0.08	0.29	0.29	0.11	0.32	0.32
Sat Flow, veh/h	1714	1726	145	1714	3187	432	1714	3610	1576	1714	3610	1586
Grp Volume(v), veh/h	160	0	516	149	333	336	94	1403	168	244	1358	301
Grp Sat Flow(s),veh/h/ln	1714	0	1872	1714	1805	1814	1714	1805	1576	1714	1805	1586
Q Serve(g_s), s	10.6	0.0	31.1	9.9	18.6	18.7	6.1	34.0	9.7	12.8	37.3	18.3
Cycle Q Clear(g_c), s	10.6	0.0	31.1	9.9	18.6	18.7	6.1	34.0	9.7	12.8	37.3	18.3
Prop In Lane	1.00		0.08	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	0	548	177	518	521	141	1063	464	190	1166	512
V/C Ratio(X)	0.86	0.00	0.94	0.84	0.64	0.65	0.67	1.32	0.36	1.28	1.16	0.59
Avail Cap(c_a), veh/h	257	0	568	227	518	521	160	1063	464	190	1166	512
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	0.0	39.8	50.8	36.0	36.0	51.4	40.7	32.1	51.3	39.1	32.6
Incr Delay (d2), s/veh	14.3	0.0	24.0	16.3	3.1	3.1	8.4	150.4	0.5	161.4	83.6	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	17.2	4.9	8.3	8.4	2.9	36.2	3.6	13.9	29.2	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.8	0.0	63.8	67.1	39.1	39.2	59.8	191.1	32.6	212.7	122.7	34.4
LnGrp LOS	E		E	E	D	D	E	F	C	F	F	C
Approach Vol, veh/h		676			818			1665			1903	
Approach Delay, s/veh		64.1			44.2			167.7			120.2	
Approach LOS		E			D			F			F	

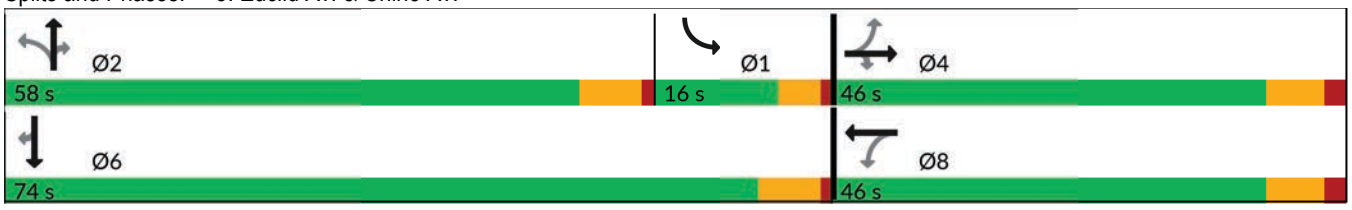
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	40.0	16.6	40.8	14.7	43.3	17.3	40.1
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	12.8	34.0	15.3	35.0	10.8	36.0	17.3	33.0
Max Q Clear Time (g_c+I1), s	14.8	36.0	11.9	33.1	8.1	39.3	12.6	20.7
Green Ext Time (p_c), s	0.0	0.0	0.1	0.8	0.0	0.0	0.1	4.1

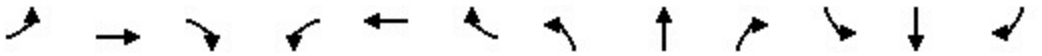
Intersection Summary	
HCM 7th Control Delay, s/veh	116.1
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	168	678	50	106	156	45	1465	247	92	1356	82
Future Volume (vph)	168	678	50	106	156	45	1465	247	92	1356	82
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	46.0	46.0	46.0	46.0	46.0	58.0	58.0	58.0	16.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	48.3%	48.3%	48.3%	13.3%	61.7%	61.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2		7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	38.8	38.8	38.8		38.8	51.5	51.5	51.5	10.8	67.0	67.0
Actuated g/C Ratio	0.32	0.32	0.32		0.32	0.43	0.43	0.43	0.09	0.56	0.56
v/c Ratio	0.64	1.16	0.09		7.27	0.78	0.99	0.35	0.63	0.71	0.09
Control Delay (s/veh)	47.1	125.4	1.7		Error	101.7	54.9	15.3	71.1	21.5	4.3
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.1	125.4	1.7		Error	101.7	54.9	15.3	71.1	21.5	4.3
LOS	D	F	A		F	F	D	B	E	C	A
Approach Delay (s/veh)		103.8			2869.0		50.5			23.6	
Approach LOS		F			F		D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 7.27	
Intersection Signal Delay (s/veh): 262.8	Intersection LOS: F
Intersection Capacity Utilization 124.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	678	50	106	156	76	45	1465	247	92	1356	82
Future Volume (veh/h)	168	678	50	106	156	76	45	1465	247	92	1356	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1900	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	177	714	40	112	164	74	47	1542	207	97	1427	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	249	614	520	40	41	11	109	1548	690	137	2032	884
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.43	0.43	0.43	0.08	0.56	0.56
Sat Flow, veh/h	1099	1900	1610	0	127	34	341	3610	1610	1714	3610	1571
Grp Volume(v), veh/h	177	714	40	350	0	0	47	1542	207	97	1427	60
Grp Sat Flow(s),veh/h/ln	1099	1900	1610	161	0	0	341	1805	1610	1714	1805	1571
Q Serve(g_s), s	0.0	38.8	2.1	0.0	0.0	0.0	16.5	51.2	10.1	6.6	34.3	2.1
Cycle Q Clear(g_c), s	35.3	38.8	2.1	38.8	0.0	0.0	50.8	51.2	10.1	6.6	34.3	2.1
Prop In Lane	1.00		1.00	0.32		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	614	520	91	0	0	109	1548	690	137	2032	884
V/C Ratio(X)	0.71	1.16	0.08	3.83	0.00	0.00	0.43	1.00	0.30	0.71	0.70	0.07
Avail Cap(c_a), veh/h	249	614	520	91	0	0	109	1548	690	161	2032	884
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	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	40.7	28.2	39.0	0.0	0.0	51.2	34.2	22.5	53.9	19.0	11.9
Incr Delay (d2), s/veh	9.1	90.4	0.1	1297.4	0.0	0.0	2.7	21.9	0.2	8.0	1.1	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(50%),veh/ln	5.5	32.9	0.8	35.7	0.0	0.0	1.4	25.0	3.6	3.0	12.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.5	131.1	28.3	1336.4	0.0	0.0	53.8	56.1	22.7	61.9	20.1	12.0
LnGrp LOS	D	F	C	F			D	E	C	E	C	B
Approach Vol, veh/h		931			350			1796			1584	
Approach Delay, s/veh		111.0			1336.4			52.2			22.3	
Approach LOS		F			F			D			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.1	58.0		46.0		74.1		46.0				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	11.3	* 52		38.8		67.5		38.8				
Max Q Clear Time (g_c+I1), s	8.6	53.2		40.8		36.3		40.8				
Green Ext Time (p_c), s	0.0	0.0		0.0		11.8		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	150.2	
HCM 7th LOS	F	

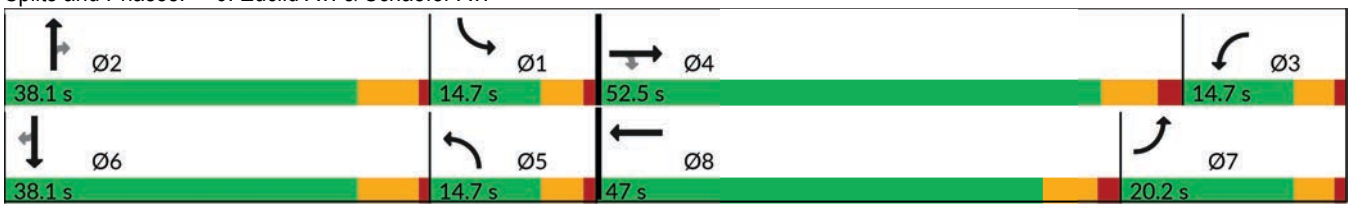
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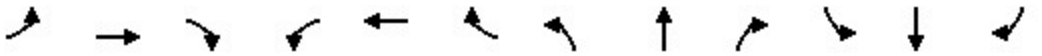
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	218	608	141	109	176	89	1420	191	207	1237	125
Future Volume (vph)	218	608	141	109	176	89	1420	191	207	1237	125
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	29.5	14.7	37.5	37.5
Total Split (s)	20.2	52.5	52.5	14.7	47.0	14.7	38.1	38.1	14.7	38.1	38.1
Total Split (%)	16.8%	43.8%	43.8%	12.3%	39.2%	12.3%	31.8%	31.8%	12.3%	31.8%	31.8%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	25.4	41.9	41.9	10.0	26.4	10.0	31.7	31.7	10.0	31.7	31.7
Actuated g/C Ratio	0.22	0.36	0.36	0.09	0.23	0.09	0.27	0.27	0.09	0.27	0.27
v/c Ratio	0.61	0.94	0.23	0.78	0.79	0.64	1.52	0.39	1.48	1.33	0.26
Control Delay (s/veh)	51.2	58.6	7.3	87.3	50.7	73.1	273.0	17.0	289.3	189.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.2	58.6	7.3	87.3	50.7	73.1	273.0	17.0	289.3	189.7	8.7
LOS	D	E	A	F	D	E	F	B	F	F	A
Approach Delay (s/veh)		49.5			60.0		233.8			188.4	
Approach LOS		D			E		F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.52	
Intersection Signal Delay (s/veh): 164.3	Intersection LOS: F
Intersection Capacity Utilization 110.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	608	141	109	176	146	89	1420	191	207	1237	125
Future Volume (veh/h)	218	608	141	109	176	146	89	1420	191	207	1237	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	229	640	87	115	185	142	94	1495	198	218	1302	89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	397	681	577	144	210	161	148	986	430	148	986	428
Arrive On Green	0.23	0.36	0.36	0.08	0.21	0.21	0.09	0.27	0.27	0.09	0.27	0.27
Sat Flow, veh/h	1714	1900	1609	1714	996	765	1714	3610	1576	1714	3610	1566
Grp Volume(v), veh/h	229	640	87	115	0	327	94	1495	198	218	1302	89
Grp Sat Flow(s),veh/h/ln	1714	1900	1609	1714	0	1761	1714	1805	1576	1714	1805	1566
Q Serve(g_s), s	13.7	37.7	4.2	7.6	0.0	20.8	6.1	31.6	12.1	10.0	31.6	5.1
Cycle Q Clear(g_c), s	13.7	37.7	4.2	7.6	0.0	20.8	6.1	31.6	12.1	10.0	31.6	5.1
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	681	577	144	0	371	148	986	430	148	986	428
V/C Ratio(X)	0.58	0.94	0.15	0.80	0.00	0.88	0.63	1.52	0.46	1.47	1.32	0.21
Avail Cap(c_a), veh/h	397	747	633	148	0	609	148	986	430	148	986	428
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	35.9	25.2	52.0	0.0	44.2	51.1	42.1	35.0	52.9	42.1	32.4
Incr Delay (d2), s/veh	1.4	18.6	0.1	22.9	0.0	7.0	6.6	237.7	0.8	245.1	151.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	20.0	1.6	4.1	0.0	9.5	2.8	45.7	4.6	14.2	33.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.8	54.5	25.3	74.9	0.0	51.3	57.7	279.8	35.7	297.9	193.6	32.7
LnGrp LOS	D	D	C	E		D	E	F	D	F	F	C
Approach Vol, veh/h		956			442			1787			1609	
Approach Delay, s/veh		48.6			57.4			241.0			198.8	
Approach LOS		D			E			F			F	

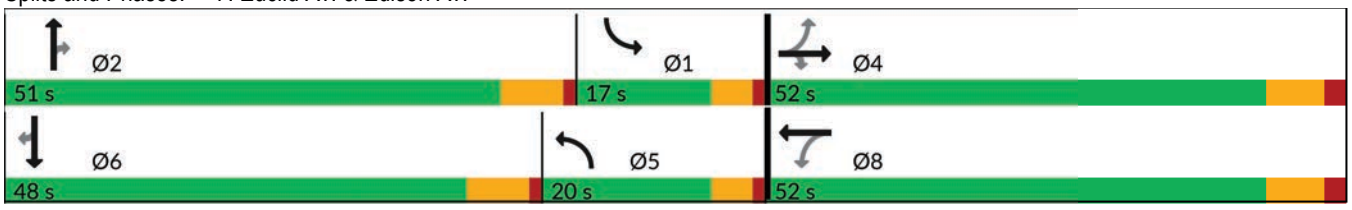
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	38.1	14.5	48.5	14.7	38.1	31.5	31.4
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	10.0	31.6	10.0	45.5	10.0	31.6	15.5	40.0
Max Q Clear Time (g_c+I1), s	12.0	33.6	9.6	39.7	8.1	33.6	15.7	22.8
Green Ext Time (p_c), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.3

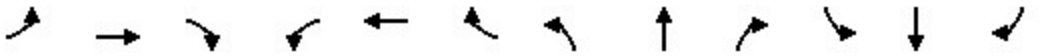
Intersection Summary	
HCM 7th Control Delay, s/veh	171.6
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	241	777	298	88	357	287	1439	115	98	1097	218
Future Volume (vph)	241	777	298	88	357	287	1439	115	98	1097	218
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	44.2	44.2	44.2	45.2	45.2	14.7	26.5	26.5	14.7	37.5	37.5
Total Split (s)	52.0	52.0	52.0	52.0	52.0	20.0	51.0	51.0	17.0	48.0	48.0
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	16.7%	42.5%	42.5%	14.2%	40.0%	40.0%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	44.8	44.8	44.8	44.8	44.8	15.2	44.5	44.5	11.6	40.9	40.9
Actuated g/C Ratio	0.38	0.38	0.38	0.38	0.38	0.13	0.37	0.37	0.10	0.34	0.34
v/c Ratio	1.17	1.15	0.43	1.58	0.62	0.76	1.13	0.19	0.62	0.93	0.36
Control Delay (s/veh)	147.6	117.1	11.6	350.8	34.5	63.5	102.2	10.5	68.6	52.1	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	147.6	117.1	11.6	350.8	34.5	63.5	102.2	10.5	68.6	52.1	11.5
LOS	F	F	B	F	C	E	F	B	E	D	B
Approach Delay (s/veh)		98.8			90.4		90.4			47.0	
Approach LOS		F			F		F			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.3	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.58	
Intersection Signal Delay (s/veh): 80.5	Intersection LOS: F
Intersection Capacity Utilization 118.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Euclid Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	241	777	298	88	357	54	287	1439	115	98	1097	218
Future Volume (veh/h)	241	777	298	88	357	54	287	1439	115	98	1097	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	254	818	246	93	376	52	302	1515	106	103	1155	202
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	243	725	615	61	622	86	368	1369	598	141	1243	545
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.12	0.38	0.38	0.08	0.34	0.34
Sat Flow, veh/h	923	1900	1610	510	1630	225	3141	3610	1576	1714	3610	1581
Grp Volume(v), veh/h	254	818	246	93	0	428	302	1515	106	103	1155	202
Grp Sat Flow(s),veh/h/ln	923	1900	1610	510	0	1855	1570	1805	1576	1714	1805	1581
Q Serve(g_s), s	23.0	44.8	13.1	0.0	0.0	21.8	11.0	44.5	5.3	6.9	36.2	11.3
Cycle Q Clear(g_c), s	44.8	44.8	13.1	44.8	0.0	21.8	11.0	44.5	5.3	6.9	36.2	11.3
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	725	615	61	0	708	368	1369	598	141	1243	545
V/C Ratio(X)	1.05	1.13	0.40	1.52	0.00	0.60	0.82	1.11	0.18	0.73	0.93	0.37
Avail Cap(c_a), veh/h	243	725	615	61	0	708	410	1369	598	180	1277	559
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	36.3	26.5	58.7	0.0	29.2	50.6	36.4	24.2	52.6	37.1	28.9
Incr Delay (d2), s/veh	70.6	74.4	0.4	299.0	0.0	1.5	10.3	59.1	0.1	7.0	11.8	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	34.5	4.9	6.9	0.0	9.5	4.7	29.1	1.9	3.1	16.8	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	120.6	110.7	26.9	357.7	0.0	30.6	60.9	95.5	24.4	59.6	48.9	29.3
LnGrp LOS	F	F	C	F		C	E	F	C	E	D	C
Approach Vol, veh/h		1318			521			1923			1460	
Approach Delay, s/veh		97.0			89.0			86.2			46.9	
Approach LOS		F			F			F			D	

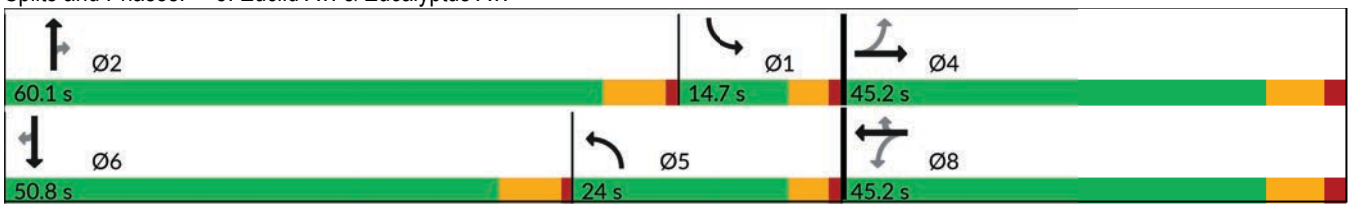
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.4	51.0		52.0	18.4	46.9		52.0				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	12.3	44.5		44.8	15.3	41.5		44.8				
Max Q Clear Time (g_c+I1), s	8.9	46.5		46.8	13.0	38.2		46.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	2.2		0.0				

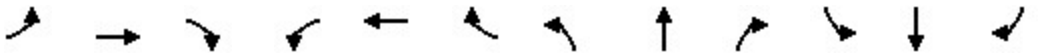
Intersection Summary												
HCM 7th Control Delay, s/veh			78.2									
HCM 7th LOS			E									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	86	541	145	115	333	328	1639	100	395	1519	113
Future Volume (vph)	86	541	145	115	333	328	1639	100	395	1519	113
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	45.2	45.2	44.2	44.2	44.2	14.7	28.5	28.5	14.7	35.5	35.5
Total Split (s)	45.2	45.2	45.2	45.2	45.2	24.0	60.1	60.1	14.7	50.8	50.8
Total Split (%)	37.7%	37.7%	37.7%	37.7%	37.7%	20.0%	50.1%	50.1%	12.3%	42.3%	42.3%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	38.0	38.0	38.0	38.0	38.0	19.3	53.6	53.6	10.0	44.3	44.3
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.16	0.45	0.45	0.08	0.37	0.37
v/c Ratio	0.24	0.92	2.59	0.20	0.55	0.66	1.02	0.14	1.55	1.14	0.17
Control Delay (s/veh)	32.3	43.8	783.8	31.1	17.9	54.3	59.3	6.7	300.3	107.9	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.3	43.8	783.8	31.1	17.9	54.3	59.3	6.7	300.3	107.9	3.3
LOS	C	D	F	C	B	D	E	A	F	F	A
Approach Delay (s/veh)		43.0		208.0			56.0			139.6	
Approach LOS		D		F			E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.59	
Intersection Signal Delay (s/veh): 97.5	Intersection LOS: F
Intersection Capacity Utilization 120.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Euclid Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	541	565	145	115	333	328	1639	100	395	1519	113
Future Volume (veh/h)	86	541	565	145	115	333	328	1639	100	395	1519	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	91	569	332	153	121	339	345	1725	102	416	1599	101
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	311	713	416	121	602	510	521	1697	719	270	1403	594
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.24	0.67	0.67	0.12	0.55	0.55
Sat Flow, veh/h	897	2251	1313	595	1900	1610	3238	3800	1610	3238	3800	1610
Grp Volume(v), veh/h	91	480	421	153	121	339	345	1725	102	416	1599	101
Grp Sat Flow(s),veh/h/ln	897	1900	1664	595	1900	1610	1619	1900	1610	1619	1900	1610
Q Serve(g_s), s	8.3	25.6	25.7	12.3	4.4	19.4	11.5	53.6	2.8	10.0	44.3	3.7
Cycle Q Clear(g_c), s	12.8	25.6	25.7	38.0	4.4	19.4	11.5	53.6	2.8	10.0	44.3	3.7
Prop In Lane	1.00		0.79	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	311	602	527	121	602	510	521	1697	719	270	1403	594
V/C Ratio(X)	0.29	0.80	0.80	1.26	0.20	0.66	0.66	1.02	0.14	1.54	1.14	0.17
Avail Cap(c_a), veh/h	311	602	527	121	602	510	521	1697	719	270	1403	594
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	28.3	28.3	47.4	22.7	26.6	42.6	19.8	11.4	52.5	26.8	17.7
Incr Delay (d2), s/veh	0.4	7.2	8.2	168.5	0.1	3.0	2.9	26.0	0.1	261.4	72.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	10.6	9.4	9.0	1.9	6.3	4.3	18.9	0.9	13.5	28.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.8	35.5	36.5	215.9	22.8	29.6	45.5	45.8	11.5	313.9	98.8	17.9
LnGrp LOS	C	D	D	F	C	C	D	F	B	F	F	B
Approach Vol, veh/h		992			613			2172			2116	
Approach Delay, s/veh		35.1			74.8			44.1			137.3	
Approach LOS		D			E			D			F	

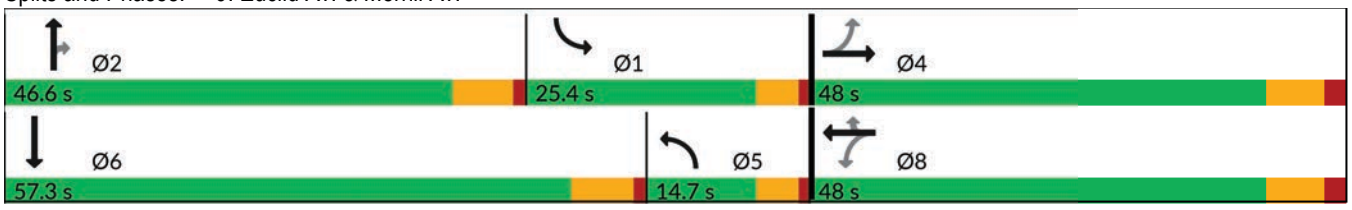
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	60.1		45.2	24.0	50.8		45.2				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.0	53.6		38.0	19.3	44.3		38.0				
Max Q Clear Time (g_c+I1), s	12.0	55.6		27.7	13.5	46.3		40.0				
Green Ext Time (p_c), s	0.0	0.0		3.6	0.5	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		79.2
HCM 7th LOS		E

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	8	17	457	2	319	7	1174	579	543	1405
Future Volume (vph)	8	17	457	2	319	7	1174	579	543	1405
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases		4		8		5	2		1	6
Permitted Phases	4		8		8			2		
Detector Phase	4	4	8	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	47.2	47.2	47.2	14.7	28.5	28.5	14.7	28.5
Total Split (s)	48.0	48.0	48.0	48.0	48.0	14.7	46.6	46.6	25.4	57.3
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	12.3%	38.8%	38.8%	21.2%	47.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	5.5	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.2	7.2	7.2	7.2	4.7	6.5	6.5	4.7	6.5
Lead/Lag						Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		40.8	40.8	40.8	40.8	10.0	40.1	40.1	20.7	62.6
Actuated g/C Ratio		0.34	0.34	0.34	0.34	0.08	0.33	0.33	0.17	0.52
v/c Ratio		0.07	1.08	0.00	0.45	0.05	1.02	0.91	1.06	0.79
Control Delay (s/veh)		19.4	103.7	26.5	7.5	51.6	72.0	44.3	102.9	28.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		19.4	103.7	26.5	7.5	51.6	72.0	44.3	102.9	28.1
LOS		B	F	C	A	D	E	D	F	C
Approach Delay (s/veh)		19.4		64.1			62.8			48.9
Approach LOS		B		E			E			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay (s/veh): 56.7	Intersection LOS: E
Intersection Capacity Utilization 98.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: Euclid Av. & Merrill Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	17	14	457	2	319	7	1174	579	543	1405	4
Future Volume (veh/h)	8	17	14	457	2	319	7	1174	579	543	1405	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	8	18	12	481	2	283	7	1236	601	572	1479	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	129	284	173	516	646	547	157	1206	527	542	1534	4
Arrive On Green	0.34	0.51	0.34	0.34	0.51	0.34	0.14	0.50	0.50	0.26	0.62	0.62
Sat Flow, veh/h	271	834	510	1328	1900	1610	1714	3610	1576	3141	3693	10
Grp Volume(v), veh/h	38	0	0	481	2	283	7	1236	601	572	723	760
Grp Sat Flow(s),veh/h/ln	1616	0	0	1328	1900	1610	1714	1805	1576	1570	1805	1898
Q Serve(g_s), s	0.0	0.0	0.0	39.3	0.1	16.9	0.4	40.1	40.1	20.7	45.4	45.4
Cycle Q Clear(g_c), s	1.5	0.0	0.0	40.8	0.1	16.9	0.4	40.1	40.1	20.7	45.4	45.4
Prop In Lane	0.21		0.32	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	586	0	0	516	646	547	157	1206	527	542	750	788
V/C Ratio(X)	0.06	0.00	0.00	0.93	0.00	0.52	0.04	1.02	1.14	1.06	0.96	0.96
Avail Cap(c_a), veh/h	586	0	0	516	646	547	157	1206	527	542	764	803
HCM Platoon Ratio	1.00	1.50	1.00	1.00	1.50	1.00	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	0.0	40.4	19.4	31.7	47.2	29.9	29.9	44.5	21.8	21.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	23.5	0.0	0.4	0.0	32.3	84.3	54.2	23.8	23.2
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(50%),veh/ln	0.7	0.0	0.0	17.0	0.0	6.3	0.2	18.2	23.5	10.9	16.8	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.4	0.0	0.0	64.0	19.4	32.1	47.3	62.3	114.2	98.7	45.6	44.9
LnGrp LOS	C			E	B	C	D	F	F	F	D	D
Approach Vol, veh/h		38			766			1844			2055	
Approach Delay, s/veh		23.4			52.1			79.1			60.1	
Approach LOS		C			D			E			E	

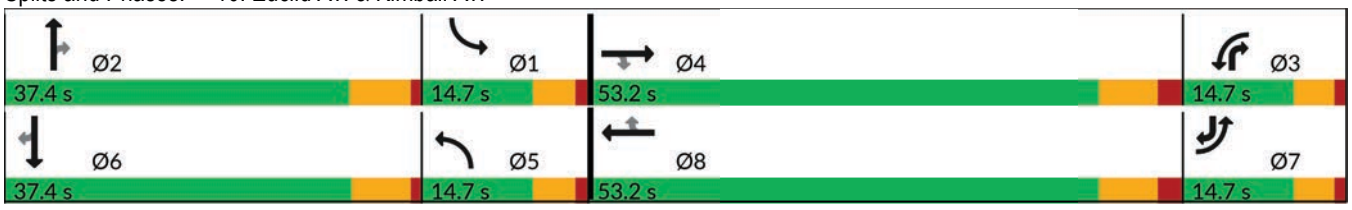
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.4	46.6		48.0	15.7	56.3		48.0				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	20.7	40.1		40.8	10.0	50.8		40.8				
Max Q Clear Time (g_c+I1), s	22.7	42.1		3.5	2.4	47.4		42.8				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	2.4		0.0				

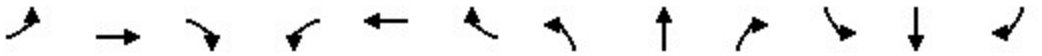
Intersection Summary		
HCM 7th Control Delay, s/veh	66.0	
HCM 7th LOS	E	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	352	1135	81	65	735	245	171	954	88	614	853	287
Future Volume (vph)	352	1135	81	65	735	245	171	954	88	614	853	287
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	14.7	37.4	14.7
Total Split (s)	14.7	53.2	53.2	14.7	53.2	53.2	14.7	37.4	14.7	14.7	37.4	14.7
Total Split (%)	12.3%	44.3%	44.3%	12.3%	44.3%	44.3%	12.3%	31.2%	12.3%	12.3%	31.2%	12.3%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	3.7	5.4	3.7
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	4.7	6.4	4.7
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.9	42.3	42.3	10.0	31.4	31.4	11.0	31.0	47.5	10.0	30.0	52.6
Actuated g/C Ratio	0.18	0.36	0.36	0.09	0.27	0.27	0.09	0.27	0.41	0.09	0.26	0.45
v/c Ratio	0.64	0.87	0.13	0.46	0.75	0.43	1.11	0.99	0.13	2.32	0.92	0.39
Control Delay (s/veh)	51.5	42.0	2.2	62.9	43.4	8.6	153.7	70.3	6.9	632.1	57.0	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.5	42.0	2.2	62.9	43.4	8.6	153.7	70.3	6.9	632.1	57.0	16.6
LOS	D	D	A	E	D	A	F	E	A	F	E	B
Approach Delay (s/veh)		42.1			36.5			77.4			251.7	
Approach LOS		D			D			E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.32	
Intersection Signal Delay (s/veh): 114.6	Intersection LOS: F
Intersection Capacity Utilization 104.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	1135	81	65	735	245	171	954	88	614	853	287
Future Volume (veh/h)	352	1135	81	65	735	245	171	954	88	614	853	287
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
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	1700	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	371	1195	53	68	774	165	180	1004	62	646	898	275
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	631	1341	561	134	898	380	177	1044	568	288	991	727
Arrive On Green	0.29	0.53	0.53	0.12	0.35	0.35	0.16	0.41	0.41	0.13	0.39	0.39
Sat Flow, veh/h	3238	3800	1590	1714	3800	1610	1714	3800	1610	3238	3800	1584
Grp Volume(v), veh/h	371	1195	53	68	774	165	180	1004	62	646	898	275
Grp Sat Flow(s),veh/h/ln	1619	1900	1590	1714	1900	1610	1714	1900	1610	1619	1900	1584
Q Serve(g_s), s	11.0	31.5	1.9	4.2	21.3	8.8	11.6	29.0	0.0	10.0	25.1	0.0
Cycle Q Clear(g_c), s	11.0	31.5	1.9	4.2	21.3	8.8	11.6	29.0	0.0	10.0	25.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	631	1341	561	134	898	380	177	1044	568	288	991	727
V/C Ratio(X)	0.59	0.89	0.09	0.51	0.86	0.43	1.01	0.96	0.11	2.24	0.91	0.38
Avail Cap(c_a), veh/h	631	1554	650	152	1554	658	177	1044	568	288	1047	750
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	24.6	17.6	47.6	34.6	30.6	47.5	32.5	19.7	48.8	32.9	16.0
Incr Delay (d2), s/veh	1.0	6.2	0.1	2.9	1.0	0.3	71.4	19.3	0.1	571.1	10.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	11.4	0.7	1.8	8.2	0.0	8.0	13.1	0.9	26.5	10.5	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.9	30.8	17.6	50.6	35.6	30.9	118.9	51.8	19.8	619.9	43.7	16.3
LnGrp LOS	D	C	B	D	D	C	F	D	B	F	D	B
Approach Vol, veh/h		1619			1007			1246			1819	
Approach Delay, s/veh		31.8			35.8			59.9			244.2	
Approach LOS		C			D			E			F	

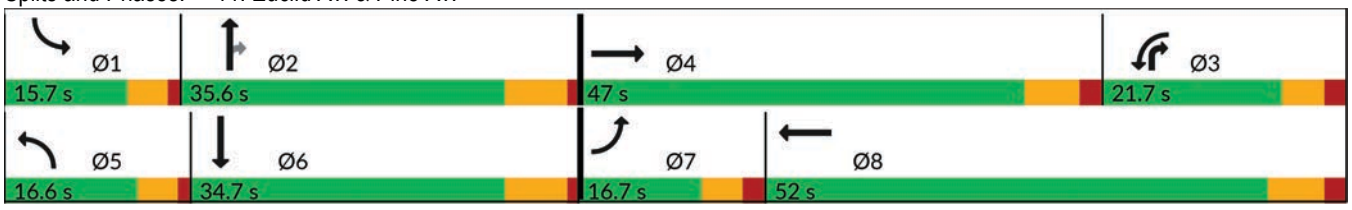
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	37.4	13.5	46.9	16.3	35.8	26.6	33.8
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	10.0	30.9	10.0	46.0	10.0	31.0	10.0	46.0
Max Q Clear Time (g_c+I1), s	12.0	31.0	6.2	33.5	13.6	27.1	13.0	23.3
Green Ext Time (p_c), s	0.0	0.0	0.0	6.2	0.0	2.2	0.0	3.3

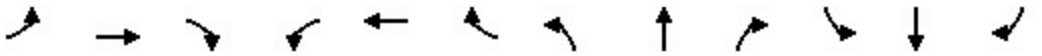
Intersection Summary	
HCM 7th Control Delay, s/veh	106.5
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	40	633	454	357	54	709	859	120	667
Future Volume (vph)	40	633	454	357	54	709	859	120	667
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	16.7	47.0	21.7	52.0	16.6	35.6	21.7	15.7	34.7
Total Split (%)	13.9%	39.2%	18.1%	43.3%	13.8%	29.7%	18.1%	13.1%	28.9%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.1	40.0	16.0	52.5	10.4	26.0	42.8	10.8	29.6
Actuated g/C Ratio	0.09	0.34	0.14	0.45	0.09	0.22	0.37	0.09	0.25
v/c Ratio	0.28	1.23	1.08	0.51	0.38	0.88	1.36	0.80	0.77
Control Delay (s/veh)	56.5	152.1	114.0	27.9	58.7	56.8	193.7	86.6	47.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.5	152.1	114.0	27.9	58.7	56.8	193.7	86.6	47.4
LOS	E	F	F	C	E	E	F	F	D
Approach Delay (s/veh)		147.2		73.2		129.4			53.2
Approach LOS		F		E		F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.36	
Intersection Signal Delay (s/veh): 105.7	Intersection LOS: F
Intersection Capacity Utilization 116.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	633	117	454	357	52	54	709	859	120	667	33
Future Volume (veh/h)	40	633	117	454	357	52	54	709	859	120	667	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	42	666	0	478	376	55	57	746	457	126	702	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	109	648		442	687	101	123	837	567	150	867	23
Arrive On Green	0.10	0.51	0.00	0.20	0.64	0.64	0.11	0.33	0.33	0.13	0.35	0.35
Sat Flow, veh/h	1714	1900	0	3238	1617	237	1714	3800	1575	1714	3680	100
Grp Volume(v), veh/h	42	666	0	478	0	431	57	746	457	126	362	359
Grp Sat Flow(s),veh/h/ln	1714	1900	0	1619	0	1854	1714	1900	1575	1714	1900	1879
Q Serve(g_s), s	2.7	40.0	0.0	16.0	0.0	15.2	3.7	21.9	6.6	8.4	20.3	20.3
Cycle Q Clear(g_c), s	2.7	40.0	0.0	16.0	0.0	15.2	3.7	21.9	6.6	8.4	20.3	20.3
Prop In Lane	1.00		0.00	1.00		0.13	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	109	648		442	0	788	123	837	567	150	448	443
V/C Ratio(X)	0.39	1.03		1.08	0.00	0.55	0.46	0.89	0.81	0.84	0.81	0.81
Avail Cap(c_a), veh/h	161	648		442	0	788	174	943	611	161	457	452
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	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	50.9	28.6	0.0	46.6	0.0	15.0	50.2	37.9	11.9	50.2	35.5	35.5
Incr Delay (d2), s/veh	0.8	42.6	0.0	66.7	0.0	1.0	1.0	9.2	6.6	27.6	9.5	9.6
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(50%),veh/ln	1.1	21.7	0.0	9.8	0.0	5.0	1.5	9.4	5.8	4.5	8.8	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.7	71.3	0.0	113.3	0.0	16.0	51.2	47.1	18.5	77.7	45.0	45.2
LnGrp LOS	D	F		F		B	D	D	B	E	D	D
Approach Vol, veh/h		708			909			1260			847	
Approach Delay, s/veh		70.1			67.2			36.9			49.9	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	32.3	23.0	47.0	13.1	34.1	13.2	56.8
Change Period (Y+Rc), s	4.7	6.5	7.0	* 7	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	11.0	29.1	16.0	* 40	11.9	28.2	11.0	45.0
Max Q Clear Time (g_c+I1), s	10.4	23.9	18.0	42.0	5.7	22.3	4.7	17.2
Green Ext Time (p_c), s	0.0	2.0	0.0	0.0	0.0	1.3	0.0	3.6

Intersection Summary	
HCM 7th Control Delay, s/veh	53.6
HCM 7th LOS	D

Notes

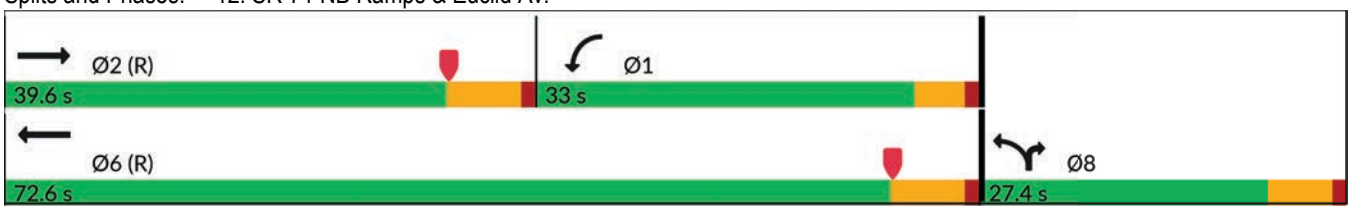
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	873	533	738	47	831
Future Volume (vph)	873	533	738	47	831
Turn Type	NA	Prot	NA	Prot	Prot
Protected Phases	2	1	6	8	8
Permitted Phases					
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	31.5	12.7	24.5	13.8	13.8
Total Split (s)	39.6	33.0	72.6	27.4	27.4
Total Split (%)	39.6%	33.0%	72.6%	27.4%	27.4%
Yellow Time (s)	5.5	3.7	5.5	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	4.7	6.5	5.8	5.8
Lead/Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	None
Act Effct Green (s)	31.6	29.8	66.1	21.6	21.6
Actuated g/C Ratio	0.32	0.30	0.66	0.22	0.22
v/c Ratio	0.89	1.10	0.33	0.07	1.18
Control Delay (s/veh)	33.9	105.4	7.8	31.7	112.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.9	105.4	7.8	31.7	112.8
LOS	C	F	A	C	F
Approach Delay (s/veh)	33.9		48.7	108.5	
Approach LOS	C		D	F	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay (s/veh): 61.0	Intersection LOS: E
Intersection Capacity Utilization 88.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: SR-71 NB Ramps & Euclid Av.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	873	84	533	738	47	831
Future Volume (veh/h)	873	84	533	738	47	831
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1900	1900	1800	1900	1700	1900
Adj Flow Rate, veh/h	919	0	561	777	49	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1043		795	2951	187	
Arrive On Green	0.29	0.00	0.46	0.82	0.06	0.00
Sat Flow, veh/h	3800	0	1714	3705	3141	1610
Grp Volume(v), veh/h	919	0	561	777	49	0
Grp Sat Flow(s),veh/h/ln	1805	0	1714	1805	1570	1610
Q Serve(g_s), s	24.3	0.0	26.1	5.0	1.5	0.0
Cycle Q Clear(g_c), s	24.3	0.0	26.1	5.0	1.5	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1043		795	2951	187	
V/C Ratio(X)	0.88		0.71	0.26	0.26	
Avail Cap(c_a), veh/h	1195		795	2951	678	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.9	0.0	21.4	2.1	44.9	0.0
Incr Delay (d2), s/veh	7.5	0.0	2.4	0.2	0.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	0.0	9.6	0.6	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	41.4	0.0	23.8	2.3	45.7	0.0
LnGrp LOS	D		C	A	D	
Approach Vol, veh/h	919			1338	49	
Approach Delay, s/veh	41.4			11.4	45.7	
Approach LOS	D			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	52.9	35.4				88.3	11.7
Change Period (Y+Rc), s	6.5	* 6.5				6.5	5.8
Max Green Setting (Gmax), s	28.3	* 33				66.1	21.6
Max Q Clear Time (g_c+I1), s	28.1	26.3				7.0	3.5
Green Ext Time (p_c), s	0.0	2.6				4.1	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	24.1
HCM 7th LOS	C

Notes

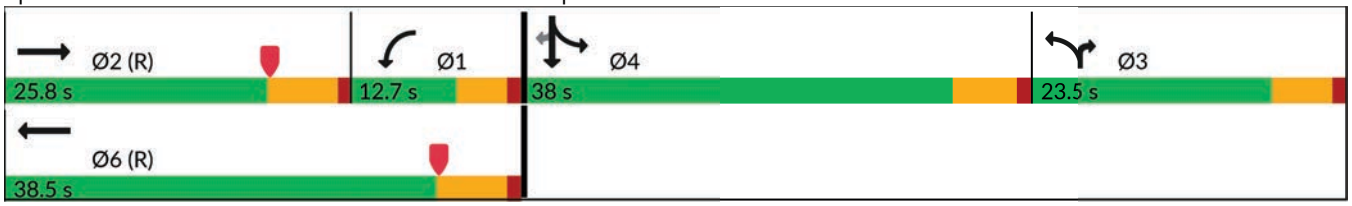
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

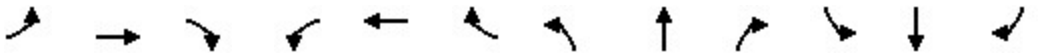
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	461	95	149	24	140	821	79	56
Future Volume (vph)	461	95	149	24	140	821	79	56
Turn Type	NA	Prot	NA	Prot	Prot	Split	NA	Perm
Protected Phases	2	1	6	3	3	4	4	
Permitted Phases								4
Detector Phase	2	1	6	3	3	4	4	4
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	25.2	12.7	27.2	23.5	23.5	34.8	34.8	34.8
Total Split (s)	25.8	12.7	38.5	23.5	23.5	38.0	38.0	38.0
Total Split (%)	25.8%	12.7%	38.5%	23.5%	23.5%	38.0%	38.0%	38.0%
Yellow Time (s)	5.2	3.7	5.2	4.5	4.5	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	4.7	6.2	5.5	5.5	5.8	5.8	5.8
Lead/Lag	Lead	Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	29.0	8.8	42.5	8.5	8.5	31.5	31.5	31.5
Actuated g/C Ratio	0.29	0.09	0.43	0.09	0.09	0.32	0.32	0.32
v/c Ratio	0.51	0.67	0.16	0.17	0.51	0.93	0.86	0.10
Control Delay (s/veh)	31.6	60.1	9.9	45.0	11.7	59.8	49.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.6	60.1	9.9	45.0	11.7	59.8	49.5	0.3
LOS	C	E	A	D	B	E	D	A
Approach Delay (s/veh)	31.6		24.8				51.5	
Approach LOS	C		C				D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay (s/veh): 39.0	Intersection LOS: D
Intersection Capacity Utilization 66.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: Euclid Av. & SR-71 SB Off-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	461	42	95	149	75	24	0	140	821	79	56
Future Volume (veh/h)	0	461	42	95	149	75	24	0	140	821	79	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	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	0	1900	1900	1800	1900	1900	1800	0	1900	1800	1900	1900
Adj Flow Rate, veh/h	0	485	25	100	157	0	25	0	60	923	0	41
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	0	578	30	614	2116		0	0	0	1008	0	473
Arrive On Green	0.00	0.00	0.17	0.60	0.98	0.00	0.00	0.00	0.00	0.29	0.00	0.29
Sat Flow, veh/h	0	3583	179	1714	3705	0		0		3429	0	1610
Grp Volume(v), veh/h	0	250	260	100	157	0		0.0		923	0	41
Grp Sat Flow(s),veh/h/ln	0	1805	1863	1714	1805	0				1714	0	1610
Q Serve(g_s), s	0.0	13.9	13.9	2.6	0.1	0.0				26.0	0.0	1.8
Cycle Q Clear(g_c), s	0.0	13.9	13.9	2.6	0.1	0.0				26.0	0.0	1.8
Prop In Lane	0.00		0.10	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	299	309	614	2116					1008	0	473
V/C Ratio(X)	0.00	0.84	0.84	0.16	0.07					0.92	0.00	0.09
Avail Cap(c_a), veh/h	0	354	365	614	2116					1104	0	518
HCM Platoon Ratio	1.00	0.00	1.00	1.67	1.67	1.67				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	48.7	47.9	13.4	0.4	0.0				34.1	0.0	25.6
Incr Delay (d2), s/veh	0.0	23.5	23.3	0.0	0.1	0.0				11.0	0.0	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	0.0	1.9	9.1	0.9	0.1	0.0				12.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	72.1	71.2	13.4	0.5	0.0				45.1	0.0	25.6
LnGrp LOS		E	E	B	A					D		C
Approach Vol, veh/h		510			257						964	
Approach Delay, s/veh		71.6			5.5						44.2	
Approach LOS		E			A						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	42.0	22.8		35.2		64.8
Change Period (Y+Rc), s	6.2	* 6.2		5.8		6.2
Max Green Setting (Gmax), s	8.0	* 20		32.2		32.3
Max Q Clear Time (g_c+I1), s	4.6	15.9		28.0		2.1
Green Ext Time (p_c), s	0.0	0.7		1.4		0.5

Intersection Summary		
HCM 7th Control Delay, s/veh		46.6
HCM 7th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	44.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	851	43	38	364	61	36	42	140	44	9	15
Future Vol, veh/h	20	851	43	38	364	61	36	42	140	44	9	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	21	896	45	40	383	64	38	44	147	46	9	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	447	0	0	941	0	0	1428	1488	918	1455	1478	415
Stage 1	-	-	-	-	-	-	961	961	-	495	495	-
Stage 2	-	-	-	-	-	-	468	527	-	960	983	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1124	-	-	737	-	-	114	125	332	109	127	642
Stage 1	-	-	-	-	-	-	311	337	-	560	549	-
Stage 2	-	-	-	-	-	-	579	531	-	311	329	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1124	-	-	737	-	-	91	112	332	~ 34	113	642
Mov Cap-2 Maneuver	-	-	-	-	-	-	91	112	-	~ 34	113	-
Stage 1	-	-	-	-	-	-	298	324	-	519	509	-
Stage 2	-	-	-	-	-	-	514	493	-	143	316	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.18	0.83	202.16	$ 429.15
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	183	39	-	-	144	-	-	49
HCM Lane V/C Ratio	1.255	0.019	-	-	0.054	-	-	1.469
HCM Ctrl Dly (s/v)	202.2	8.3	0	-	10.2	0	-	$ 429.1
HCM Lane LOS	F	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	12.6	0.1	-	-	0.2	-	-	6.8

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

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	1	33	2	0	12
Future Vol, veh/h	4	1	33	2	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	1	35	2	0	13

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	48	18	0	0	37	0
Stage 1	36	-	-	-	-	-
Stage 2	13	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	964	1062	-	-	1587	-
Stage 1	988	-	-	-	-	-
Stage 2	1015	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	964	1062	-	-	1587	-
Mov Cap-2 Maneuver	935	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	1015	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.78	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	958	1587	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Ctrl Dly (s/v)	-	-	8.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	1157	964	12	22	13
Future Vol, veh/h	8	1157	964	12	22	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	1218	1015	13	23	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1027	0	-	0	2256	1021
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	1235	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	684	-	-	-	46	289
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	277	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	684	-	-	-	44	289
Mov Cap-2 Maneuver	-	-	-	-	206	-
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	277	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.07	0	22.25
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	12	-	-	-	206	289
HCM Lane V/C Ratio	0.012	-	-	-	0.113	0.047
HCM Ctrl Dly (s/v)	10.3	0	-	-	24.7	18.1
HCM Lane LOS	B	A	-	-	C	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4	0.1

Intersection	
Intersection Delay, s/veh	531.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	614	93	68	430	100	52	559	63	53	652	111
Future Vol, veh/h	83	614	93	68	430	100	52	559	63	53	652	111
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	87	646	98	72	453	105	55	588	66	56	686	117
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	600.8	377.2	466.4	630.6
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	11%	11%	6%
Vol Thru, %	83%	78%	72%	80%
Vol Right, %	9%	12%	17%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	674	790	598	816
LT Vol	52	83	68	53
Through Vol	559	614	430	652
RT Vol	63	93	100	111
Lane Flow Rate	709	832	629	859
Geometry Grp	1	1	1	1
Degree of Util (X)	1.883	2.206	1.665	2.274
Departure Headway (Hd)	22.618	20.253	23.866	20.231
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	170	191	157	189
Service Time	20.618	18.253	21.866	18.231
HCM Lane V/C Ratio	4.171	4.356	4.006	4.545
HCM Control Delay, s/veh	466.4	600.8	377.2	630.6
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	22.6	31.5	17.8	32.9

Intersection	
Intersection Delay, s/veh	416.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	687	98	66	293	62	62	473	102	32	313	37
Future Vol, veh/h	85	687	98	66	293	62	62	473	102	32	313	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	89	723	103	69	308	65	65	498	107	34	329	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	679.6	163.5	395.6	130.4
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	10%	16%	8%
Vol Thru, %	74%	79%	70%	82%
Vol Right, %	16%	11%	15%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	637	870	421	382
LT Vol	62	85	66	32
Through Vol	473	687	293	313
RT Vol	102	98	62	37
Lane Flow Rate	671	916	443	402
Geometry Grp	1	1	1	1
Degree of Util (X)	1.773	2.429	1.174	1.067
Departure Headway (Hd)	14.385	12.664	17.522	18.042
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	262	302	213	205
Service Time	12.385	10.664	15.522	16.042
HCM Lane V/C Ratio	2.561	3.033	2.08	1.961
HCM Control Delay, s/veh	395.6	679.6	163.5	130.4
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	29.8	55.4	12	9.8

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	11	4	7	5	14	2	675	3	11	209	1
Future Vol, veh/h	2	11	4	7	5	14	2	675	3	11	209	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	12	4	7	5	15	2	711	3	12	220	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	961	962	221	965	961	712	221	0	0	714	0	0
Stage 1	244	244	-	716	716	-	-	-	-	-	-	-
Stage 2	717	718	-	249	244	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	238	258	824	236	258	436	1360	-	-	896	-	-
Stage 1	764	708	-	424	437	-	-	-	-	-	-	-
Stage 2	424	436	-	760	708	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	221	254	824	221	254	436	1360	-	-	896	-	-
Mov Cap-2 Maneuver	221	254	-	221	254	-	-	-	-	-	-	-
Stage 1	753	698	-	423	436	-	-	-	-	-	-	-
Stage 2	403	435	-	732	697	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	17.9	17.68	0.02	0.45
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	5	-	-	297	311	90	-	-
HCM Lane V/C Ratio	0.002	-	-	0.06	0.088	0.013	-	-
HCM Ctrl Dly (s/v)	7.7	0	-	17.9	17.7	9.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0	-	-

Intersection	
Int Delay, s/veh	182.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	294	885	68	52	763	286	92	174	73	182	39	123
Future Vol, veh/h	294	885	68	52	763	286	92	174	73	182	39	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	309	932	72	55	803	301	97	183	77	192	41	129

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1104	0	0	1003	0	0	2519	2800	967	2705	2685	954
Stage 1	-	-	-	-	-	-	1586	1586	-	1063	1063	-
Stage 2	-	-	-	-	-	-	933	1214	-	1642	1622	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	640	-	-	698	-	-	~ 19	~ 19	311	~ 14	~ 22	317
Stage 1	-	-	-	-	-	-	137	~ 170	-	272	302	-
Stage 2	-	-	-	-	-	-	322	257	-	~ 127	163	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	640	-	-	698	-	-	-	~ 8	311	~ 2	~ 9	317
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	237	-	-	~ 25	-
Stage 1	-	-	-	-	-	-	~ 71	~ 88	-	212	235	-
Stage 2	-	-	-	-	-	-	122	200	-	-	84	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	3.72	0.5		$ 1594.27
HCM LOS			-	F

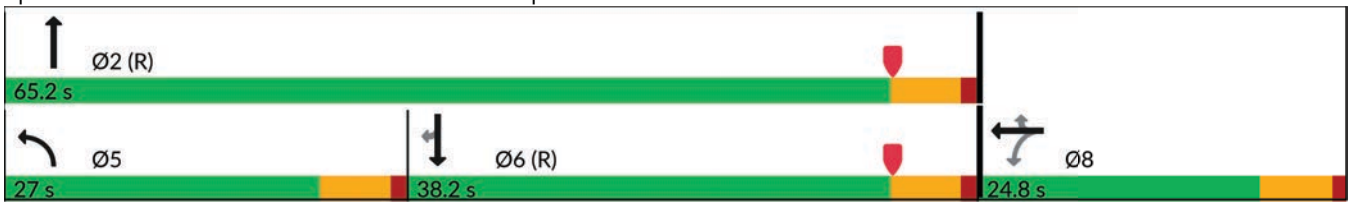
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	640	-	-	81	-	-	84
HCM Lane V/C Ratio	-	0.484	-	-	0.078	-	-	4.317
HCM Ctrl Dly (s/v)	-	15.8	-	-	10.6	0		$ 1594.3
HCM Lane LOS	-	C	-	-	B	A	-	F
HCM 95th %tile Q(veh)	-	2.6	-	-	0.3	-	-	38.3

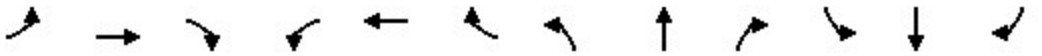
Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	326	378	905	1199	864
Future Volume (vph)	0	326	378	905	1199	864
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		8				6
Detector Phase	8	8	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	15.8	24.8	15.8	15.8
Total Split (s)	24.8	24.8	27.0	65.2	38.2	38.2
Total Split (%)	27.6%	27.6%	30.0%	72.4%	42.4%	42.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	18.6	18.6	21.6	59.8	32.4	32.4
Actuated g/C Ratio	0.21	0.21	0.24	0.66	0.36	0.36
v/c Ratio	0.92	0.75	0.97	0.40	0.97	0.97
Control Delay (s/veh)	67.2	28.6	40.5	8.5	48.5	35.7
Queue Delay	0.0	0.0	0.0	0.9	0.0	0.0
Total Delay (s/veh)	67.2	28.6	40.5	9.3	48.5	35.7
LOS	E	C	D	A	D	D
Approach Delay (s/veh)	47.9			18.5	43.1	
Approach LOS	D			B	D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 30.8 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay (s/veh): 36.0	Intersection LOS: D
Intersection Capacity Utilization 108.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 21: Grove Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	326	0	326	378	905	0	0	1199	864
Future Volume (veh/h)	0	0	0	326	0	326	378	905	0	0	1199	864
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
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	1900	1900	1800	1900	0	0	1900	1900
Adj Flow Rate, veh/h				343	0	258	398	953	0	0	1262	698
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				377	0	336	404	2392	0	0	1309	568
Arrive On Green				0.21	0.00	0.21	0.47	1.00	0.00	0.00	0.36	0.36
Sat Flow, veh/h				1810	0	1610	1714	3705	0	0	3705	1565
Grp Volume(v), veh/h				343	0	258	398	953	0	0	1262	698
Grp Sat Flow(s),veh/h/ln				1810	0	1610	1714	1805	0	0	1805	1565
Q Serve(g_s), s				16.7	0.0	13.6	20.6	0.0	0.0	0.0	30.8	32.6
Cycle Q Clear(g_c), s				16.7	0.0	13.6	20.6	0.0	0.0	0.0	30.8	32.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				377	0	336	404	2392	0	0	1309	568
V/C Ratio(X)				0.91	0.00	0.77	0.99	0.40	0.00	0.00	0.96	1.23
Avail Cap(c_a), veh/h				382	0	340	404	2392	0	0	1309	568
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	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.8	0.0	33.6	23.6	0.0	0.0	0.0	28.1	28.7
Incr Delay (d2), s/veh				24.7	0.0	9.7	10.3	0.0	0.0	0.0	17.6	118.3
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				9.4	0.0	5.9	6.3	0.0	0.0	0.0	15.2	29.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				59.5	0.0	43.3	34.0	0.0	0.0	0.0	45.7	147.0
LnGrp LOS				E		D	C	A			D	F
Approach Vol, veh/h					601			1351			1960	
Approach Delay, s/veh					52.5			10.0			81.8	
Approach LOS					D			B			F	

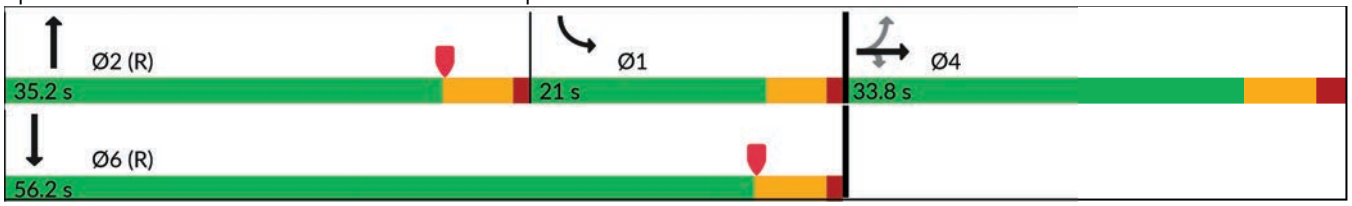
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	65.4		27.0	38.4		24.6						
Change Period (Y+Rc), s	5.8		5.8	5.8		5.8						
Max Green Setting (Gmax), s	59.4		21.2	32.4		19.0						
Max Q Clear Time (g_c+I1), s	2.0		22.6	34.6		18.7						
Green Ext Time (p_c), s	5.9		0.0	0.0		0.1						

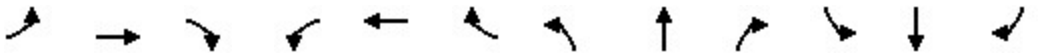
Intersection Summary	
HCM 7th Control Delay, s/veh	52.5
HCM 7th LOS	D

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	1	345	820	411	1114
Future Volume (vph)	1	345	820	411	1114
Turn Type	NA	Perm	NA	Prot	NA
Protected Phases	4		2	1	6
Permitted Phases		4			
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	31.8	15.0	25.8
Total Split (s)	33.8	33.8	35.2	21.0	56.2
Total Split (%)	37.6%	37.6%	39.1%	23.3%	62.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	5.8	5.0	5.8
Lead/Lag			Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	26.0	26.0	30.4	16.0	51.4
Actuated g/C Ratio	0.29	0.29	0.34	0.18	0.57
v/c Ratio	0.93	0.68	1.12	1.42	0.54
Control Delay (s/veh)	58.3	26.9	92.2	228.3	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.4
Total Delay (s/veh)	58.3	26.9	92.2	228.3	19.4
LOS	E	C	F	F	B
Approach Delay (s/veh)	44.9		92.2		75.7
Approach LOS	D		F		E

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay (s/veh): 75.3	Intersection LOS: E
Intersection Capacity Utilization 108.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	463	1	345	0	0	0	0	820	600	411	1114	0
Future Volume (veh/h)	463	1	345	0	0	0	0	820	600	411	1114	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	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	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	487	1	310				0	863	316	433	1173	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	518	1	461				0	860	314	312	2178	0
Arrive On Green	0.43	0.43	0.43				0.00	0.49	0.49	0.36	1.00	0.00
Sat Flow, veh/h	1806	4	1607				0	2633	961	1714	3800	0
Grp Volume(v), veh/h	488	0	310				0	622	557	433	1173	0
Grp Sat Flow(s),veh/h/ln	1810	0	1607				0	1900	1694	1714	1900	0
Q Serve(g_s), s	23.2	0.0	13.9				0.0	29.4	29.4	16.4	0.0	0.0
Cycle Q Clear(g_c), s	23.2	0.0	13.9				0.0	29.4	29.4	16.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.57	1.00		0.00
Lane Grp Cap(c), veh/h	519	0	461				0	621	553	312	2178	0
V/C Ratio(X)	0.94	0.00	0.67				0.00	1.00	1.01	1.39	0.54	0.00
Avail Cap(c_a), veh/h	543	0	482				0	621	553	312	2178	0
HCM Platoon Ratio	1.50	1.50	1.50				1.00	1.50	1.50	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.16	0.16	0.00
Uniform Delay (d), s/veh	24.9	0.0	22.3				0.0	23.0	23.0	28.6	0.0	0.0
Incr Delay (d2), s/veh	23.7	0.0	2.7				0.0	36.6	40.0	177.3	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	10.7	0.0	4.5				0.0	15.3	14.2	20.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.6	0.0	25.0				0.0	59.6	62.9	205.9	0.2	0.0
LnGrp LOS	D		C					F	F	F	A	
Approach Vol, veh/h		798						1179			1606	
Approach Delay, s/veh		39.4						61.2			55.6	
Approach LOS		D						E			E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.2	35.2		32.6		57.4
Change Period (Y+Rc), s	5.8	* 5.8		6.8		5.8
Max Green Setting (Gmax), s	16.0	* 29		27.0		50.4
Max Q Clear Time (g_c+I1), s	18.4	31.4		25.2		2.0
Green Ext Time (p_c), s	0.0	0.0		0.6		7.9

Intersection Summary	
HCM 7th Control Delay, s/veh	53.8
HCM 7th LOS	D

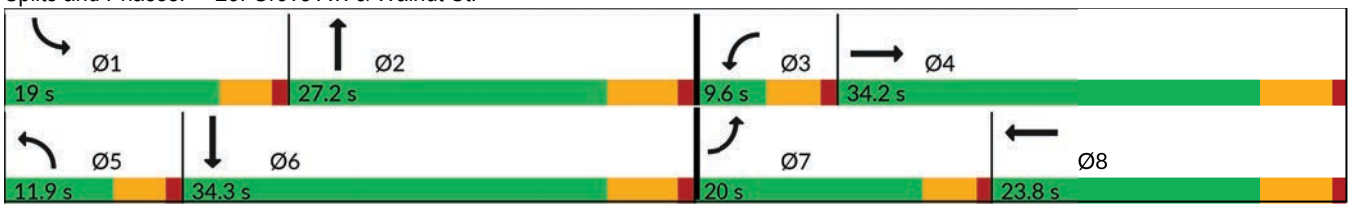
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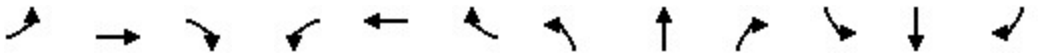
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	187	587	62	394	152	1033	192	870
Future Volume (vph)	187	587	62	394	152	1033	192	870
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	9.6	23.8
Total Split (s)	20.0	34.2	9.6	23.8	11.9	27.2	19.0	34.3
Total Split (%)	22.2%	38.0%	10.7%	26.4%	13.2%	30.2%	21.1%	38.1%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.1	26.9	5.0	16.7	7.3	22.5	12.8	28.0
Actuated g/C Ratio	0.15	0.31	0.06	0.19	0.08	0.26	0.15	0.33
v/c Ratio	0.76	0.75	0.65	0.82	1.10	1.34	0.79	0.92
Control Delay (s/veh)	54.6	29.9	72.4	40.5	145.6	188.0	58.9	42.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	54.6	29.9	72.4	40.5	145.6	188.0	58.9	42.0
LOS	D	C	E	D	F	F	E	D
Approach Delay (s/veh)		34.6		43.7		183.2		44.7
Approach LOS		C		D		F		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 86	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.34	
Intersection Signal Delay (s/veh): 86.9	Intersection LOS: F
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 23: Grove Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	587	208	62	394	164	152	1033	157	192	870	145
Future Volume (veh/h)	187	587	208	62	394	164	152	1033	157	192	870	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	197	618	207	65	415	149	160	1087	154	202	916	117
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	234	746	250	82	503	178	154	872	123	238	1043	133
Arrive On Green	0.14	0.28	0.28	0.05	0.19	0.19	0.09	0.28	0.28	0.14	0.32	0.32
Sat Flow, veh/h	1714	2646	885	1714	2599	922	1714	3168	448	1714	3213	410
Grp Volume(v), veh/h	197	421	404	65	287	277	160	618	623	202	515	518
Grp Sat Flow(s),veh/h/ln	1714	1805	1726	1714	1805	1717	1714	1805	1811	1714	1805	1818
Q Serve(g_s), s	9.1	17.8	17.8	3.1	12.4	12.6	7.3	22.4	22.4	9.4	21.9	21.9
Cycle Q Clear(g_c), s	9.1	17.8	17.8	3.1	12.4	12.6	7.3	22.4	22.4	9.4	21.9	21.9
Prop In Lane	1.00		0.51	1.00		0.54	1.00		0.25	1.00		0.23
Lane Grp Cap(c), veh/h	234	509	487	82	349	332	154	497	499	238	586	590
V/C Ratio(X)	0.84	0.83	0.83	0.79	0.82	0.83	1.04	1.24	1.25	0.85	0.88	0.88
Avail Cap(c_a), veh/h	325	630	603	105	399	380	154	497	499	304	633	637
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	27.3	27.4	38.3	31.4	31.5	37.0	29.5	29.5	34.2	25.9	25.9
Incr Delay (d2), s/veh	10.0	7.4	7.9	20.4	11.5	13.4	83.5	126.2	127.9	13.4	12.7	12.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	8.0	7.7	1.7	6.1	6.1	6.4	26.2	26.5	4.6	10.6	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.3	34.8	35.2	58.7	42.9	44.9	120.5	155.6	157.4	47.6	38.7	38.6
LnGrp LOS	D	C	D	E	D	D	F	F	F	D	D	D
Approach Vol, veh/h		1022			629			1401			1235	
Approach Delay, s/veh		36.8			45.4			152.4			40.1	
Approach LOS		D			D			F			D	

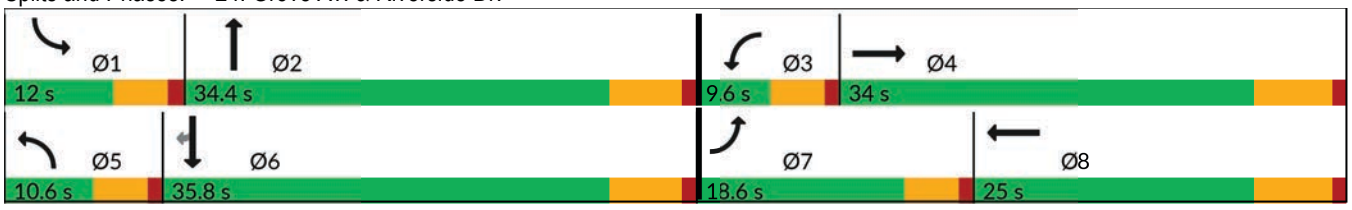
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	28.2	8.5	28.7	11.9	32.2	15.7	21.5
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	14.4	21.4	5.0	28.4	7.3	28.5	15.4	18.0
Max Q Clear Time (g_c+I1), s	11.4	24.4	5.1	19.8	9.3	23.9	11.1	14.6
Green Ext Time (p_c), s	0.1	0.0	0.0	3.1	0.0	2.5	0.1	1.0

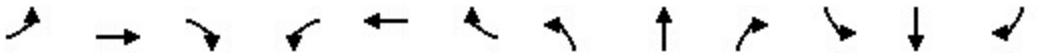
Intersection Summary	
HCM 7th Control Delay, s/veh	76.8
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	155	544	210	766	32	997	128	700	149
Future Volume (vph)	155	544	210	766	32	997	128	700	149
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	18.6	34.0	9.6	25.0	10.6	34.4	12.0	35.8	35.8
Total Split (%)	20.7%	37.8%	10.7%	27.8%	11.8%	38.2%	13.3%	39.8%	39.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.8	27.8	5.0	21.0	5.6	28.6	7.4	34.2	34.2
Actuated g/C Ratio	0.13	0.31	0.06	0.23	0.06	0.32	0.08	0.38	0.38
v/c Ratio	0.73	1.12	2.33	1.36	0.32	2.08	0.96	1.02	0.21
Control Delay (s/veh)	55.9	106.7	651.0	197.2	48.3	513.1	111.4	69.8	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.9	106.7	651.0	197.2	48.3	513.1	111.4	69.8	2.1
LOS	E	F	F	F	D	F	F	E	A
Approach Delay (s/veh)		96.5		270.1		500.7		64.9	
Approach LOS		F		F		F		E	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.33	
Intersection Signal Delay (s/veh): 257.1	Intersection LOS: F
Intersection Capacity Utilization 134.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	544	74	210	766	332	32	997	182	128	700	149
Future Volume (veh/h)	155	544	74	210	766	332	32	997	182	128	700	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	163	573	78	221	806	323	34	1049	184	135	737	119
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	504	69	95	627	251	55	500	88	141	700	593
Arrive On Green	0.11	0.31	0.31	0.06	0.25	0.25	0.03	0.32	0.32	0.08	0.37	0.37
Sat Flow, veh/h	1714	1632	222	1714	2505	1002	1714	1574	276	1714	1900	1610
Grp Volume(v), veh/h	163	0	651	221	580	549	34	0	1233	135	737	119
Grp Sat Flow(s),veh/h/ln	1714	0	1854	1714	1805	1701	1714	0	1850	1714	1900	1610
Q Serve(g_s), s	8.4	0.0	27.8	5.0	22.5	22.5	1.8	0.0	28.6	7.1	33.1	4.5
Cycle Q Clear(g_c), s	8.4	0.0	27.8	5.0	22.5	22.5	1.8	0.0	28.6	7.1	33.1	4.5
Prop In Lane	1.00		0.12	1.00		0.59	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	196	0	573	95	452	426	55	0	588	141	700	593
V/C Ratio(X)	0.83	0.00	1.14	2.32	1.28	1.29	0.62	0.00	2.10	0.96	1.05	0.20
Avail Cap(c_a), veh/h	267	0	573	95	452	426	114	0	588	141	700	593
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	31.1	42.5	33.7	33.7	43.0	0.0	30.7	41.1	28.4	19.4
Incr Delay (d2), s/veh	11.4	0.0	81.3	625.8	143.9	146.2	4.3	0.0	499.4	62.4	49.0	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(50%),veh/ln	3.9	0.0	24.1	18.6	27.1	25.8	0.8	0.0	93.2	5.3	23.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.4	0.0	112.4	668.3	177.7	180.0	47.3	0.0	530.1	103.5	77.4	19.6
LnGrp LOS	D		F	F	F	F	D		F	F	F	B
Approach Vol, veh/h		814			1350			1267			991	
Approach Delay, s/veh		100.0			258.9			517.2			74.0	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	34.4	9.6	34.0	7.5	38.9	14.9	28.7
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	7.4	28.6	5.0	27.8	6.0	30.0	14.0	18.8
Max Q Clear Time (g_c+I1), s	9.1	30.6	7.0	29.8	3.8	35.1	10.4	24.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	262.2
HCM 7th LOS	F

Intersection	
Intersection Delay, s/veh	916.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	120	943	236	39	651	57	45	887	76	26	776	19
Future Vol, veh/h	120	943	236	39	651	57	45	887	76	26	776	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	126	993	248	41	685	60	47	934	80	27	817	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	1245.1	607.6	904.9	691.5
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	9%	5%	3%
Vol Thru, %	88%	73%	87%	95%
Vol Right, %	8%	18%	8%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1008	1299	747	821
LT Vol	45	120	39	26
Through Vol	887	943	651	776
RT Vol	76	236	57	19
Lane Flow Rate	1061	1367	786	864
Geometry Grp	1	1	1	1
Degree of Util (X)	2.818	3.611	2.089	2.302
Departure Headway (Hd)	34.042	28.703	42.85	39.499
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	117	150	94	104
Service Time	32.042	26.703	40.85	37.499
HCM Lane V/C Ratio	9.068	9.113	8.362	8.308
HCM Control Delay, s/veh	904.9	1245.1	607.6	691.5
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	28	44.7	15.6	19

Intersection	
Intersection Delay, s/veh	728
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	762	26	95	501	87	136	832	0	143	706	40
Future Vol, veh/h	100	762	26	95	501	87	136	832	0	143	706	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	105	802	27	100	527	92	143	876	0	151	743	42
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	746.1	505.4	847.5	750.8
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	11%	14%	16%
Vol Thru, %	86%	86%	73%	79%
Vol Right, %	0%	3%	13%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	968	888	683	889
LT Vol	136	100	95	143
Through Vol	832	762	501	706
RT Vol	0	26	87	40
Lane Flow Rate	1019	935	719	936
Geometry Grp	1	1	1	1
Degree of Util (X)	2.724	2.493	1.907	2.496
Departure Headway (Hd)	27.47	27.75	33.318	29.108
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	143	140	122	140
Service Time	25.47	25.75	31.318	27.108
HCM Lane V/C Ratio	7.126	6.679	5.893	6.686
HCM Control Delay, s/veh	847.5	746.1	505.4	750.8
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	32.4	28.5	16.8	27.4

Intersection	
Intersection Delay, s/veh	507.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	160	673	17	5	320	89	42	765	12	190	290	76
Future Vol, veh/h	160	673	17	5	320	89	42	765	12	190	290	76
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	168	708	18	5	337	94	44	805	13	200	305	80
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	671.3	172.8	632.5	322.4
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	19%	1%	34%
Vol Thru, %	93%	79%	77%	52%
Vol Right, %	1%	2%	21%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	819	850	414	556
LT Vol	42	160	5	190
Through Vol	765	673	320	290
RT Vol	12	17	89	76
Lane Flow Rate	862	895	436	585
Geometry Grp	1	1	1	1
Degree of Util (X)	2.299	2.392	1.146	1.558
Departure Headway (Hd)	16.726	15.818	23.05	20.41
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	224	242	161	187
Service Time	14.726	13.818	21.05	18.41
HCM Lane V/C Ratio	3.848	3.698	2.708	3.128
HCM Control Delay, s/veh	632.5	671.3	172.8	322.4
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	39.6	44.2	9.7	18

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	10	15	11	6	10	6	837	6	4	465	6
Future Vol, veh/h	16	10	15	11	6	10	6	837	6	4	465	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	0	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	17	11	16	12	6	11	6	881	6	4	489	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1398	1401	493	1397	1398	881	496	0	0	887	0	0
Stage 1	501	501	-	894	894	-	-	-	-	-	-	-
Stage 2	897	900	-	503	504	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	119	141	580	120	142	349	1078	-	-	772	-	-
Stage 1	556	546	-	339	362	-	-	-	-	-	-	-
Stage 2	337	360	-	554	544	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	112	140	580	110	140	349	1078	-	-	772	-	-
Mov Cap-2 Maneuver	229	255	-	234	257	-	-	-	-	-	-	-
Stage 1	553	543	-	337	360	-	-	-	-	-	-	-
Stage 2	319	358	-	526	541	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	18.79	19.74	0.06	0.08
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1078	-	-	304	273	772	-	-
HCM Lane V/C Ratio	0.006	-	-	0.142	0.104	0.005	-	-
HCM Ctrl Dly (s/v)	8.4	-	-	18.8	19.7	9.7	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.3	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	223	946	130	122	621	303	122	318	159	441	180	124
Future Vol, veh/h	223	946	130	122	621	303	122	318	159	441	180	124
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	-	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	235	996	137	128	654	319	128	335	167	464	189	131

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	973	0	0	1133	0	0	2539	2763	1064	2703	2672	813
Stage 1	-	-	-	-	-	-	1534	1534	-	1070	1070	-
Stage 2	-	-	-	-	-	-	1005	1229	-	1633	1602	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	717	-	-	624	-	-	~ 19	~ 20	273	~ 14	~ 23	381
Stage 1	-	-	-	-	-	-	147	~ 180	-	~ 270	300	-
Stage 2	-	-	-	-	-	-	293	~ 252	-	~ 129	~ 167	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	717	-	-	624	-	-	-	~ 7	273	-	~ 8	381
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	~ 99	~ 121	-	~ 139	~ 155	-
Stage 2	-	-	-	-	-	-	-	~ 130	-	-	~ 112	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.14	1.43		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	-	717	-	-	197	-	-	-	-	381
HCM Lane V/C Ratio	-	0.327	-	-	0.206	-	-	-	-	0.591
HCM Ctrl Dly (s/v)	-	12.4	-	-	12.3	0	-	-	-	27.2
HCM Lane LOS	-	B	-	-	B	A	-	-	-	D
HCM 95th %tile Q(veh)	-	1.4	-	-	0.8	-	-	-	-	3.6

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

Intersection	
Intersection Delay, s/veh	631.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	338	142	495	36	424	115	280	437	29	73	395	387
Future Vol, veh/h	338	142	495	36	424	115	280	437	29	73	395	387
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	356	149	521	38	446	121	295	460	31	77	416	407
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	806.9	363.2	569.5	665.7
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	35%	6%	9%
Vol Thru, %	59%	15%	74%	46%
Vol Right, %	4%	51%	20%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	746	975	575	855
LT Vol	280	338	36	73
Through Vol	437	142	424	395
RT Vol	29	495	115	387
Lane Flow Rate	785	1026	605	900
Geometry Grp	1	1	1	1
Degree of Util (X)	2.105	2.669	1.596	2.336
Departure Headway (Hd)	25.167	20.874	29.018	23.278
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	157	185	133	171
Service Time	23.167	18.874	27.018	21.278
HCM Lane V/C Ratio	5	5.546	4.549	5.263
HCM Control Delay, s/veh	569.5	806.9	363.2	665.7
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	24.4	40.3	14.4	30.3

Intersection	
Intersection Delay, s/veh	594.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	81	659	28	221	356	194	38	731	340	267	331	24
Future Vol, veh/h	81	659	28	221	356	194	38	731	340	267	331	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	85	694	29	233	375	204	40	769	358	281	348	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	595.7	590.5	980.1	435.5
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	11%	29%	43%
Vol Thru, %	66%	86%	46%	53%
Vol Right, %	31%	4%	25%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1109	768	771	622
LT Vol	38	81	221	267
Through Vol	731	659	356	331
RT Vol	340	28	194	24
Lane Flow Rate	1167	808	812	655
Geometry Grp	1	1	1	1
Degree of Util (X)	3.055	2.155	2.143	1.757
Departure Headway (Hd)	21.453	26.89	26.888	30.943
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	187	146	146	124
Service Time	19.453	24.89	24.888	28.943
HCM Lane V/C Ratio	6.241	5.534	5.562	5.282
HCM Control Delay, s/veh	980.1	595.7	590.5	435.5
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	47.2	23.9	23.7	15.8

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	12	5	510	288	15
Future Vol, veh/h	29	12	5	510	288	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	31	13	5	537	303	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	858	311	319	0	-	0
Stage 1	311	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	330	734	1252	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	328	734	1252	-	-	-
Mov Cap-2 Maneuver	508	-	-	-	-	-
Stage 1	744	-	-	-	-	-
Stage 2	584	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.99	0.08	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1252	-	558	-	-
HCM Lane V/C Ratio	0.004	-	0.077	-	-
HCM Ctrl Dly (s/v)	7.9	-	12	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Intersection Delay, s/veh	168.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	251	455	124	14	297	116	88	313	23	128	90	158
Future Vol, veh/h	251	455	124	14	297	116	88	313	23	128	90	158
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	264	479	131	15	313	122	93	329	24	135	95	166
Number of Lanes	1	1	0	0	1	0	1	1	1	1	1	0

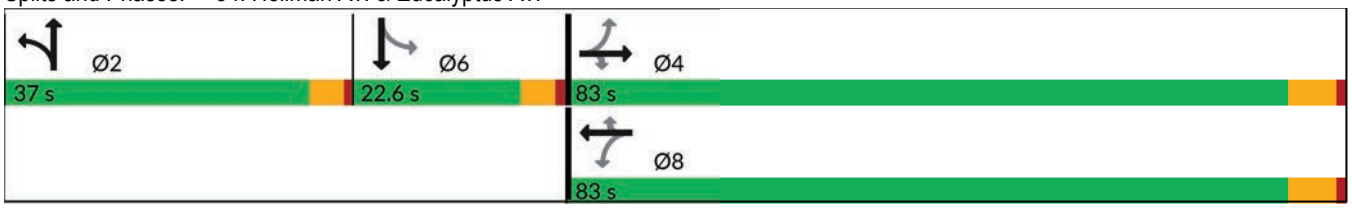
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	1	2
HCM Control Delay, s/veh	262.9	200.6	66.7	39.1
HCM LOS	F	F	F	E

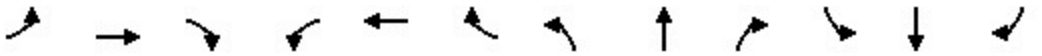
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	3%	100%	0%
Vol Thru, %	0%	100%	0%	0%	79%	70%	0%	36%
Vol Right, %	0%	0%	100%	0%	21%	27%	0%	64%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	88	313	23	251	579	427	128	248
LT Vol	88	0	0	251	0	14	128	0
Through Vol	0	313	0	0	455	297	0	90
RT Vol	0	0	23	0	124	116	0	158
Lane Flow Rate	93	329	24	264	609	449	135	261
Geometry Grp	6	6	6	6	6	6	6	6
Degree of Util (X)	0.287	0.974	0.067	0.787	1.706	1.33	0.427	0.759
Departure Headway (Hd)	12.972	12.44	11.695	11.804	11.116	11.733	13.523	12.496
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	279	293	308	309	335	315	268	292
Service Time	10.672	10.14	9.395	9.504	8.816	9.433	11.223	10.196
HCM Lane V/C Ratio	0.333	1.123	0.078	0.854	1.818	1.425	0.504	0.894
HCM Control Delay, s/veh	20.8	83.4	15.2	47.1	356.4	200.6	25.9	45.9
HCM Lane LOS	C	F	C	E	F	F	D	E
HCM 95th-tile Q	1.2	9.8	0.2	6.3	34.6	20.2	2	5.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	69	723	94	72	530	56	62	216	78	94
Future Volume (vph)	69	723	94	72	530	56	62	216	78	94
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Split	NA	Perm	NA
Protected Phases		4			8		2	2		6
Permitted Phases	4		4	8		8			6	
Detector Phase	4	4	4	8	8	8	2	2	6	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	24.2	28.6	28.6	22.6	22.6
Total Split (s)	83.0	83.0	83.0	83.0	83.0	83.0	37.0	37.0	22.6	22.6
Total Split (%)	58.2%	58.2%	58.2%	58.2%	58.2%	58.2%	25.9%	25.9%	15.8%	15.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	6.2	4.6	4.6		4.6
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	35.3	35.3	35.3	35.3	35.3	35.3	32.6	32.6		18.1
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.35	0.35	0.32	0.32		0.18
v/c Ratio	0.72	0.61	0.17	0.52	0.85	0.10	0.12	0.80		0.91
Control Delay (s/veh)	67.8	29.1	12.8	39.9	42.9	8.3	28.1	42.5		82.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay (s/veh)	67.8	29.1	12.8	39.9	42.9	8.3	28.1	42.5		82.8
LOS	E	C	B	D	D	A	C	D		F
Approach Delay (s/veh)		30.4			39.6			40.7		82.8
Approach LOS		C			D			D		F

Intersection Summary	
Cycle Length: 142.6	
Actuated Cycle Length: 101.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay (s/veh): 40.0	Intersection LOS: D
Intersection Capacity Utilization 90.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 34: Hellman Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	723	94	72	530	56	62	216	230	78	94	23
Future Volume (veh/h)	69	723	94	72	530	56	62	216	230	78	94	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	73	761	96	76	558	59	65	227	230	82	99	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	218	1502	670	237	791	670	490	248	251	99	119	29
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.29	0.29	0.29	0.14	0.14	0.14
Sat Flow, veh/h	819	3610	1610	620	1900	1610	1714	865	877	730	881	214
Grp Volume(v), veh/h	73	761	96	76	558	59	65	0	457	205	0	0
Grp Sat Flow(s),veh/h/ln	819	1805	1610	620	1900	1610	1714	0	1742	1825	0	0
Q Serve(g_s), s	7.7	14.8	3.5	9.8	23.0	2.1	2.7	0.0	24.1	10.4	0.0	0.0
Cycle Q Clear(g_c), s	30.7	14.8	3.5	24.6	23.0	2.1	2.7	0.0	24.1	10.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	0.40		0.12
Lane Grp Cap(c), veh/h	218	1502	670	237	791	670	490	0	498	247	0	0
V/C Ratio(X)	0.33	0.51	0.14	0.32	0.71	0.09	0.13	0.00	0.92	0.83	0.00	0.00
Avail Cap(c_a), veh/h	541	2926	1305	482	1540	1305	586	0	596	347	0	0
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.5	20.5	17.2	29.5	22.9	16.8	25.1	0.0	32.7	39.9	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.3	0.1	0.8	1.2	0.1	0.0	0.0	16.0	11.2	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(50%),veh/ln	1.5	5.8	1.2	1.4	9.6	0.7	1.0	0.0	11.6	5.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.4	20.7	17.3	30.3	24.0	16.8	25.1	0.0	48.7	51.1	0.0	0.0
LnGrp LOS	D	C	B	C	C	B	C		D	D		
Approach Vol, veh/h		930			693			522			205	
Approach Delay, s/veh		21.6			24.1			45.8			51.1	
Approach LOS		C			C			D			D	

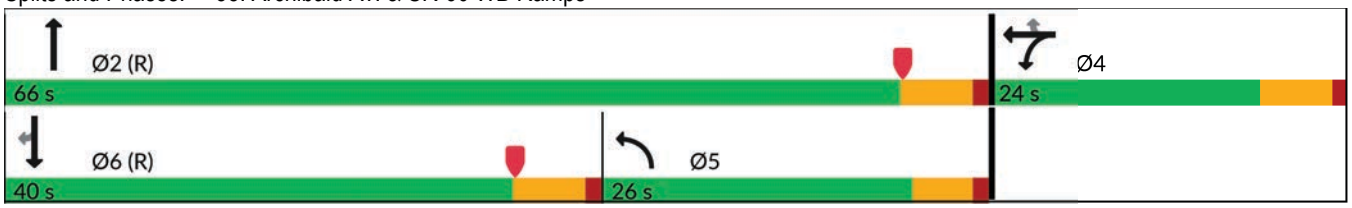
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.7		45.6		17.4		45.6				
Change Period (Y+Rc), s		4.6		6.2		4.6		6.2				
Max Green Setting (Gmax), s		32.4		76.8		18.0		76.8				
Max Q Clear Time (g_c+I1), s		26.1		32.7		12.4		26.6				
Green Ext Time (p_c), s		1.0		6.8		0.4		4.7				

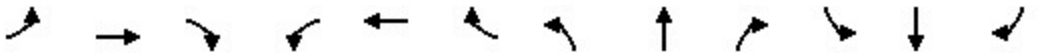
Intersection Summary	
HCM 7th Control Delay, s/veh	30.3
HCM 7th LOS	C

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	646	8	292	786	1054	2063	385
Future Volume (vph)	646	8	292	786	1054	2063	385
Turn Type	Split	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4	4		5	2	6	
Permitted Phases			4				6
Detector Phase	4	4	4	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	8.0	8.0	8.0
Minimum Split (s)	10.8	10.8	10.8	10.0	43.8	38.8	38.8
Total Split (s)	24.0	24.0	24.0	26.0	66.0	40.0	40.0
Total Split (%)	26.7%	26.7%	26.7%	28.9%	73.3%	44.4%	44.4%
Yellow Time (s)	4.8	4.8	4.8	4.0	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.0	5.8	5.8	5.8
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	18.2	18.2	18.2	21.0	60.2	34.2	34.2
Actuated g/C Ratio	0.20	0.20	0.20	0.23	0.67	0.38	0.38
v/c Ratio	1.10	1.07	0.68	1.13	0.32	0.87	0.53
Control Delay (s/veh)	114.5	106.7	27.9	98.0	0.5	30.9	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	114.5	106.7	27.9	98.0	0.5	30.9	10.9
LOS	F	F	C	F	A	C	B
Approach Delay (s/veh)		87.6			42.2	27.8	
Approach LOS		F			D	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 29.6 (33%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay (s/veh): 43.7	Intersection LOS: D
Intersection Capacity Utilization 89.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 35: Archibald Av. & SR-60 WB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	646	8	292	786	1054	0	0	2063	385
Future Volume (veh/h)	0	0	0	646	8	292	786	1054	0	0	2063	385
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.98
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				1800	1900	1900	1700	1900	0	0	1900	1900
Adj Flow Rate, veh/h				738	0	121	827	1109	0	0	2172	285
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				693	0	326	993	3925	0	0	2457	591
Arrive On Green				0.20	0.00	0.20	0.63	1.00	0.00	0.00	0.38	0.38
Sat Flow, veh/h				3429	0	1610	3141	5358	0	0	6802	1572
Grp Volume(v), veh/h				738	0	121	827	1109	0	0	2172	285
Grp Sat Flow(s),veh/h/ln				1714	0	1610	1570	1729	0	0	1634	1572
Q Serve(g_s), s				18.2	0.0	5.8	18.4	0.0	0.0	0.0	28.0	12.4
Cycle Q Clear(g_c), s				18.2	0.0	5.8	18.4	0.0	0.0	0.0	28.0	12.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				693	0	326	993	3925	0	0	2457	591
V/C Ratio(X)				1.06	0.00	0.37	0.83	0.28	0.00	0.00	0.88	0.48
Avail Cap(c_a), veh/h				693	0	326	993	3925	0	0	2484	597
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	0.59	0.59	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.9	0.0	31.0	14.7	0.0	0.0	0.0	26.2	21.4
Incr Delay (d2), s/veh				52.6	0.0	0.7	3.5	0.1	0.0	0.0	5.1	2.8
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 BackOfQ(50%),veh/ln				12.2	0.0	5.5	4.0	0.0	0.0	0.0	10.7	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				88.5	0.0	31.7	18.2	0.1	0.0	0.0	31.3	24.2
LnGrp LOS				F		C	B	A			C	C
Approach Vol, veh/h					859			1936			2457	
Approach Delay, s/veh					80.5			7.8			30.5	
Approach LOS					F			A			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	73.9	24.0	34.3	39.6
Change Period (Y+Rc), s	5.8	5.8	5.8	* 5.8
Max Green Setting (Gmax), s	60.2	18.2	21.0	* 34
Max Q Clear Time (g_c+I1), s	2.0	20.2	20.4	30.0
Green Ext Time (p_c), s	9.2	0.0	0.2	3.9

Intersection Summary	
HCM 7th Control Delay, s/veh	30.3
HCM 7th LOS	C

Notes

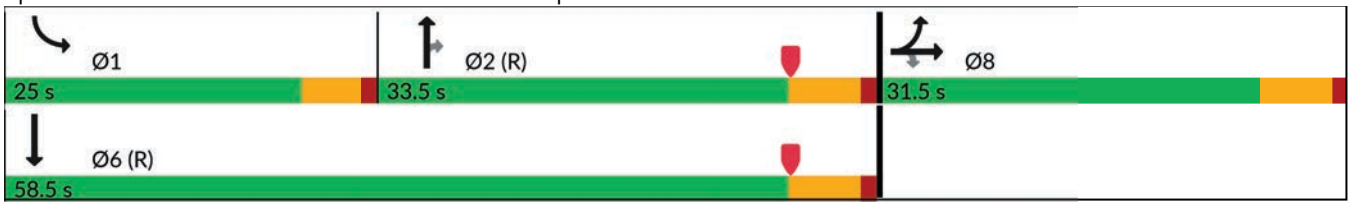
User approved volume balancing among the lanes for turning movement.

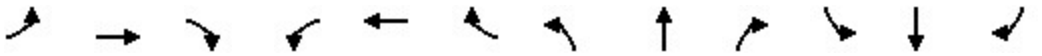
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	157	0	676	1640	568	628	2032
Future Volume (vph)	157	0	676	1640	568	628	2032
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8	8		2		1	6
Permitted Phases			8		2		
Detector Phase	8	8	8	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	10.8	10.8	10.8	32.8	32.8	10.0	33.8
Total Split (s)	31.5	31.5	31.5	33.5	33.5	25.0	58.5
Total Split (%)	35.0%	35.0%	35.0%	37.2%	37.2%	27.8%	65.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.0	5.8
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	21.9	21.9	21.9	30.7	30.7	20.8	56.5
Actuated g/C Ratio	0.24	0.24	0.24	0.34	0.34	0.23	0.63
v/c Ratio	0.38	0.85	0.82	0.77	0.63	0.91	0.66
Control Delay (s/veh)	30.0	42.1	38.4	30.3	5.6	52.3	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.0	42.1	38.4	30.3	5.6	52.3	3.5
LOS	C	D	D	C	A	D	A
Approach Delay (s/veh)		38.6		24.0			15.0
Approach LOS		D		C			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 29.6 (33%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay (s/veh): 21.9	Intersection LOS: C
Intersection Capacity Utilization 89.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 36: Archibald Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	0	676	0	0	0	0	1640	568	628	2032	0
Future Volume (veh/h)	157	0	676	0	0	0	0	1640	568	628	2032	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1900	1900				0	1900	1900	1700	1900	0
Adj Flow Rate, veh/h	110	0	561				0	1726	449	661	2139	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	359	0	674				0	2511	619	698	3433	0
Arrive On Green	0.21	0.00	0.21				0.00	0.38	0.38	0.44	1.00	0.00
Sat Flow, veh/h	1714	0	3220				0	6802	1610	3141	5358	0
Grp Volume(v), veh/h	110	0	561				0	1726	449	661	2139	0
Grp Sat Flow(s),veh/h/ln	1714	0	1610				0	1634	1610	1570	1729	0
Q Serve(g_s), s	4.9	0.0	15.0				0.0	19.9	21.4	18.2	0.0	0.0
Cycle Q Clear(g_c), s	4.9	0.0	15.0				0.0	19.9	21.4	18.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	359	0	674				0	2511	619	698	3433	0
V/C Ratio(X)	0.31	0.00	0.83				0.00	0.69	0.73	0.95	0.62	0.00
Avail Cap(c_a), veh/h	490	0	920				0	2511	619	698	3433	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	0.30	0.30	0.00
Uniform Delay (d), s/veh	30.1	0.0	34.1				0.0	23.2	23.7	24.5	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	4.9				0.0	1.6	7.3	9.0	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	2.0	0.0	6.0				0.0	7.1	8.5	5.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.6	0.0	38.9				0.0	24.8	30.9	33.5	0.3	0.0
LnGrp LOS	C		D					C	C	C	A	
Approach Vol, veh/h		671						2175			2800	
Approach Delay, s/veh		37.6						26.0			8.1	
Approach LOS		D						C			A	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	25.0	40.4				65.4		24.6				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	20.0	27.7				52.7		25.7				
Max Q Clear Time (g_c+I1), s	20.2	23.4				2.0		17.0				
Green Ext Time (p_c), s	0.0	3.6				25.7		1.8				

Intersection Summary			
HCM 7th Control Delay, s/veh			18.5
HCM 7th LOS			B

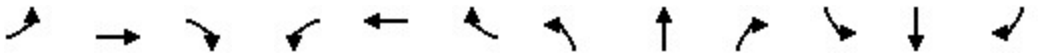
Notes
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	406	521	242	144	595	391	349	1403	662	1350
Future Volume (vph)	406	521	242	144	595	391	349	1403	662	1350
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	38.2	38.2	9.6	38.2	38.2	9.6	32.2	9.6	33.2
Total Split (s)	19.0	39.0	39.0	18.2	38.2	38.2	17.0	36.8	26.0	45.8
Total Split (%)	15.8%	32.5%	32.5%	15.2%	31.8%	31.8%	14.2%	30.7%	21.7%	38.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.4	28.6	28.6	12.5	26.7	26.7	12.4	32.3	21.4	41.3
Actuated g/C Ratio	0.13	0.25	0.25	0.11	0.24	0.24	0.11	0.29	0.19	0.36
v/c Ratio	1.97	0.60	0.43	0.81	0.74	0.63	1.96	1.07	2.16	1.07
Control Delay (s/veh)	477.9	40.4	6.4	80.2	45.5	9.9	480.9	82.3	555.4	77.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	477.9	40.4	6.4	80.2	45.5	9.9	480.9	82.3	555.4	77.1
LOS	F	D	A	F	D	A	F	F	F	E
Approach Delay (s/veh)		185.2			37.6			158.0		201.2
Approach LOS		F			D			F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 113.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.16	
Intersection Signal Delay (s/veh): 158.9	Intersection LOS: F
Intersection Capacity Utilization 125.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 37: Archibald Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	406	521	242	144	595	391	349	1403	84	662	1350	540
Future Volume (veh/h)	406	521	242	144	595	391	349	1403	84	662	1350	540
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	427	548	181	152	626	358	367	1477	75	697	1421	542
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	903	396	179	814	354	191	1458	74	329	1363	511
Arrive On Green	0.13	0.25	0.25	0.10	0.23	0.23	0.11	0.29	0.29	0.19	0.37	0.37
Sat Flow, veh/h	1714	3610	1582	1714	3610	1570	1714	5051	256	1714	3691	1385
Grp Volume(v), veh/h	427	548	181	152	626	358	367	1011	541	697	1330	633
Grp Sat Flow(s),veh/h/ln	1714	1805	1582	1714	1805	1570	1714	1729	1850	1714	1729	1618
Q Serve(g_s), s	14.4	15.0	10.8	9.7	18.1	16.3	12.4	32.2	32.2	21.4	41.2	41.2
Cycle Q Clear(g_c), s	14.4	15.0	10.8	9.7	18.1	16.3	12.4	32.2	32.2	21.4	41.2	41.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.86
Lane Grp Cap(c), veh/h	221	903	396	179	814	354	191	998	534	329	1277	597
V/C Ratio(X)	1.93	0.61	0.46	0.85	0.77	1.01	1.93	1.01	1.01	2.12	1.04	1.06
Avail Cap(c_a), veh/h	221	1113	488	209	1087	473	191	998	534	329	1277	597
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	37.0	35.4	49.1	40.5	18.0	49.6	39.7	39.7	45.1	35.2	35.2
Incr Delay (d2), s/veh	434.7	0.7	0.8	21.5	2.4	40.3	435.6	31.8	42.3	514.0	36.6	53.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.6	6.4	4.1	5.1	7.9	9.3	28.1	17.2	20.0	55.6	22.4	23.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	483.3	37.6	36.2	70.6	42.9	58.4	485.2	71.5	82.0	559.1	71.8	88.9
LnGrp LOS	F	D	D	E	D	F	F	F	F	F	F	F
Approach Vol, veh/h		1156			1136			1919			2660	
Approach Delay, s/veh		202.0			51.5			153.6			203.6	
Approach LOS		F			D			F			F	

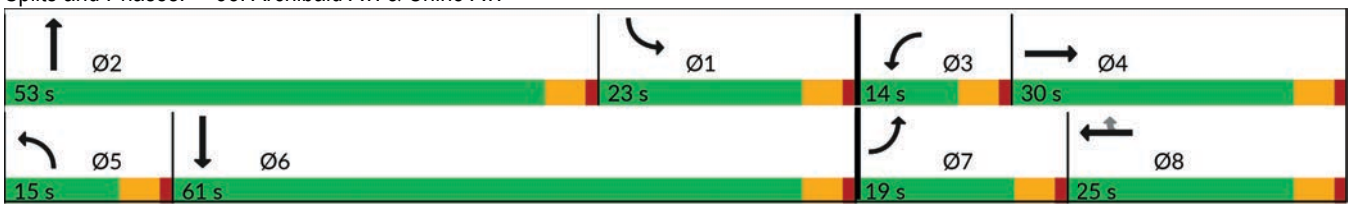
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	36.8	16.2	32.5	17.0	45.8	19.0	29.8
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	21.4	32.2	13.6	34.4	12.4	41.2	14.4	33.6
Max Q Clear Time (g_c+I1), s	23.4	34.2	11.7	17.0	14.4	43.2	16.4	20.1
Green Ext Time (p_c), s	0.0	0.0	0.0	3.6	0.0	0.0	0.0	4.2

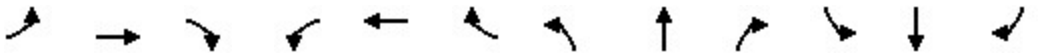
Intersection Summary	
HCM 7th Control Delay, s/veh	164.2
HCM 7th LOS	F

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	100	37	175	143	304	149	1195	175	1257
Future Volume (vph)	100	37	175	143	304	149	1195	175	1257
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	19.0	30.0	14.0	25.0	25.0	15.0	53.0	23.0	61.0
Total Split (%)	15.8%	25.0%	11.7%	20.8%	20.8%	12.5%	44.2%	19.2%	50.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.3	15.4	9.7	13.8	13.8	10.7	34.7	21.5	45.4
Actuated g/C Ratio	0.11	0.15	0.10	0.14	0.14	0.11	0.35	0.21	0.45
v/c Ratio	0.55	0.36	1.12	0.58	0.64	0.86	0.71	0.50	0.83
Control Delay (s/veh)	57.0	19.7	149.4	52.1	11.4	86.9	30.7	43.8	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.0	19.7	149.4	52.1	11.4	86.9	30.7	43.8	29.3
LOS	E	B	F	D	B	F	C	D	C
Approach Delay (s/veh)		37.4		59.6			36.4		31.0
Approach LOS		D		E			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay (s/veh): 38.0	Intersection LOS: D
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 38: Archibald Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	37	73	175	143	304	149	1195	132	175	1257	94
Future Volume (veh/h)	100	37	73	175	143	304	149	1195	132	175	1257	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	105	39	70	184	151	266	157	1258	132	184	1323	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	134	52	93	194	228	193	190	1794	188	389	1649	112
Arrive On Green	0.08	0.08	0.08	0.11	0.12	0.12	0.11	0.35	0.35	0.23	0.47	0.47
Sat Flow, veh/h	1714	609	1094	1714	1900	1610	1714	5072	532	1714	3513	238
Grp Volume(v), veh/h	105	0	109	184	151	266	157	942	448	184	714	699
Grp Sat Flow(s),veh/h/ln	1714	0	1703	1714	1900	1610	1714	1900	1804	1714	1900	1851
Q Serve(g_s), s	5.0	0.0	5.2	8.9	6.3	6.1	7.4	17.7	17.7	7.7	26.5	26.7
Cycle Q Clear(g_c), s	5.0	0.0	5.2	8.9	6.3	6.1	7.4	17.7	17.7	7.7	26.5	26.7
Prop In Lane	1.00		0.64	1.00		1.00	1.00		0.29	1.00		0.13
Lane Grp Cap(c), veh/h	134	0	144	194	228	193	190	1344	638	389	892	869
V/C Ratio(X)	0.78	0.00	0.76	0.95	0.66	1.38	0.82	0.70	0.70	0.47	0.80	0.80
Avail Cap(c_a), veh/h	297	0	521	194	467	396	215	2215	1052	389	1290	1257
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	0.0	37.2	36.6	34.9	13.9	36.1	23.1	23.1	27.8	18.7	18.8
Incr Delay (d2), s/veh	9.6	0.0	7.8	49.8	3.3	186.0	20.4	0.7	1.4	0.9	2.4	2.5
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(50%),veh/ln	2.4	0.0	2.4	6.2	3.0	13.5	3.9	6.9	6.7	3.0	10.2	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.2	0.0	45.0	86.3	38.2	199.9	56.5	23.7	24.5	28.7	21.1	21.3
LnGrp LOS	D		D	F	D	F	E	C	C	C	C	C
Approach Vol, veh/h		214			601			1547			1597	
Approach Delay, s/veh		46.1			124.5			27.3			22.0	
Approach LOS		D			F			C			C	

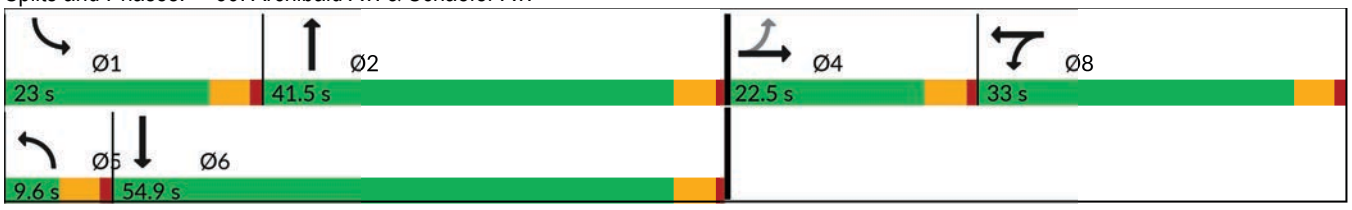
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.4	34.0	14.0	11.6	13.8	43.6	11.1	14.5
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	48.4	9.4	25.4	10.4	56.4	14.4	20.4
Max Q Clear Time (g_c+I1), s	9.7	19.7	10.9	7.2	9.4	28.7	7.0	8.3
Green Ext Time (p_c), s	0.3	9.7	0.0	0.4	0.0	10.3	0.1	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	40.9
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	325	113	66	89	167	1453	139	1238
Future Volume (vph)	325	113	66	89	167	1453	139	1238
Turn Type	Perm	NA	Split	NA	Prot	NA	Prot	NA
Protected Phases		4	8	8	5	2	1	6
Permitted Phases	4							
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	22.5	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	22.5	22.5	33.0	33.0	9.6	41.5	23.0	54.9
Total Split (%)	18.8%	18.8%	27.5%	27.5%	8.0%	34.6%	19.2%	45.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		18.0	14.1	14.1	5.0	42.6	13.0	50.5
Actuated g/C Ratio		0.17	0.13	0.13	0.05	0.40	0.12	0.48
v/c Ratio		9.11	0.30	0.55	2.20	0.76	0.70	1.00
Control Delay (s/veh)		Error	43.9	44.4	599.0	32.0	63.2	49.3
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		Error	43.9	44.4	599.0	32.0	63.2	49.3
LOS		F	D	D	F	C	E	D
Approach Delay (s/veh)		3676.2		44.2		88.8		50.4
Approach LOS		F		D		F		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 9.11	
Intersection Signal Delay (s/veh): 536.3	Intersection LOS: F
Intersection Capacity Utilization 107.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	113	99	66	89	44	167	1453	49	139	1238	353
Future Volume (veh/h)	325	113	99	66	89	44	167	1453	49	139	1238	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	342	119	104	69	94	44	176	1529	49	146	1303	372
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	190	66	58	174	124	58	84	2269	73	176	1374	383
Arrive On Green	0.18	0.18	0.18	0.10	0.10	0.10	0.05	0.44	0.44	0.10	0.49	0.49
Sat Flow, veh/h	1082	376	329	1714	1224	573	1714	5163	165	1714	2789	776
Grp Volume(v), veh/h	565	0	0	69	0	138	176	1024	554	146	832	843
Grp Sat Flow(s),veh/h/ln	1787	0	0	1714	0	1797	1714	1729	1870	1714	1805	1760
Q Serve(g_s), s	17.9	0.0	0.0	3.8	0.0	7.6	5.0	24.0	24.0	8.5	44.1	47.5
Cycle Q Clear(g_c), s	17.9	0.0	0.0	3.8	0.0	7.6	5.0	24.0	24.0	8.5	44.1	47.5
Prop In Lane	0.61		0.18	1.00		0.32	1.00		0.09	1.00		0.44
Lane Grp Cap(c), veh/h	314	0	0	174	0	183	84	1519	822	176	889	867
V/C Ratio(X)	1.80	0.00	0.00	0.40	0.00	0.76	2.09	0.67	0.67	0.83	0.94	0.97
Avail Cap(c_a), veh/h	314	0	0	478	0	501	84	1519	822	310	892	870
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	42.0	0.0	0.0	42.8	0.0	44.5	48.4	22.7	22.7	44.8	24.3	25.1
Incr Delay (d2), s/veh	371.9	0.0	0.0	1.5	0.0	6.2	528.9	1.2	2.2	3.9	16.6	23.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.0	0.0	0.0	1.6	0.0	3.6	14.4	8.9	9.8	3.6	20.0	22.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	413.9	0.0	0.0	44.3	0.0	50.7	577.3	23.9	24.9	48.7	40.9	49.0
LnGrp LOS	F			D		D	F	C	C	D	D	D
Approach Vol, veh/h		565			207			1754			1821	
Approach Delay, s/veh		413.9			48.6			79.8			45.3	
Approach LOS		F			D			E			D	

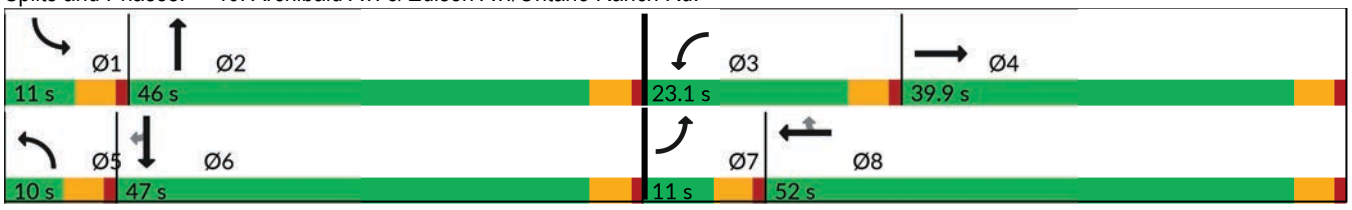
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	49.3		22.5	9.6	54.8		14.9				
Change Period (Y+Rc), s	4.6	4.6		4.6	4.6	4.6		4.6				
Max Green Setting (Gmax), s	18.4	36.9		17.9	5.0	50.3		28.4				
Max Q Clear Time (g_c+I1), s	10.5	26.0		19.9	7.0	49.5		9.6				
Green Ext Time (p_c), s	0.1	6.6		0.0	0.0	0.7		0.8				

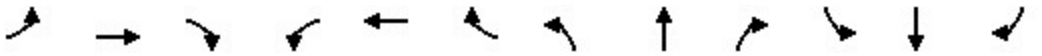
Intersection Summary		
HCM 7th Control Delay, s/veh		107.3
HCM 7th LOS		F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	1189	259	372	1146	243	117	902	386	220	848	197
Future Volume (vph)	309	1189	259	372	1146	243	117	902	386	220	848	197
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	11.0	39.9		23.1	52.0	52.0	10.0	46.0		11.0	47.0	47.0
Total Split (%)	9.2%	33.3%		19.3%	43.3%	43.3%	8.3%	38.3%		9.2%	39.2%	39.2%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	6.4	36.9	114.4	17.0	47.5	47.5	5.4	35.6	114.4	6.4	36.6	36.6
Actuated g/C Ratio	0.06	0.32	1.00	0.15	0.42	0.42	0.05	0.31	1.00	0.06	0.32	0.32
v/c Ratio	1.86	0.75	0.17	0.84	1.53	0.35	1.54	0.85	0.25	2.42	0.77	0.34
Control Delay (s/veh)	436.4	39.0	0.2	64.9	272.2	14.3	328.5	44.6	0.4	696.3	40.1	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	436.4	39.0	0.2	64.9	272.2	14.3	328.5	44.6	0.4	696.3	40.1	11.4
LOS	F	D	A	E	F	B	F	D	A	F	D	B
Approach Delay (s/veh)		103.1			192.8			56.1			150.0	
Approach LOS		F			F			E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.42	
Intersection Signal Delay (s/veh): 127.5	Intersection LOS: F
Intersection Capacity Utilization 123.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 40: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	1189	259	372	1146	243	117	902	386	220	848	197
Future Volume (veh/h)	309	1189	259	372	1146	243	117	902	386	220	848	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	325	1252	0	392	1206	227	123	949	0	232	893	188
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	179	1758		443	804	681	83	1078		98	1110	495
Arrive On Green	0.09	0.51	0.00	0.21	0.63	0.63	0.07	0.45	0.00	0.09	0.46	0.46
Sat Flow, veh/h	3141	5187	1610	3141	1900	1610	1714	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	325	1252	0	392	1206	227	123	949	0	232	893	188
Grp Sat Flow(s),veh/h/ln	1570	1729	1610	1570	1900	1610	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	6.4	20.8	0.0	13.6	47.4	7.3	5.4	26.9	0.0	6.4	23.7	8.5
Cycle Q Clear(g_c), s	6.4	20.8	0.0	13.6	47.4	7.3	5.4	26.9	0.0	6.4	23.7	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	1758		443	804	681	83	1078		98	1110	495
V/C Ratio(X)	1.81	0.71		0.88	1.50	0.33	1.49	0.88		2.37	0.80	0.38
Avail Cap(c_a), veh/h	179	1758		518	804	681	83	1334		98	1366	609
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.2	23.3	0.0	43.3	20.5	13.2	52.0	29.1	0.0	51.2	27.3	23.2
Incr Delay (d2), s/veh	386.5	1.4	0.0	13.6	231.9	0.3	273.5	6.0	0.0	646.7	2.9	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(50%),veh/ln	12.0	6.6	0.0	5.5	64.3	2.3	8.4	9.7	0.0	20.1	8.1	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	437.8	24.7	0.0	56.9	252.3	13.4	325.5	35.1	0.0	698.0	30.2	23.7
LnGrp LOS	F	C		E	F	B	F	D		F	C	C
Approach Vol, veh/h		1577			1825			1072			1313	
Approach Delay, s/veh		109.8			180.6			68.5			147.3	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	38.1	20.4	42.6	10.0	39.1	11.0	52.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	6.4	41.4	18.5	35.3	5.4	42.4	6.4	47.4
Max Q Clear Time (g_c+I1), s	8.4	28.9	15.6	22.8	7.4	25.7	8.4	49.4
Green Ext Time (p_c), s	0.0	4.6	0.2	6.2	0.0	5.6	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	133.0
HCM 7th LOS	F

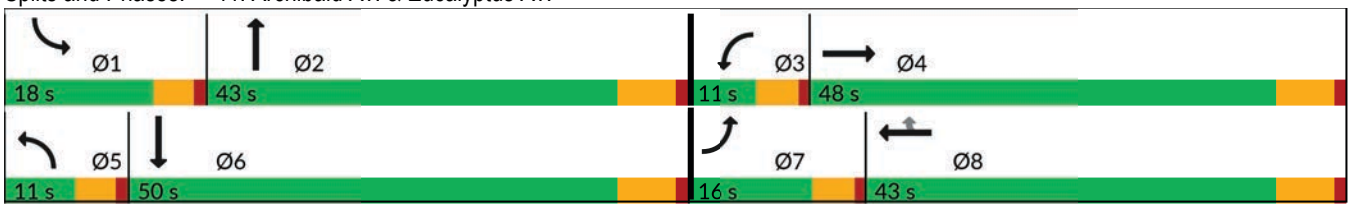
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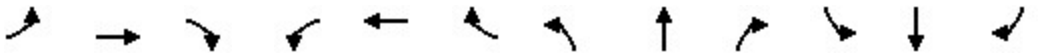
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	274	369	106	122	72	146	1164	142	1046
Future Volume (vph)	274	369	106	122	72	146	1164	142	1046
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	42.2	9.6	42.2	42.2	9.6	32.2	9.6	32.2
Total Split (s)	16.0	48.0	11.0	43.0	43.0	11.0	43.0	18.0	50.0
Total Split (%)	13.3%	40.0%	9.2%	35.8%	35.8%	9.2%	35.8%	15.0%	41.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.7	28.8	6.4	23.5	23.5	6.6	31.2	9.3	33.9
Actuated g/C Ratio	0.12	0.29	0.07	0.24	0.24	0.07	0.32	0.10	0.35
v/c Ratio	0.77	0.78	0.55	0.15	0.14	0.73	0.62	0.50	0.76
Control Delay (s/veh)	59.4	31.3	59.4	30.0	0.6	69.3	30.4	50.9	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.4	31.3	59.4	30.0	0.6	69.3	30.4	50.9	30.9
LOS	E	C	E	C	A	E	C	D	C
Approach Delay (s/veh)		38.4		33.3			34.6		32.8
Approach LOS		D		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.8	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay (s/veh): 34.9	Intersection LOS: C
Intersection Capacity Utilization 76.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 41: Archibald Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	274	369	436	106	122	72	146	1164	51	142	1046	244
Future Volume (veh/h)	274	369	436	106	122	72	146	1164	51	142	1046	244
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
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	1700	1900	1900	1700	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	288	388	457	112	128	38	154	1225	40	149	1101	229
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	347	596	531	166	984	433	205	2160	70	210	1423	296
Arrive On Green	0.11	0.33	0.33	0.05	0.27	0.27	0.07	0.33	0.33	0.07	0.33	0.33
Sat Flow, veh/h	3141	1805	1610	3141	3610	1588	3141	6547	213	3141	4291	892
Grp Volume(v), veh/h	288	388	457	112	128	38	154	917	348	149	887	443
Grp Sat Flow(s),veh/h/ln	1570	1805	1610	1570	1805	1588	1570	1634	1858	1570	1729	1725
Q Serve(g_s), s	8.8	18.0	26.0	3.4	2.6	1.7	4.7	15.1	15.2	4.6	22.6	22.6
Cycle Q Clear(g_c), s	8.8	18.0	26.0	3.4	2.6	1.7	4.7	15.1	15.2	4.6	22.6	22.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		0.52
Lane Grp Cap(c), veh/h	347	596	531	166	984	433	205	1617	613	210	1147	572
V/C Ratio(X)	0.83	0.65	0.86	0.67	0.13	0.09	0.75	0.57	0.57	0.71	0.77	0.77
Avail Cap(c_a), veh/h	365	769	686	205	1354	596	205	1839	697	429	1544	770
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	28.0	30.7	45.6	26.9	26.6	45.1	27.1	27.1	44.8	29.5	29.5
Incr Delay (d2), s/veh	13.2	1.2	8.7	3.6	0.1	0.1	12.9	0.3	0.8	1.7	1.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	7.5	10.7	1.4	1.1	0.6	2.1	5.4	6.2	1.7	8.7	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.9	29.3	39.4	49.2	27.0	26.7	58.0	27.4	27.9	46.5	31.2	33.0
LnGrp LOS	E	C	D	D	C	C	E	C	C	D	C	C
Approach Vol, veh/h		1133			278			1419			1479	
Approach Delay, s/veh		40.1			35.9			30.8			33.3	
Approach LOS		D			D			C			C	

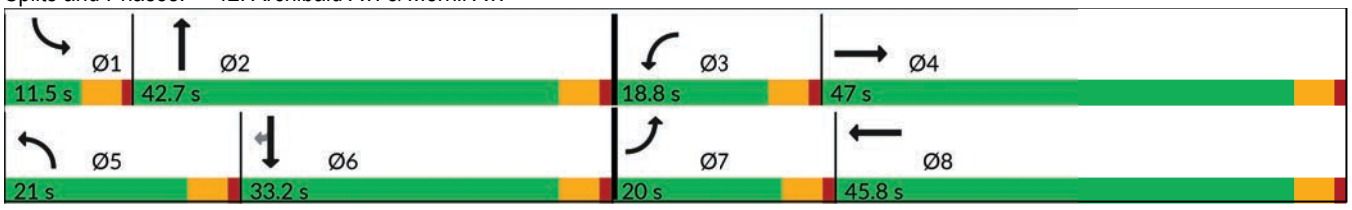
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	38.6	9.8	38.6	11.0	38.7	15.4	32.9
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	13.4	36.8	6.4	41.8	6.4	43.8	11.4	36.8
Max Q Clear Time (g_c+I1), s	6.6	17.2	5.4	28.0	6.7	24.6	10.8	4.6
Green Ext Time (p_c), s	0.1	7.4	0.0	4.3	0.0	7.9	0.0	0.8

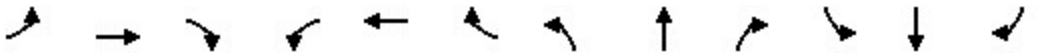
Intersection Summary	
HCM 7th Control Delay, s/veh	34.5
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	598	405	677	141	200	630	668	73	832	449
Future Volume (vph)	598	405	677	141	200	630	668	73	832	449
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2	1	6	
Permitted Phases			Free							6
Detector Phase	7	4		3	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	44.8		9.6	45.8	9.6	32.5	9.6	31.5	31.5
Total Split (s)	20.0	47.0		18.8	45.8	21.0	42.7	11.5	33.2	33.2
Total Split (%)	16.7%	39.2%		15.7%	38.2%	17.5%	35.6%	9.6%	27.7%	27.7%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	None	None
Act Effct Green (s)	15.6	20.1	96.1	12.6	17.1	16.6	40.4	6.7	28.1	28.1
Actuated g/C Ratio	0.16	0.21	1.00	0.13	0.18	0.17	0.42	0.07	0.29	0.29
v/c Ratio	1.20	0.54	0.45	0.66	0.39	1.19	0.27	0.34	0.79	0.59
Control Delay (s/veh)	143.9	36.1	0.9	56.5	31.0	138.2	19.4	50.2	38.6	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	143.9	36.1	0.9	56.5	31.0	138.2	19.4	50.2	38.6	6.8
LOS	F	D	A	E	C	F	B	D	D	A
Approach Delay (s/veh)		60.3			40.1		71.4		28.7	
Approach LOS		E			D		E		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay (s/veh): 53.1	Intersection LOS: D
Intersection Capacity Utilization 88.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 42: Archibald Av. & Merrill Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	598	405	677	141	200	54	630	668	141	73	832	449
Future Volume (veh/h)	598	405	677	141	200	54	630	668	141	73	832	449
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	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	1700	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	629	426	0	148	211	37	663	703	100	77	876	447
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	564	740		180	395	68	601	2896	400	156	1165	493
Arrive On Green	0.26	0.29	0.00	0.16	0.19	0.19	0.28	0.67	0.67	0.07	0.46	0.46
Sat Flow, veh/h	3238	3800	1610	1714	3148	541	3238	6521	902	3238	3800	1609
Grp Volume(v), veh/h	629	426	0	148	126	122	663	612	191	77	876	447
Grp Sat Flow(s),veh/h/ln	1619	1900	1610	1714	1900	1789	1619	1900	1723	1619	1900	1609
Q Serve(g_s), s	15.4	8.4	0.0	7.4	5.3	5.5	16.4	3.8	3.9	2.0	16.8	22.7
Cycle Q Clear(g_c), s	15.4	8.4	0.0	7.4	5.3	5.5	16.4	3.8	3.9	2.0	16.8	22.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	564	740		180	238	224	601	2531	765	156	1165	493
V/C Ratio(X)	1.11	0.58		0.82	0.53	0.55	1.10	0.24	0.25	0.50	0.75	0.91
Avail Cap(c_a), veh/h	564	1823		275	886	834	601	2531	765	253	1230	521
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	28.2	0.0	36.4	33.5	33.6	31.9	8.8	8.9	40.0	21.1	22.7
Incr Delay (d2), s/veh	73.4	0.7	0.0	11.2	1.8	2.1	68.3	0.0	0.2	2.4	2.5	19.0
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(50%),veh/ln	10.8	3.4	0.0	3.3	2.3	2.3	10.8	1.3	1.2	0.8	5.8	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	106.1	28.9	0.0	47.6	35.3	35.7	100.2	8.9	9.0	42.4	23.6	41.7
LnGrp LOS	F	C		D	D	D	F	A	A	D	C	D
Approach Vol, veh/h		1055			396			1466			1400	
Approach Delay, s/veh		74.9			40.0			50.2			30.4	
Approach LOS		E			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	43.8	13.9	21.8	21.0	31.7	20.0	15.7
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	6.9	38.1	14.2	42.4	16.4	28.6	15.4	41.2
Max Q Clear Time (g_c+I1), s	4.0	5.9	9.4	10.4	18.4	24.7	17.4	7.5
Green Ext Time (p_c), s	0.0	5.0	0.1	2.7	0.0	2.3	0.0	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	48.9
HCM 7th LOS	D

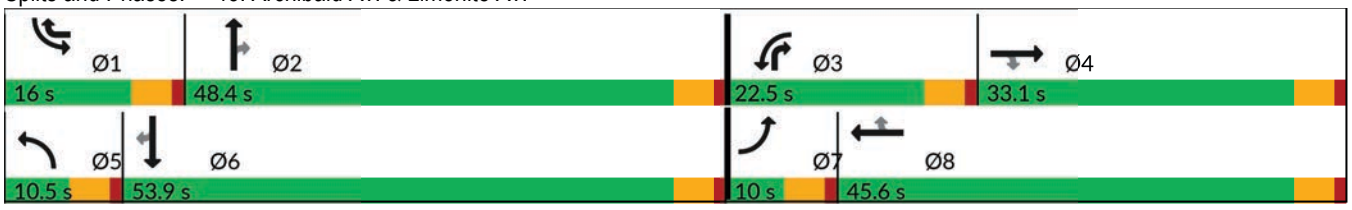
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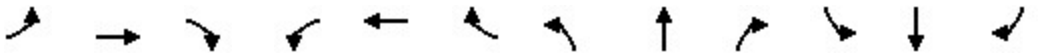
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	770	84	431	706	564	62	521	326	558	741	200
Future Volume (vph)	194	770	84	431	706	564	62	521	326	558	741	200
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	3	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.6	14.6	14.6	9.6	45.6	9.6	9.6	47.6	9.6	9.6	37.6	37.6
Total Split (s)	10.0	33.1	33.1	22.5	45.6	16.0	10.5	48.4	22.5	16.0	53.9	53.9
Total Split (%)	8.3%	27.6%	27.6%	18.8%	38.0%	13.3%	8.8%	40.3%	18.8%	13.3%	44.9%	44.9%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.5	26.0	26.0	17.4	37.9	49.5	5.7	22.0	39.4	11.6	30.2	30.2
Actuated g/C Ratio	0.06	0.27	0.27	0.18	0.40	0.52	0.06	0.23	0.41	0.12	0.32	0.32
v/c Ratio	1.10	0.79	0.15	0.77	0.49	0.35	0.34	0.63	0.48	1.50	0.43	0.33
Control Delay (s/veh)	140.6	39.9	0.6	49.1	24.2	7.3	52.5	36.2	14.3	269.9	27.4	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	140.6	39.9	0.6	49.1	24.2	7.3	52.5	36.2	14.3	269.9	27.4	6.2
LOS	F	D	A	D	C	A	D	D	B	F	C	A
Approach Delay (s/veh)		55.4			24.9			29.5			114.8	
Approach LOS		E			C			C			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.50	
Intersection Signal Delay (s/veh): 58.0	Intersection LOS: E
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 43: Archibald Av. & Limonite Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	770	84	431	706	564	62	521	326	558	741	200
Future Volume (veh/h)	194	770	84	431	706	564	62	521	326	558	741	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1700	1900	1900	1700	1900	1800	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	204	811	88	454	743	594	65	548	185	587	780	211
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	214	1002	425	531	1374	1528	153	788	590	452	1708	483
Arrive On Green	0.10	0.40	0.40	0.25	0.54	0.54	0.07	0.31	0.31	0.21	0.45	0.45
Sat Flow, veh/h	3238	3800	1610	3238	3800	3048	3238	3800	1573	3238	5700	1610
Grp Volume(v), veh/h	204	811	88	454	743	594	65	548	185	587	780	211
Grp Sat Flow(s),veh/h/ln	1619	1900	1610	1619	1900	1524	1619	1900	1573	1619	1900	1610
Q Serve(g_s), s	5.1	15.5	2.9	10.9	10.3	8.0	1.6	10.4	6.4	11.4	7.7	7.3
Cycle Q Clear(g_c), s	5.1	15.5	2.9	10.9	10.3	8.0	1.6	10.4	6.4	11.4	7.7	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	214	1002	425	531	1374	1528	153	788	590	452	1708	483
V/C Ratio(X)	0.95	0.81	0.21	0.86	0.54	0.39	0.43	0.70	0.31	1.30	0.46	0.44
Avail Cap(c_a), veh/h	214	1327	562	710	1909	1957	234	2039	1108	452	3443	973
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	22.8	19.0	29.9	14.3	8.7	36.9	25.9	15.8	32.3	17.9	17.7
Incr Delay (d2), s/veh	47.6	2.9	0.2	6.2	0.3	0.2	0.7	1.1	0.3	149.6	0.2	0.6
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(50%),veh/ln	3.3	5.7	1.0	4.1	3.4	1.9	0.6	3.9	2.0	13.1	2.7	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	84.2	25.7	19.3	36.0	14.6	8.9	37.6	27.0	16.1	181.9	18.1	18.4
LnGrp LOS	F	C	B	D	B	A	D	C	B	F	B	B
Approach Vol, veh/h		1103			1791			798			1578	
Approach Delay, s/veh		36.0			18.1			25.3			79.0	
Approach LOS		D			B			C			E	

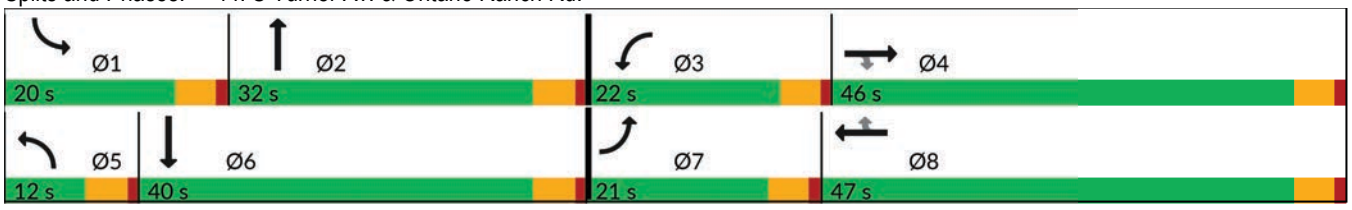
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	21.5	18.0	26.1	8.5	29.1	10.0	34.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	11.4	43.8	17.9	28.5	5.9	49.3	5.4	41.0
Max Q Clear Time (g_c+I1), s	13.4	12.4	12.9	17.5	3.6	9.7	7.1	12.3
Green Ext Time (p_c), s	0.0	4.0	0.5	4.0	0.0	6.0	0.0	8.2

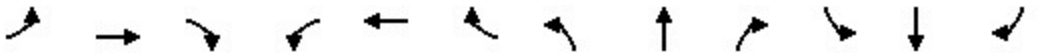
Intersection Summary	
HCM 7th Control Delay, s/veh	41.2
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	219	1714	228	187	1656	179	281	344	224	386
Future Volume (vph)	219	1714	228	187	1656	179	281	344	224	386
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.8	23.8	9.6	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	21.0	46.0	46.0	22.0	47.0	47.0	12.0	32.0	20.0	40.0
Total Split (%)	17.5%	38.3%	38.3%	18.3%	39.2%	39.2%	10.0%	26.7%	16.7%	33.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.4	42.7	42.7	16.1	42.4	42.4	7.4	27.4	15.4	35.4
Actuated g/C Ratio	0.14	0.36	0.36	0.13	0.35	0.35	0.06	0.23	0.13	0.30
v/c Ratio	0.99	1.33	0.36	0.86	1.30	0.28	2.82	1.37	1.08	1.33
Control Delay (s/veh)	109.0	188.5	13.7	83.3	173.7	7.3	865.1	214.8	132.3	195.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	109.0	188.5	13.7	83.3	173.7	7.3	865.1	214.8	132.3	195.8
LOS	F	F	B	F	F	A	F	F	F	F
Approach Delay (s/veh)		162.0			150.6			434.3		180.2
Approach LOS		F			F			F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.82	
Intersection Signal Delay (s/veh): 199.2	Intersection LOS: F
Intersection Capacity Utilization 129.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1714	228	187	1656	179	281	344	208	224	386	302
Future Volume (veh/h)	219	1714	228	187	1656	179	281	344	208	224	386	302
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	231	1804	232	197	1743	185	296	362	193	236	406	306
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	234	1368	580	223	1343	569	106	266	142	220	295	222
Arrive On Green	0.14	0.36	0.36	0.13	0.35	0.35	0.06	0.23	0.23	0.13	0.30	0.30
Sat Flow, veh/h	1714	3800	1610	1714	3800	1610	1714	1165	621	1714	998	753
Grp Volume(v), veh/h	231	1804	232	197	1743	185	296	0	555	236	0	712
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	1900	1610	1714	0	1786	1714	0	1751
Q Serve(g_s), s	16.1	43.2	12.9	13.6	42.4	10.1	7.4	0.0	27.4	15.4	0.0	35.4
Cycle Q Clear(g_c), s	16.1	43.2	12.9	13.6	42.4	10.1	7.4	0.0	27.4	15.4	0.0	35.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		0.43
Lane Grp Cap(c), veh/h	234	1368	580	223	1343	569	106	0	408	220	0	517
V/C Ratio(X)	0.99	1.32	0.40	0.88	1.30	0.33	2.80	0.00	1.36	1.07	0.00	1.38
Avail Cap(c_a), veh/h	234	1368	580	249	1343	569	106	0	408	220	0	517
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.7	38.4	28.7	51.3	38.8	28.3	56.3	0.0	46.3	52.3	0.0	42.3
Incr Delay (d2), s/veh	54.6	148.5	0.4	25.7	139.8	0.3	835.7	0.0	177.6	81.3	0.0	182.1
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(50%),veh/ln	10.3	47.2	4.9	7.3	44.8	3.8	27.7	0.0	31.8	11.4	0.0	40.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	106.2	186.9	29.1	77.0	178.6	28.7	892.0	0.0	223.9	133.6	0.0	224.4
LnGrp LOS	F	F	C	E	F	C	F		F	F		F
Approach Vol, veh/h		2267			2125			851			948	
Approach Delay, s/veh		162.5			156.1			456.2			201.8	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	32.0	20.2	47.8	12.0	40.0	21.0	47.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.4	27.4	17.4	41.4	7.4	35.4	16.4	42.4
Max Q Clear Time (g_c+I1), s	17.4	29.4	15.6	45.2	9.4	37.4	18.1	44.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

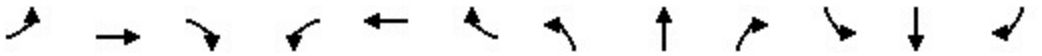
Intersection Summary	
HCM 7th Control Delay, s/veh	206.7
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	1546	192	398	1629	268	86	459	167	272	460	75
Future Volume (vph)	235	1546	192	398	1629	268	86	459	167	272	460	75
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	34.5	34.5	9.6	47.8	47.8	9.6	45.8	45.8
Total Split (s)	16.0	35.0	35.0	16.0	35.0	35.0	14.2	51.0	51.0	18.0	54.8	54.8
Total Split (%)	13.3%	29.2%	29.2%	13.3%	29.2%	29.2%	11.8%	42.5%	42.5%	15.0%	45.7%	45.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.5	30.6	30.6	11.5	30.6	30.6	8.6	32.7	32.7	13.5	37.5	37.5
Actuated g/C Ratio	0.11	0.29	0.29	0.11	0.29	0.29	0.08	0.31	0.31	0.13	0.35	0.35
v/c Ratio	1.35	1.09	0.36	1.25	0.92	0.44	0.66	0.83	0.29	1.32	0.72	0.13
Control Delay (s/veh)	226.5	90.8	12.0	174.2	46.5	6.3	72.3	47.1	4.9	213.4	36.9	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	226.5	90.8	12.0	174.2	46.5	6.3	72.3	47.1	4.9	213.4	36.9	3.2
LOS	F	F	B	F	D	A	E	D	A	F	D	A
Approach Delay (s/veh)		99.3			64.0			40.3			93.2	
Approach LOS		F			E			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay (s/veh): 77.2	Intersection LOS: E
Intersection Capacity Utilization 98.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 45: Haven Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	235	1546	192	398	1629	268	86	459	167	272	460	75
Future Volume (veh/h)	235	1546	192	398	1629	268	86	459	167	272	460	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	247	1627	176	419	1715	199	91	483	132	286	484	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	188	1520	472	345	1916	467	114	552	468	221	671	565
Arrive On Green	0.11	0.29	0.29	0.11	0.29	0.29	0.07	0.29	0.29	0.13	0.35	0.35
Sat Flow, veh/h	1714	5187	1610	3141	6536	1594	1714	1900	1610	1714	1900	1601
Grp Volume(v), veh/h	247	1627	176	419	1715	199	91	483	132	286	484	61
Grp Sat Flow(s),veh/h/ln	1714	1729	1610	1570	1634	1594	1714	1900	1610	1714	1900	1601
Q Serve(g_s), s	11.4	30.4	9.0	11.4	26.1	10.5	5.4	25.1	6.6	13.4	22.9	2.7
Cycle Q Clear(g_c), s	11.4	30.4	9.0	11.4	26.1	10.5	5.4	25.1	6.6	13.4	22.9	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	188	1520	472	345	1916	467	114	552	468	221	671	565
V/C Ratio(X)	1.31	1.07	0.37	1.21	0.90	0.43	0.80	0.88	0.28	1.29	0.72	0.11
Avail Cap(c_a), veh/h	188	1520	472	345	1916	467	159	850	720	221	920	775
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	36.7	29.1	46.2	35.1	29.6	47.7	35.0	28.4	45.2	29.1	22.6
Incr Delay (d2), s/veh	172.6	44.4	0.5	119.9	6.0	0.6	11.9	6.6	0.3	160.6	1.8	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(50%),veh/ln	13.7	18.1	0.1	9.9	10.3	3.8	2.6	11.9	2.4	15.4	10.1	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	218.8	81.1	29.6	166.1	41.1	30.2	59.6	41.6	28.8	205.7	30.9	22.6
LnGrp LOS	F	F	C	F	D	C	E	D	C	F	C	C
Approach Vol, veh/h		2050			2333			706			831	
Approach Delay, s/veh		93.3			62.6			41.5			90.5	
Approach LOS		F			E			D			F	

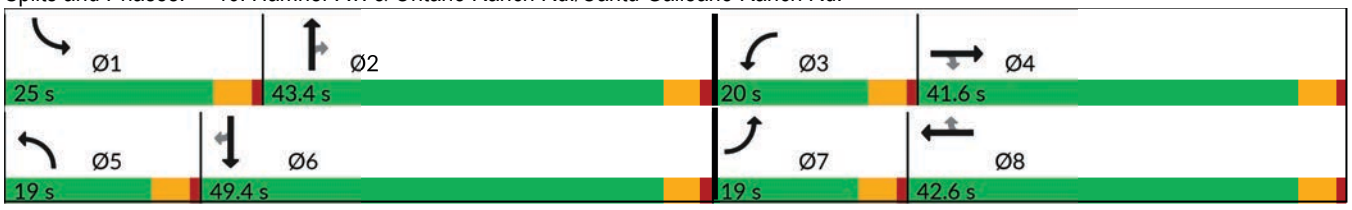
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	34.7	16.0	35.0	11.5	41.2	16.0	35.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	13.4	46.4	11.4	30.4	9.6	50.2	11.4	30.4
Max Q Clear Time (g_c+I1), s	15.4	27.1	13.4	32.4	7.4	24.9	13.4	28.1
Green Ext Time (p_c), s	0.0	3.0	0.0	0.0	0.0	3.0	0.0	2.0

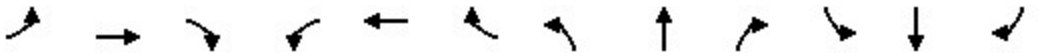
Intersection Summary	
HCM 7th Control Delay, s/veh	74.6
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	404	1203	298	431	1642	366	403	898	347	609	1385	750
Future Volume (vph)	404	1203	298	431	1642	366	403	898	347	609	1385	750
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6
Total Split (s)	19.0	41.6	41.6	20.0	42.6	42.6	19.0	43.4	43.4	25.0	49.4	49.4
Total Split (%)	14.6%	32.0%	32.0%	15.4%	32.8%	32.8%	14.6%	33.4%	33.4%	19.2%	38.0%	38.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.4	37.0	37.0	15.4	38.0	38.0	14.4	38.8	38.8	20.4	44.8	44.8
Actuated g/C Ratio	0.11	0.28	0.28	0.12	0.29	0.29	0.11	0.30	0.30	0.16	0.34	0.34
v/c Ratio	1.19	0.78	0.51	1.19	1.04	0.59	1.19	0.56	0.57	1.27	0.74	1.12
Control Delay (s/veh)	158.9	46.8	13.8	156.6	77.1	16.5	158.0	39.9	16.8	179.1	40.3	99.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	158.9	46.8	13.8	156.6	77.1	16.5	158.0	39.9	16.8	179.1	40.3	99.2
LOS	F	D	B	F	E	B	F	D	B	F	D	F
Approach Delay (s/veh)		65.4			82.1			63.9			87.2	
Approach LOS		E			F			E			F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay (s/veh): 76.6	Intersection LOS: E
Intersection Capacity Utilization 102.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 46: Hamner Av. & Ontario Ranch Rd./Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	1203	298	431	1642	366	403	898	347	609	1385	750
Future Volume (veh/h)	404	1203	298	431	1642	366	403	898	347	609	1385	750
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
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	1700	1900	1900	1700	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	425	1266	177	454	1728	227	424	945	186	641	1458	421
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	373	1689	477	399	1734	483	373	1537	429	529	1811	505
Arrive On Green	0.17	0.44	0.44	0.18	0.46	0.46	0.17	0.40	0.40	0.25	0.48	0.48
Sat Flow, veh/h	3238	5700	1609	3238	5700	1588	3238	5700	1590	3238	5700	1588
Grp Volume(v), veh/h	425	1266	177	454	1728	227	424	945	186	641	1458	421
Grp Sat Flow(s),veh/h/ln	1619	1900	1609	1619	1900	1588	1619	1900	1590	1619	1900	1588
Q Serve(g_s), s	14.4	23.1	9.1	15.4	37.7	12.3	14.4	16.4	10.6	20.4	27.1	28.8
Cycle Q Clear(g_c), s	14.4	23.1	9.1	15.4	37.7	12.3	14.4	16.4	10.6	20.4	27.1	28.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	373	1689	477	399	1734	483	373	1537	429	529	1811	505
V/C Ratio(X)	1.14	0.75	0.37	1.14	1.00	0.47	1.14	0.61	0.43	1.21	0.80	0.83
Avail Cap(c_a), veh/h	373	1689	477	399	1734	483	373	1771	494	529	2045	570
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	30.8	27.0	50.9	33.9	27.0	51.6	32.0	30.3	47.1	29.4	29.8
Incr Delay (d2), s/veh	89.7	1.9	0.5	87.9	20.7	0.7	88.8	0.5	0.7	111.9	2.2	9.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	8.7	3.2	10.4	16.9	4.1	9.9	6.5	3.7	15.4	10.2	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	141.4	32.7	27.4	138.8	54.6	27.7	140.4	32.5	31.0	159.0	31.6	39.2
LnGrp LOS	F	C	C	F	D	C	F	C	C	F	C	D
Approach Vol, veh/h		1868			2409			1555			2520	
Approach Delay, s/veh		57.0			67.9			61.8			65.3	
Approach LOS		E			E			E			E	

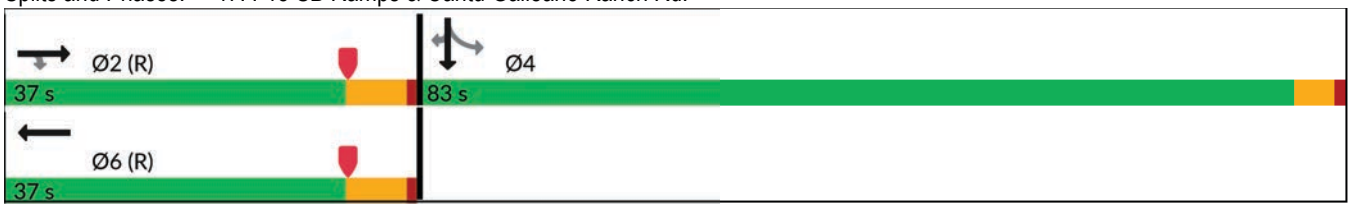
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	38.3	20.0	41.6	19.0	44.3	19.0	42.6
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	20.4	38.8	15.4	37.0	14.4	44.8	14.4	38.0
Max Q Clear Time (g_c+I1), s	22.4	18.4	17.4	25.1	16.4	30.8	16.4	39.7
Green Ext Time (p_c), s	0.0	6.5	0.0	6.4	0.0	8.9	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	63.5
HCM 7th LOS	E

Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1767	873	1200	591	332	0	1880
Future Volume (vph)	1767	873	1200	591	332	0	1880
Turn Type	NA	Perm	NA	Free	Perm	NA	Perm
Protected Phases	2		6			4	
Permitted Phases		2		Free	4		4
Detector Phase	2	2	6		4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	37.0	37.0	37.0		83.0	83.0	83.0
Total Split (%)	30.8%	30.8%	30.8%		69.2%	69.2%	69.2%
Yellow Time (s)	5.5	5.5	5.5		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5		4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	C-Min	C-Min	C-Min		Min	Min	Min
Act Effct Green (s)	30.7	30.7	30.7	120.0	78.2	78.2	78.2
Actuated g/C Ratio	0.26	0.26	0.26	1.00	0.65	0.65	0.65
v/c Ratio	1.28	1.03	1.30	0.39	0.28	0.94	0.95
Control Delay (s/veh)	167.3	51.7	181.4	0.8	9.7	36.0	37.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	11.2	0.0
Total Delay (s/veh)	167.3	51.7	181.4	0.8	9.7	47.3	37.3
LOS	F	D	F	A	A	D	D
Approach Delay (s/veh)	129.1		121.8			37.9	
Approach LOS	F		F			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 8.1 (7%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay (s/veh): 96.7	Intersection LOS: F
Intersection Capacity Utilization 120.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 47: I-15 SB Ramps & Cantu Galleano Ranch Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	1767	873	0	1200	591	0	0	0	332	0	1880
Future Volume (veh/h)	0	1767	873	0	1200	591	0	0	0	332	0	1880
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
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	0	1900	1900	0	1900	1900				1800	1900	1900
Adj Flow Rate, veh/h	0	1860	0	0	1263	0				233	0	1683
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1935		0	1290					974	0	1829
Arrive On Green	0.00	0.34	0.00	0.00	0.45	0.00				0.57	0.00	0.57
Sat Flow, veh/h	0	5700	1610	0	3800	1610				1714	0	3220
Grp Volume(v), veh/h	0	1860	0	0	1263	0				233	0	1683
Grp Sat Flow(s),veh/h/ln	0	1900	1610	0	1900	1610				1714	0	1610
Q Serve(g_s), s	0.0	38.4	0.0	0.0	39.2	0.0				8.2	0.0	56.7
Cycle Q Clear(g_c), s	0.0	38.4	0.0	0.0	39.2	0.0				8.2	0.0	56.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1935		0	1290					974	0	1829
V/C Ratio(X)	0.00	0.96		0.00	0.98					0.24	0.00	0.92
Avail Cap(c_a), veh/h	0	1935		0	1290					1120	0	2104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.35	0.00	0.00	0.64	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	38.9	0.0	0.0	32.5	0.0				13.0	0.0	23.4
Incr Delay (d2), s/veh	0.0	6.0	0.0	0.0	15.7	0.0				0.1	0.0	6.6
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	0.0	17.6	0.0	0.0	17.5	0.0				3.0	0.0	20.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	44.9	0.0	0.0	48.2	0.0				13.1	0.0	30.0
LnGrp LOS		D			D					B		C
Approach Vol, veh/h		1860			1263						1916	
Approach Delay, s/veh		44.9			48.2						28.0	
Approach LOS		D			D						C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	47.2	72.8	47.2
Change Period (Y+Rc), s	6.5	4.6	6.5
Max Green Setting (Gmax), s	30.5	78.4	30.5
Max Q Clear Time (g_c+I1), s	40.4	58.7	41.2
Green Ext Time (p_c), s	0.0	9.4	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	39.3
HCM 7th LOS	D

Notes

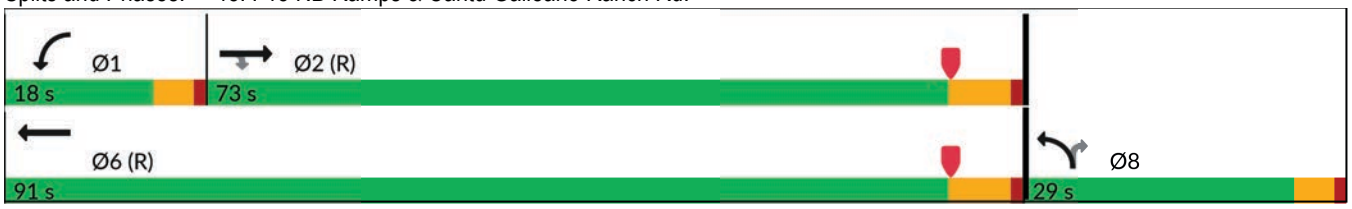
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	830	1268	422	999	796	276
Future Volume (vph)	830	1268	422	999	796	276
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	61.3	61.3	11.0	22.5	22.5	22.5
Total Split (s)	73.0	73.0	18.0	91.0	29.0	29.0
Total Split (%)	60.8%	60.8%	15.0%	75.8%	24.2%	24.2%
Yellow Time (s)	5.5	5.5	3.6	5.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.6	6.5	4.6	4.6
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	66.5	66.5	13.4	84.5	24.4	24.4
Actuated g/C Ratio	0.55	0.55	0.11	0.70	0.20	0.20
v/c Ratio	0.28	1.11	1.23	0.26	1.24	0.49
Control Delay (s/veh)	9.6	89.2	171.1	6.6	161.8	8.2
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.6	89.4	171.1	6.6	161.8	8.2
LOS	A	F	F	A	F	A
Approach Delay (s/veh)	57.8			55.4	126.2	
Approach LOS	E			E	F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 15.4 (13%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay (s/veh): 73.0	Intersection LOS: E
Intersection Capacity Utilization 101.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 48: I-15 NB Ramps & Cantu Galleano Ranch Rd.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	830	1268	422	999	796	276
Future Volume (veh/h)	830	1268	422	999	796	276
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1900	1900	1700	1900	1800	1900
Adj Flow Rate, veh/h	874	788	444	1052	838	159
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	3159	891	362	4014	697	327
Arrive On Green	0.93	0.93	0.17	1.00	0.30	0.30
Sat Flow, veh/h	5700	1609	3238	5700	3429	1610
Grp Volume(v), veh/h	874	788	444	1052	838	159
Grp Sat Flow(s),veh/h/ln	1900	1609	1619	1900	1714	1610
Q Serve(g_s), s	1.8	24.1	13.4	0.0	24.4	9.7
Cycle Q Clear(g_c), s	1.8	24.1	13.4	0.0	24.4	9.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3159	891	362	4014	697	327
V/C Ratio(X)	0.28	0.88	1.23	0.26	1.20	0.49
Avail Cap(c_a), veh/h	3159	891	362	4014	697	327
HCM Platoon Ratio	1.67	1.67	1.50	1.50	1.50	1.50
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.1	2.9	49.9	0.0	41.7	36.6
Incr Delay (d2), s/veh	0.0	1.3	124.6	0.2	104.3	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.9	11.1	0.1	19.0	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	2.1	4.2	174.6	0.2	146.0	37.7
LnGrp LOS	A	A	F	A	F	D
Approach Vol, veh/h	1662			1496	997	
Approach Delay, s/veh	3.1			51.9	128.7	
Approach LOS	A			D	F	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	18.0	73.0			91.0	29.0
Change Period (Y+Rc), s	4.6	6.5			6.5	4.6
Max Green Setting (Gmax), s	13.4	66.5			84.5	24.4
Max Q Clear Time (g_c+I1), s	15.4	26.1			2.0	26.4
Green Ext Time (p_c), s	0.0	11.1			7.9	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	50.8
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	2	33	1	1	15
Future Vol, veh/h	3	2	33	1	1	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	2	35	1	1	16

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	53	18	0	0	36	0
Stage 1	35	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	957	1063	-	-	1588	-
Stage 1	989	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	957	1063	-	-	1588	-
Mov Cap-2 Maneuver	933	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	1009	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.69	0	0.45
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	981	1588	-
HCM Lane V/C Ratio	-	-	0.005	0.001	-
HCM Ctrl Dly (s/v)	-	-	8.7	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	5	29	8	2	17
Future Vol, veh/h	11	5	29	8	2	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	5	31	8	2	18

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	57	19	0	0	39	0
Stage 1	35	-	-	-	-	-
Stage 2	22	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	953	1060	-	-	1584	-
Stage 1	989	-	-	-	-	-
Stage 2	1006	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	951	1060	-	-	1584	-
Mov Cap-2 Maneuver	931	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	1004	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.79	0	0.77
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	968	1584	-
HCM Lane V/C Ratio	-	-	0.017	0.001	-
HCM Ctrl Dly (s/v)	-	-	8.8	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	15	22	6	6	22
Future Vol, veh/h	15	15	22	6	6	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	16	23	6	6	23

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	62	15	0	0	29	0
Stage 1	26	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	946	1068	-	-	1597	-
Stage 1	999	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	942	1068	-	-	1597	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	988	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.75	0	1.56
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	992	1597	-
HCM Lane V/C Ratio	-	-	0.032	0.004	-
HCM Ctrl Dly (s/v)	-	-	8.7	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	2	4	2	3	9
Future Vol, veh/h	1	2	4	2	3	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	2	4	2	3	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	3	0	13	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1632	-	1012	1088
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	1018	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1632	-	1009	1088
Mov Cap-2 Maneuver	-	-	-	-	1009	-
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	1015	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	4.81	8.41
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1067	-	-	1200	-
HCM Lane V/C Ratio	0.012	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	1205	961	17	42	11
Future Vol, veh/h	4	1205	961	17	42	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	1268	1012	18	44	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1029	0	-	0	2297	1021
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	1277	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	683	-	-	-	~ 43	290
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	265	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	683	-	-	-	~ 43	290
Mov Cap-2 Maneuver	-	-	-	-	202	-
Stage 1	-	-	-	-	349	-
Stage 2	-	-	-	-	265	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.03	0	27.44
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	683	-	-	-	216
HCM Lane V/C Ratio	0.006	-	-	-	0.259
HCM Ctrl Dly (s/v)	10.3	-	-	-	27.4
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	1

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

Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	1	3	4	2	8
Future Vol, veh/h	9	1	3	4	2	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	1	3	4	2	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	21	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1622	-	1002	1077
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	1018	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1622	-	1000	1077
Mov Cap-2 Maneuver	-	-	-	-	1000	-
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	1016	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.1	8.43
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1061	-	-	771	-
HCM Lane V/C Ratio	0.01	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	3	118	0	26	1	652	105	22	197	0
Future Vol, veh/h	1	0	3	118	0	26	1	652	105	22	197	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	0	3	124	0	27	1	686	111	23	207	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	942	1053	207	997	997	742	207	0	0	797	0	0
Stage 1	254	254	-	744	744	-	-	-	-	-	-	-
Stage 2	688	799	-	254	254	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	245	228	838	225	246	419	1376	-	-	834	-	-
Stage 1	755	701	-	410	425	-	-	-	-	-	-	-
Stage 2	439	401	-	755	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	221	221	838	217	238	419	1376	-	-	834	-	-
Mov Cap-2 Maneuver	221	221	-	217	238	-	-	-	-	-	-	-
Stage 1	731	679	-	409	424	-	-	-	-	-	-	-
Stage 2	410	400	-	729	679	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	12.35	43.63	0.01	0.95
HCM LOS	B	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	2	-	-	494	237	181	-	-
HCM Lane V/C Ratio	0.001	-	-	0.009	0.639	0.028	-	-
HCM Ctrl Dly (s/v)	7.6	0	-	12.3	43.6	9.4	0	-
HCM Lane LOS	A	A	-	B	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	3.9	0.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	0	12	7	0	3	9	748	6	2	314	3
Future Vol, veh/h	7	0	12	7	0	3	9	748	6	2	314	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	7	0	13	7	0	3	9	787	6	2	331	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1143	1149	332	1144	1147	791	334	0	0	794	0	0
Stage 1	336	336	-	809	809	-	-	-	-	-	-	-
Stage 2	806	813	-	335	338	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	179	200	714	178	201	393	1237	-	-	836	-	-
Stage 1	682	645	-	377	396	-	-	-	-	-	-	-
Stage 2	378	395	-	683	644	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	175	197	714	172	197	393	1237	-	-	836	-	-
Mov Cap-2 Maneuver	175	197	-	172	197	-	-	-	-	-	-	-
Stage 1	680	643	-	372	391	-	-	-	-	-	-	-
Stage 2	370	389	-	669	642	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	16.47	23.29	0.09	0.06
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	21	-	-	334	207	11	-	-
HCM Lane V/C Ratio	0.008	-	-	0.06	0.051	0.003	-	-
HCM Ctrl Dly (s/v)	7.9	0	-	16.5	23.3	9.3	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	0	13	6	0	6	5	745	4	4	325	5
Future Vol, veh/h	12	0	13	6	0	6	5	745	4	4	325	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	0	14	6	0	6	5	784	4	4	342	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1148	1152	345	1147	1153	786	347	0	0	788	0	0
Stage 1	353	353	-	797	797	-	-	-	-	-	-	-
Stage 2	795	799	-	351	356	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	177	199	703	178	199	395	1223	-	-	840	-	-
Stage 1	668	634	-	383	402	-	-	-	-	-	-	-
Stage 2	384	401	-	670	633	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	172	197	703	172	196	395	1223	-	-	840	-	-
Mov Cap-2 Maneuver	172	197	-	172	196	-	-	-	-	-	-	-
Stage 1	664	630	-	380	398	-	-	-	-	-	-	-
Stage 2	375	398	-	653	629	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	18.99	20.87	0.05	0.11
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	12	-	-	283	239	21	-	-
HCM Lane V/C Ratio	0.004	-	-	0.093	0.053	0.005	-	-
HCM Ctrl Dly (s/v)	8	0	-	19	20.9	9.3	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	11	1	12	13	4
Future Vol, veh/h	14	11	1	12	13	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	15	12	1	13	14	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	26	0	35	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	15	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1601	-	983	1063
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	1013	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1601	-	982	1063
Mov Cap-2 Maneuver	-	-	-	-	982	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	1013	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.56	8.67
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	138	-
HCM Lane V/C Ratio	0.018	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	1240	848	12	21	6
Future Vol, veh/h	3	1240	848	12	21	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	1305	893	13	22	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	905	0	-	0	2211	899
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	1312	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	760	-	-	-	49	341
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	254	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	760	-	-	-	49	341
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	254	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.02	0	23.16
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	760	-	-	-	226
HCM Lane V/C Ratio	0.004	-	-	-	0.125
HCM Ctrl Dly (s/v)	9.8	-	-	-	23.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	17	1	4	11	2	9
Future Vol, veh/h	17	1	4	11	2	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	18	1	4	12	2	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	19	0	38	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	20	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1611	-	979	1066
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1008	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	976	1066
Mov Cap-2 Maneuver	-	-	-	-	976	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1005	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.93	8.47
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1048	-	-	480	-
HCM Lane V/C Ratio	0.011	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	1249	843	13	17	17
Future Vol, veh/h	12	1249	843	13	17	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	1315	887	14	18	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	901	0	-	0	2234	894
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	1340	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	763	-	-	-	47	343
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	247	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	763	-	-	-	47	343
Mov Cap-2 Maneuver	-	-	-	-	201	-
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	247	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.09	0	21.51
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	763	-	-	-	254
HCM Lane V/C Ratio	0.017	-	-	-	0.141
HCM Ctrl Dly (s/v)	9.8	-	-	-	21.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	1	4	12	3	10
Future Vol, veh/h	24	1	4	12	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	1	4	13	3	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	26	0	47	26
Stage 1	-	-	-	-	26	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1601	-	968	1056
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1601	-	966	1056
Mov Cap-2 Maneuver	-	-	-	-	966	-
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	1004	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.81	8.53
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1034	-	-	450	-
HCM Lane V/C Ratio	0.013	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	1261	847	21	37	9
Future Vol, veh/h	6	1261	847	21	37	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	6	1327	892	22	39	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	914	0	-	0	2243	903
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	1340	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	754	-	-	-	47	339
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	247	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	754	-	-	-	47	339
Mov Cap-2 Maneuver	-	-	-	-	201	-
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	247	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.05	0	26.09
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	754	-	-	-	219
HCM Lane V/C Ratio	0.008	-	-	-	0.222
HCM Ctrl Dly (s/v)	9.8	-	-	-	26.1
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	0	2	15	1	5
Future Vol, veh/h	33	0	2	15	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	35	0	2	16	1	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	35	0	55	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	20	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1590	-	958	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	1008	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1590	-	957	1044
Mov Cap-2 Maneuver	-	-	-	-	957	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	1007	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.86	8.52
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1028	-	-	212	-
HCM Lane V/C Ratio	0.006	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	37	0	1	16	1	1
Future Vol, veh/h	37	0	1	16	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	39	0	1	17	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	39	0	58	39
Stage 1	-	-	-	-	39	-
Stage 2	-	-	-	-	19	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1584	-	954	1038
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1009	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1584	-	954	1038
Mov Cap-2 Maneuver	-	-	-	-	954	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1008	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.43	8.63
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	994	-	-	106	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	38	0	1	17	0	3
Future Vol, veh/h	38	0	1	17	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	40	0	1	18	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	40	0	60	40
Stage 1	-	-	-	-	40	-
Stage 2	-	-	-	-	20	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1583	-	952	1037
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	1008	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1583	-	951	1037
Mov Cap-2 Maneuver	-	-	-	-	951	-
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	1007	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.4	8.48
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1037	-	-	100	-
HCM Lane V/C Ratio	0.003	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	9	0	0	12	20	843	0	0	510	0
Future Vol, veh/h	0	0	9	0	0	12	20	843	0	0	510	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	9	0	0	13	21	887	0	0	537	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1023	1466	268	1198	1466	444	537	0	0	887	0	0
Stage 1	537	537	-	929	929	-	-	-	-	-	-	-
Stage 2	486	929	-	268	537	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	193	129	736	144	129	567	1041	-	-	772	-	-
Stage 1	501	526	-	292	349	-	-	-	-	-	-	-
Stage 2	537	349	-	720	526	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	185	127	736	139	127	567	1041	-	-	772	-	-
Mov Cap-2 Maneuver	316	243	-	233	241	-	-	-	-	-	-	-
Stage 1	501	526	-	286	342	-	-	-	-	-	-	-
Stage 2	514	342	-	710	526	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.96	11.49	0.2	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1041	-	-	736	567	772	-	-
HCM Lane V/C Ratio	0.02	-	-	0.013	0.022	-	-	-
HCM Ctrl Dly (s/v)	8.5	-	-	10	11.5	0	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	9	0	0	12	0	843	0	0	510	0
Future Vol, veh/h	0	0	9	0	0	12	0	843	0	0	510	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	9	0	0	13	0	887	0	0	537	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	268	-	-	444	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	736	0	0	567	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	736	-	-	567	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.96	11.49	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	736	567	-	-
HCM Lane V/C Ratio	-	-	0.013	0.022	-	-
HCM Ctrl Dly (s/v)	-	-	10	11.5	-	-
HCM Lane LOS	-	-	A	B	-	-
HCM 95th %tile Q(veh)	-	-	0	0.1	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	1	0	22	6	0
Future Vol, veh/h	20	1	0	22	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	21	1	0	23	6	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	22	0	45	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	23	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1606	-	971	1062
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	1005	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1606	-	971	1062
Mov Cap-2 Maneuver	-	-	-	-	971	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	1005	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	8.73
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	971	-	-	1606	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	1	3	22	0	5
Future Vol, veh/h	18	1	3	22	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	19	1	3	23	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	49	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	29	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1609	-	965	1064
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	998	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1609	-	964	1064
Mov Cap-2 Maneuver	-	-	-	-	964	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.87	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1064	-	-	216	-
HCM Lane V/C Ratio	0.005	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	787	536	14	24	28
Future Vol, veh/h	16	787	536	14	24	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	828	564	15	25	29

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	579	0	-	0	1434	572
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	862	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1005	-	-	-	149	524
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	417	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1005	-	-	-	147	524
Mov Cap-2 Maneuver	-	-	-	-	343	-
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	417	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.17	0	14.82
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1005	-	-	-	421
HCM Lane V/C Ratio	0.017	-	-	-	0.13
HCM Ctrl Dly (s/v)	8.6	-	-	-	14.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	21	3	3	18	6	6
Future Vol, veh/h	21	3	3	18	6	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	3	3	19	6	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	25	0	49	24
Stage 1	-	-	-	-	24	-
Stage 2	-	-	-	-	25	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1602	-	965	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1003	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1602	-	964	1059
Mov Cap-2 Maneuver	-	-	-	-	964	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.04	8.61
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1009	-	-	257	-
HCM Lane V/C Ratio	0.013	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	25	2	3	16	5	7
Future Vol, veh/h	25	2	3	16	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	2	3	17	5	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	28	0	51	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	23	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1598	-	963	1054
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	1005	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1598	-	962	1054
Mov Cap-2 Maneuver	-	-	-	-	962	-
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	1003	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.15	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1013	-	-	284	-
HCM Lane V/C Ratio	0.012	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	800	534	17	24	16
Future Vol, veh/h	11	800	534	17	24	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	842	562	18	25	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	580	0	-	0	1436	571
Stage 1	-	-	-	-	571	-
Stage 2	-	-	-	-	865	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1004	-	-	-	149	524
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	415	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1004	-	-	-	147	524
Mov Cap-2 Maneuver	-	-	-	-	343	-
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	415	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.12	0	15.12
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1004	-	-	-	398
HCM Lane V/C Ratio	0.012	-	-	-	0.106
HCM Ctrl Dly (s/v)	8.6	-	-	-	15.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	30	1	5	16	3	10
Future Vol, veh/h	30	1	5	16	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	1	5	17	3	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	33	0	59	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1592	-	952	1047
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1000	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1592	-	949	1047
Mov Cap-2 Maneuver	-	-	-	-	949	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.73	8.57
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1023	-	-	429	-
HCM Lane V/C Ratio	0.013	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	815	535	9	15	15
Future Vol, veh/h	9	815	535	9	15	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	858	563	9	16	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	573	0	-	0	1445	568
Stage 1	-	-	-	-	568	-
Stage 2	-	-	-	-	877	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1010	-	-	-	147	526
Stage 1	-	-	-	-	571	-
Stage 2	-	-	-	-	410	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1010	-	-	-	145	526
Mov Cap-2 Maneuver	-	-	-	-	340	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	410	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.09	0	14.43
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1010	-	-	-	413
HCM Lane V/C Ratio	0.009	-	-	-	0.076
HCM Ctrl Dly (s/v)	8.6	-	-	-	14.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	1	526	374	1
Future Vol, veh/h	2	3	1	526	374	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	3	1	554	394	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	950	394	395	0	-	0
Stage 1	394	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	291	659	1175	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	578	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	291	659	1175	-	-	-
Mov Cap-2 Maneuver	485	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	578	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.3	0.02	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1175	-	576	-	-
HCM Lane V/C Ratio	0.001	-	0.009	-	-
HCM Ctrl Dly (s/v)	8.1	-	11.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	4	3	516	369	9
Future Vol, veh/h	11	4	3	516	369	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	4	3	543	388	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	943	393	398	0	-	0
Stage 1	393	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	294	660	1172	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	582	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	293	660	1172	-	-	-
Mov Cap-2 Maneuver	487	-	-	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	582	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.09	0.05	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1172	-	524	-	-
HCM Lane V/C Ratio	0.003	-	0.03	-	-
HCM Ctrl Dly (s/v)	8.1	-	12.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	6	3	516	371	2
Future Vol, veh/h	3	6	3	516	371	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	6	3	543	391	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	941	392	393	0	-	0
Stage 1	392	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	295	661	1177	-	-	-
Stage 1	687	-	-	-	-	-
Stage 2	582	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	294	661	1177	-	-	-
Mov Cap-2 Maneuver	487	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	582	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.19	0.05	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1177	-	591	-	-
HCM Lane V/C Ratio	0.003	-	0.016	-	-
HCM Ctrl Dly (s/v)	8.1	-	11.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

APPENDIX 7.4:

HORIZON YEAR (2050) WITHOUT PROJECT SIGNAL WARRANT ANALYSIS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

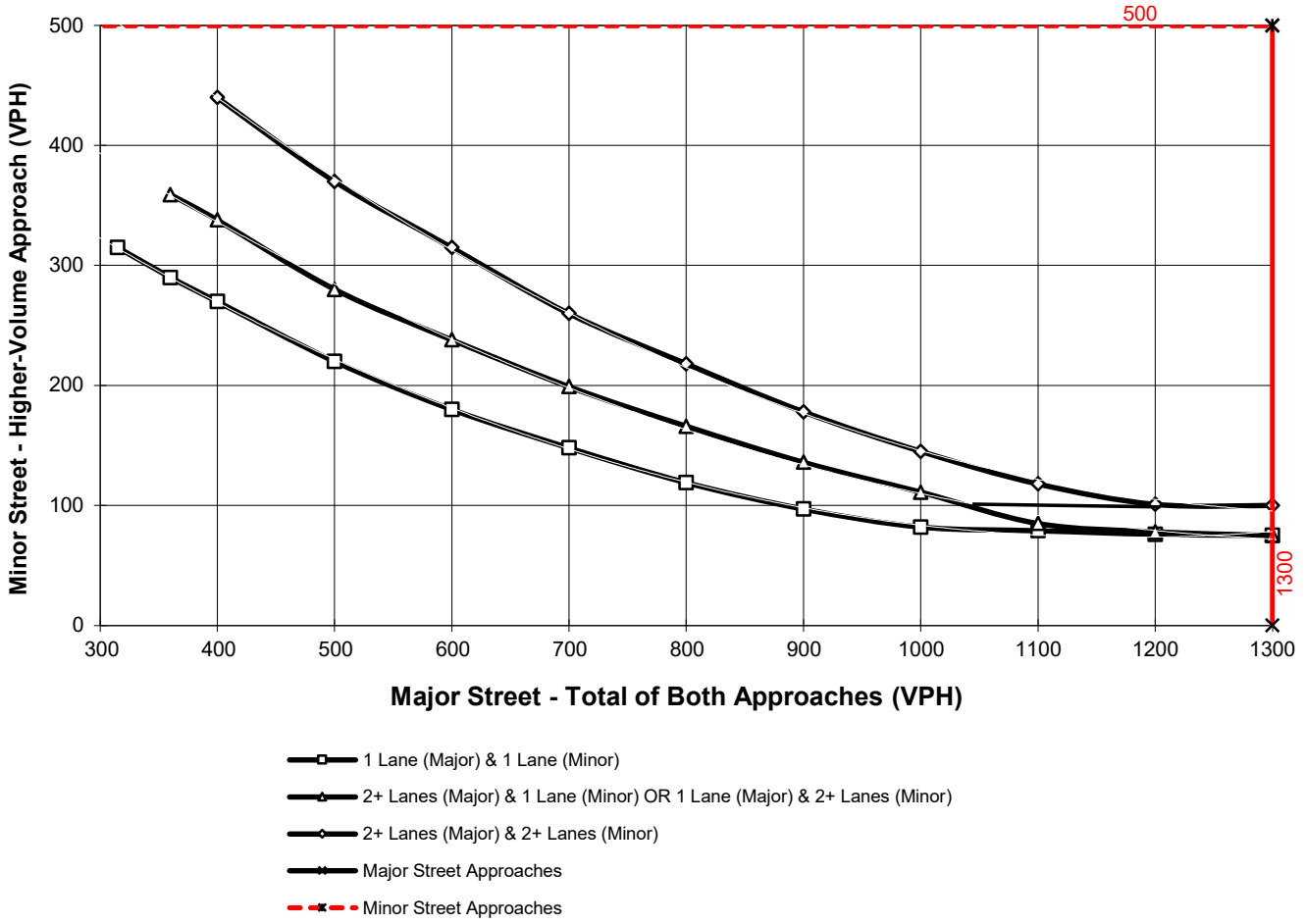
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year Without Project - Weekday AM Peak Hour**

Major Street Name = **Bon View Av.**
Total of Both Approaches (VPH) = **1467**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Schaefer Av.**
High Volume Approach (VPH) = **679**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

APPENDIX 7.5:

HORIZON YEAR (2050) WITH PROJECT SIGNAL WARRANT ANALYSIS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2050 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Campus Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **New Public Street**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **265** vpd Minor Street Future ADT = **33** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……

(Based on Estimated Average Daily Traffic - See Note)

URBAN RURAL
XX

CONDITION A - Minimum Vehicular Volume

Satisfied Not Satisfied
XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **265**	*1* **33**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied Not Satisfied
XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **265**	*1* **33**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied Not Satisfied
XX

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 2% **B** 3%

2 CONDITIONS 80% 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2050 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Eucalyptus Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Campus Avenue**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **25,264** vpd Minor Street Future ADT = **1,371** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **25,264** / *1* **1,371**	8,000	5,600 *	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied: XX / Not Satisfied				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **25,264** / *1* **1,371**	12,000	8,400 *	1,200	850 *
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied: XX / Not Satisfied				
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 82% B: 100%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM	TRAFFIC CONDITIONS	**2050 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Bon View Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **New Public Street**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **102,321** vpd Minor Street Future ADT = **332** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume	Urban	Rural	Urban	Rural
Satisfied / Not Satisfied: XX / XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **102,321** / 1 **332**	8,000	5,600 *	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **102,321** / 1 **332**	12,000	8,400 *	1,200	850
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 20% B: 39%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2050 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Grove Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **New Public Street**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **17,480** vpd Minor Street Future ADT = **496** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **17,480**	*1* **496**	8,000	5,600 *	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **17,480**	*1* **496**	12,000	8,400 *	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 30%	**B** 58%			

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**2050 With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Walker Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **New Public Street**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **7,289** vpd Minor Street Future ADT = **244** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **7,289** / *1* **244**	8,000	5,600 *	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **7,289** / *1* **244**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 15% **B** 29%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		**HY With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Campus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 1**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **2,645** vpd Minor Street Future ADT = **43** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **2,645**	*1* **43**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **2,645**	*1* **43**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 3% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		HY With Project
				CALC JB	DATE	11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE	11/11/25
Major Street: Campus Avenue				Critical Approach Speed (Major)		45 mph
Minor Street: Driveway 2				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **548** vpd Minor Street Future ADT = **90** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied (XX)	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **548** / 1 **90**	8,000	5,600	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied (XX)	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **548** / 1 **90**	12,000	8,400	1,200	850
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 5% B: 7%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	HY With Project
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Campus Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 3**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **592** vpd Minor Street Future ADT = **128** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX / XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **592** / *1* **128**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **592** / *1* **128**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 8% **B** 7%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		**HY With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Public Street A**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 4**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **104** vpd Minor Street Future ADT = **80** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **104**	*1* **80**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **104**	*1* **80**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 2% **B** 1%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM		TRAFFIC CONDITIONS		HY With Project
				CALC	JB	DATE	11/11/25
Jurisdiction:	City of Ontario			CHK	JB	DATE	11/11/25
Major Street:	Eucalyptus Avenue				Critical Approach Speed (Major)		45 mph
Minor Street:	Driveway 5				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **25,452** vpd Minor Street Future ADT = **234** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **25,452**	*1* **234**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **25,452**	*1* **234**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 14% **B** 28%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM	TRAFFIC CONDITIONS		**HY With Project**
				CALC JB	DATE	11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE	11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 6**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **186** vpd Minor Street Future ADT = **66** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied **XX**				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **186** / *1* **66**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied **XX**				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **186** / *1* **66**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied **XX**	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** **3%** **B** **2%**				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	HY With Project
				CALC JB	DATE 11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE 11/11/25
Major Street: Bon View Avenue				Critical Approach Speed (Major)	45 mph
Minor Street: Driveway 7				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **11,174** vpd Minor Street Future ADT = **1,429** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN RURAL XX

CONDITION A - Minimum Vehicular Volume

Satisfied Not Satisfied XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **11,174**	*1* **1,429**	8,000	5,600 *	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied XX Not Satisfied

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **11,174**	*1* **1,429**	12,000	8,400 *	1,200	850 *
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied XX Not Satisfied

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 85% **B** 100%

2 CONDITIONS 80% 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**HY With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Bon View Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 8**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **12,251** vpd Minor Street Future ADT = **172** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL: XX

CONDITION A - Minimum Vehicular Volume

Satisfied / Not Satisfied: XX

Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
		Urban	Rural	Urban	Rural
1 **12,251**	1 **172**	8,000	5,600 *	2,400	1,680
2 +	1	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied / Not Satisfied: XX

Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
		Urban	Rural	Urban	Rural
1 **12,251**	1 **172**	12,000	8,400 *	1,200	850
2 +	1	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied / Not Satisfied: XX

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 10% **B** 20%

2 CONDITIONS 80%

2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM	TRAFFIC CONDITIONS		**HY With Project**
				CALC JB	DATE	11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE	11/11/25
Major Street: **Bon View Avenue**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 9**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **12,331** vpd Minor Street Future ADT = **184** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume	Urban	Rural	Urban	Rural
Satisfied / Not Satisfied: XX / XX (RURAL)				
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **12,331** / *1* **184**	8,000	5,600 *	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **12,331** / *1* **184**	12,000	8,400 *	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 11% B: 22%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	HY With Project
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 10**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **359** vpd Minor Street Future ADT = **127** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied **XX**				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **359** / *1* **127**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied **XX**				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **359** / *1* **127**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied **XX**	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** **6%** **B** **4%**				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		**HY With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Eucalyptus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 11**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **24,003** vpd Minor Street Future ADT = **169** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **24,003**	*1* **169**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **24,003**	*1* **169**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 10% **B** 20%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		HY With Project
				CALC JB	DATE	11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE	11/11/25
Major Street: Public Street A				Critical Approach Speed (Major)		45 mph
Minor Street: Driveway 12				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **329** vpd Minor Street Future ADT = **75** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **329** / *1* **75**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **329** / *1* **75**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 4% **B** 4%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**HY With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Eucalyptus Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 13**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **24,098** vpd Minor Street Future ADT = **228** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **24,098**	*1* **228**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **24,098**	*1* **228**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 14%	**B** 27%			

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**HY With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 14**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **425** vpd Minor Street Future ADT = **81** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume	Urban	Rural	Urban	Rural
Satisfied / Not Satisfied: XX / XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **425** / *1* **81**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **425** / *1* **81**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 5% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM				
				TRAFFIC CONDITIONS		**HY With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Eucalyptus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 15**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **24,266** vpd Minor Street Future ADT = **282** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **24,266**	*1* **282**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **24,266**	*1* **282**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 17% **B** 33%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	HY With Project
				CALC JB	DATE 11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE 11/11/25
Major Street: Public Street A				Critical Approach Speed (Major)	45 mph
Minor Street: Driveway 16				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **498** vpd Minor Street Future ADT = **44** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... √

or

In built up area of isolated community of < 10,000 population .....

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **498** / 1 **44**	8,000	5,600	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **498** / 1 **44**	12,000	8,400	1,200	850
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)				
No one condition satisfied, but following conditions fulfilled 80% of more ..... A 3% B 5%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**HY With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 17**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **518** vpd Minor Street Future ADT = **12** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN RURAL
XX

CONDITION A - Minimum Vehicular Volume

Satisfied Not Satisfied
XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **518**	1 **12**	8,000	5,600	2,400	1,680
2 +	1	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied Not Satisfied
XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **518**	1 **12**	12,000	8,400	1,200	850
2 +	1	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied Not Satisfied
XX

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 1% **B** 1%

2 CONDITIONS 80% 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		HY With Project
				CALC JB	DATE	11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE	11/11/25
Major Street: Public Street A				Critical Approach Speed (Major)		45 mph
Minor Street: Driveway 18				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **538** vpd Minor Street Future ADT = **28** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... √

or

In built up area of isolated community of < 10,000 population .....

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **538** / *1* **28**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **538** / *1* **28**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ..... **A** 2% **B** 3%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	HY With Project
				CALC JB	DATE 11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE 11/11/25
Major Street: Grove Avenue				Critical Approach Speed (Major)	45 mph
Minor Street: Driveway 19				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **17,588** vpd Minor Street Future ADT = **577** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... √

or

In built up area of isolated community of < 10,000 population .....

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Number of lanes for moving traffic on each approach: Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
CONDITION A - Minimum Vehicular Volume						
Satisfied / Not Satisfied XX						
	1	1	8,000	5,600	2,400	1,680
	2 + **17,588**	1 **577**	9,600	6,720 *	2,400	1,680
	2 +	2 +	9,600	6,720	3,200	2,240
	1	2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic						
Satisfied / Not Satisfied XX						
	1	1	12,000	8,400	1,200	850
	2 + **17,588**	1 **577**	14,400	10,080 *	1,200	850
	2 +	2 +	14,400	10,080	1,600	1,120
	1	2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B						
Satisfied / Not Satisfied XX						
No one condition satisfied, but following conditions fulfilled 80% of more	**A** 34%	**B** 68%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		HY With Project
				CALC JB	DATE	11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE	11/11/25
Major Street: Public Street A				Critical Approach Speed (Major)		45 mph
Minor Street: Driveway 21				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **378** vpd Minor Street Future ADT = **42** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street / Minor Street				
1 **378** / 1 **42**	8,000	5,600	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street / Minor Street				
1 **378** / 1 **42**	12,000	8,400	1,200	850
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 2% B: 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	HY With Project
				CALC JB	DATE 11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 22**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **366** vpd Minor Street Future ADT = **34** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street / Minor Street				
1 **366** / 1 **34**	8,000	5,600	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street / Minor Street				
1 **366** / 1 **34**	12,000	8,400	1,200	850
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 2% B: 4%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		**HY With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Eucalyptus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 23**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **12,435** vpd Minor Street Future ADT = **319** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **12,435**	*1* **319**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **12,435**	*1* **319**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 19% **B** 38%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	HY With Project
				CALC JB	DATE 11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE 11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 24**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **391** vpd Minor Street Future ADT = **79** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume	Urban	Rural	Urban	Rural
Satisfied / Not Satisfied: XX / XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **391** / *1* **79**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **391** / *1* **79**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 5% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM	TRAFFIC CONDITIONS		**HY With Project**
				CALC JB	DATE	11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE	11/11/25
Major Street: **Public Street A**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 25**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **397** vpd Minor Street Future ADT = **85** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **397**	*1* **85**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **397**	*1* **85**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 5% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM				
				TRAFFIC CONDITIONS		**HY With Project**	
				CALC	JB	DATE	11/11/25
Jurisdiction:	**City of Ontario**			CHK	JB	DATE	11/11/25
Major Street:	**Eucalyptus Avenue**			Critical Approach Speed (Major)		45	mph
Minor Street:	**Driveway 26**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **12,468** vpd Minor Street Future ADT = **262** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **12,468**	*1* **262**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **12,468**	*1* **262**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 16% **B** 31%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		HY With Project
				CALC JB	DATE	11/11/25
Jurisdiction: City of Ontario				CHK JB	DATE	11/11/25
Major Street: Public Street A				Critical Approach Speed (Major)		45 mph
Minor Street: Driveway 27				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **448** vpd Minor Street Future ADT = **92** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... √

or

In built up area of isolated community of < 10,000 population .....

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **448** / *1* **92**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied (XX)				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **448** / *1* **92**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ..... **A** 5% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM		TRAFFIC CONDITIONS		HY With Project
				CALC	JB	DATE	11/11/25
Jurisdiction:	City of Ontario			CHK	JB	DATE	11/11/25
Major Street:	Eucalyptus Avenue				Critical Approach Speed (Major)		45 mph
Minor Street:	Driveway 28				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **12,520** vpd Minor Street Future ADT = **188** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **12,520**	*1* **188**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **12,520**	*1* **188**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 11% **B** 22%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

___ DIST	___ CO	___ RTE	___ PM	TRAFFIC CONDITIONS		**HY With Project**
				CALC JB	DATE	11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE	11/11/25
Major Street: **Walker Avenue**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 29**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **7,866** vpd Minor Street Future ADT = **43** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **7,866**	*1* **43**	8,000	5,600 *	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **7,866**	*1* **43**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 3% **B** 5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	**HY With Project**
				CALC JB	DATE 11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE 11/11/25
Major Street: **Walker Avenue**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 30**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **7,827** vpd Minor Street Future ADT = **102** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume	Urban	Rural	Urban	Rural
Satisfied / Not Satisfied: XX / XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **7,827** / 1 **102**	8,000	5,600 *	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **7,827** / 1 **102**	12,000	8,400	1,200	850
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 6% B: 12%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		**HY With Project**
				CALC JB	DATE	11/11/25
Jurisdiction: **City of Ontario**				CHK JB	DATE	11/11/25
Major Street: **Walker Avenue**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 31**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **7,797** vpd Minor Street Future ADT = **56** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population .....

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX / XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **7,797** / 1 **56**	8,000	5,600 *	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **7,797** / 1 **56**	12,000	8,400	1,200	850
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ..... A: 3% B: 7%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

APPENDIX 7.6:

HORIZON YEAR (2050) WITHOUT PROJECT OFF-RAMP QUEUING ANALYSIS

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Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	440	431	395	651	1325	1100	729
v/c Ratio	1.22	0.98	0.93	1.50	0.58	0.95	0.84
Control Delay (s/veh)	155.4	66.7	55.8	254.8	4.0	47.0	18.0
Queue Delay	0.0	1.5	0.0	0.0	5.6	33.8	0.0
Total Delay (s/veh)	155.4	68.2	55.8	254.8	9.5	80.8	18.0
Queue Length 50th (ft)	~326	208	173	~544	98	318	96
Queue Length 95th (ft)	#517	#421	#362	m#353	m66	#452	#342
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	360	439	425	433	2286	1163	866
Starvation Cap Reductn	0	0	0	0	892	0	0
Spillback Cap Reductn	0	3	0	0	0	140	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.99	0.93	1.50	0.95	1.08	0.84

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	426	585	1503	1001	459	1388
v/c Ratio	0.98	1.31	1.44	1.12	1.09	0.65
Control Delay (s/veh)	74.3	182.6	232.7	81.7	79.3	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	23.5
Total Delay (s/veh)	74.3	182.6	232.7	81.7	79.3	35.1
Queue Length 50th (ft)	253	~435	~617	~394	~308	296
Queue Length 95th (ft)	#453	#652	#751	#633	m#306	m268
Internal Link Dist (ft)		1588	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	433	447	1042	897	423	2125
Starvation Cap Reductn	0	0	0	0	0	785
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	1.31	1.44	1.12	1.09	1.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	798	818	907	97	857
v/c Ratio	0.87	1.04	0.33	0.27	1.07
Control Delay (s/veh)	37.8	70.2	4.2	42.5	61.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.8	70.2	4.2	42.5	61.2
Queue Length 50th (ft)	174	~584	79	29	~181
Queue Length 95th (ft)	281	#813	101	54	#418
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	972	790	2747	363	803
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.82	1.04	0.33	0.27	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	467	205	224	67	274	321	328	54
v/c Ratio	0.47	0.77	0.13	0.40	0.68	0.81	0.77	0.10
Control Delay (s/veh)	32.5	56.2	13.2	49.3	14.4	51.0	47.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.5	56.2	13.2	49.3	14.4	51.0	47.0	0.4
Queue Length 50th (ft)	132	125	33	41	0	198	201	0
Queue Length 95th (ft)	190	#254	50	82	74	293	292	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	1020	270	1720	215	442	474	509	586
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.76	0.13	0.31	0.62	0.68	0.64	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	203	747	344	1438	695	549
v/c Ratio	0.33	1.20	0.90	0.76	0.81	0.69
Control Delay (s/veh)	24.0	129.3	48.3	17.7	41.0	8.0
Queue Delay	0.0	0.0	0.0	2.4	0.0	0.0
Total Delay (s/veh)	24.0	129.3	48.3	20.1	41.0	8.0
Queue Length 50th (ft)	86	~488	214	263	197	0
Queue Length 95th (ft)	143	#710	m171	m210	#281	90
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	624	625	402	1933	861	793
Starvation Cap Reductn	0	0	0	354	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	1.20	0.86	0.91	0.81	0.69

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	721	244	1571	364	532
v/c Ratio	1.23	0.35	1.26	1.60	0.28
Control Delay (s/veh)	146.7	4.7	151.3	315.6	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	146.7	4.7	151.3	315.6	12.5
Queue Length 50th (ft)	~511	0	~580	~313	63
Queue Length 95th (ft)	#725	50	#717	m#438	m106
Internal Link Dist (ft)	1339		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	587	688	1245	228	1933
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.23	0.35	1.26	1.60	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	374	370	346	1146	2051	876	143
v/c Ratio	1.46	1.38	1.05	0.88	0.55	0.56	0.29
Control Delay (s/veh)	258.6	221.4	91.9	25.9	1.4	30.7	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Total Delay (s/veh)	258.6	221.4	91.9	25.9	2.1	30.7	5.6
Queue Length 50th (ft)	~309	~300	~170	321	19	130	0
Queue Length 95th (ft)	#490	#492	#350	m#485	m39	131	37
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	256	269	329	1307	3700	2483	693
Starvation Cap Reductn	0	0	0	0	1161	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.46	1.38	1.05	0.88	0.81	0.35	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	405	397	374	2626	706	209	1291
v/c Ratio	0.81	0.78	0.69	0.96	0.67	0.76	0.44
Control Delay (s/veh)	41.7	36.6	26.9	37.1	5.9	66.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.7	36.6	26.9	37.1	5.9	66.7	1.0
Queue Length 50th (ft)	211	193	138	~468	13	53	6
Queue Length 95th (ft)	323	309	240	#543	102	m#65	m11
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	562	564	593	2736	1055	276	2917
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.70	0.63	0.96	0.67	0.76	0.44

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1446	924	914	433	309	675	668
v/c Ratio	0.53	0.75	0.51	0.27	0.42	0.91	0.90
Control Delay (s/veh)	23.4	5.7	25.6	0.4	25.3	44.9	44.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	23.4	5.7	25.6	0.4	25.3	44.9	44.5
Queue Length 50th (ft)	278	0	321	0	150	400	394
Queue Length 95th (ft)	304	77	m353	m0	234	#666	#658
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	2745	1239	1830	1615	770	775	770
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.75	0.50	0.27	0.40	0.87	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	696	1094	506	678	730	331
v/c Ratio	0.25	0.99	1.02	0.17	0.97	0.54
Control Delay (s/veh)	9.1	42.3	96.3	6.6	72.0	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.1	42.3	96.3	6.6	72.0	7.9
Queue Length 50th (ft)	35	536	~208	53	~294	0
Queue Length 95th (ft)	m48	#812	#314	66	#414	79
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	2897	1120	495	3990	753	612
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.98	1.02	0.17	0.97	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	508	510	461	498	1254	1349	636
v/c Ratio	1.13	0.97	0.92	1.90	0.60	1.02	0.66
Control Delay (s/veh)	114.2	59.5	51.0	434.9	20.8	59.3	5.8
Queue Delay	0.0	0.0	0.0	0.0	3.6	0.0	0.0
Total Delay (s/veh)	114.2	59.5	51.0	434.9	24.4	59.3	5.8
Queue Length 50th (ft)	~355	257	211	~445	382	~414	5
Queue Length 95th (ft)	#556	#485	#412	m#370	m333	#563	84
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	451	526	499	262	2085	1323	967
Starvation Cap Reductn	0	0	0	0	720	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.97	0.92	1.90	0.92	1.02	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	344	526	1369	796	415	1859
v/c Ratio	0.81	1.28	1.26	0.89	0.90	0.83
Control Delay (s/veh)	49.0	172.1	156.0	21.9	26.2	7.2
Queue Delay	0.0	0.0	0.2	0.0	0.0	0.8
Total Delay (s/veh)	49.0	172.1	156.2	21.9	26.2	8.0
Queue Length 50th (ft)	196	~407	~520	107	184	143
Queue Length 95th (ft)	#353	#616	#652	#380	m175	m127
Internal Link Dist (ft)		1671	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	423	412	1083	891	480	2286
Starvation Cap Reductn	0	0	0	0	0	177
Spillback Cap Reductn	0	1	49	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	1.28	1.32	0.89	0.86	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	994	535	781	78	911
v/c Ratio	0.89	1.04	0.33	0.12	1.23
Control Delay (s/veh)	33.5	88.1	7.8	32.1	131.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.5	88.1	7.8	32.1	131.8
Queue Length 50th (ft)	253	~391	101	20	~451
Queue Length 95th (ft)	m330	#594	132	40	#692
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	1181	512	2386	676	742
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.84	1.04	0.33	0.12	1.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	508	100	224	26	146	472	473	62
v/c Ratio	0.49	0.65	0.15	0.18	0.51	0.93	0.87	0.10
Control Delay (s/veh)	31.4	58.1	10.3	45.2	11.5	59.4	50.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.4	58.1	10.3	45.2	11.5	59.4	50.1	0.3
Queue Length 50th (ft)	143	62	17	16	0	301	293	0
Queue Length 95th (ft)	193	#149	30	41	44	#498	#476	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	1031	154	1497	307	426	526	562	633
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.65	0.15	0.08	0.34	0.90	0.84	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	282	343	337	938	1192	909
v/c Ratio	0.82	0.78	0.89	0.38	0.84	0.92
Control Delay (s/veh)	54.5	30.3	36.8	7.3	32.3	26.1
Queue Delay	0.0	0.0	0.0	0.7	0.0	0.0
Total Delay (s/veh)	54.5	30.3	36.8	8.0	32.3	26.1
Queue Length 50th (ft)	151	93	156	131	335	202
Queue Length 95th (ft)	#264	#203	m152	m127	#469	#511
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	381	471	402	2455	1426	984
Starvation Cap Reductn	0	0	0	1065	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.73	0.84	0.67	0.84	0.92

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	488	338	1342	431	1043
v/c Ratio	0.93	0.63	1.12	1.26	0.51
Control Delay (s/veh)	58.3	24.7	94.3	160.1	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	58.3	24.7	94.3	160.1	15.6
Queue Length 50th (ft)	265	112	~435	~296	179
Queue Length 95th (ft)	#448	204	#570	m#414	230
Internal Link Dist (ft)	1341		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	542	550	1193	342	2060
Starvation Cap Reductn	0	0	0	0	323
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.90	0.61	1.12	1.26	0.60

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	374	371	276	818	1061	2055	405
v/c Ratio	1.14	1.11	0.66	1.12	0.31	0.83	0.53
Control Delay (s/veh)	128.4	117.8	25.3	92.9	0.4	28.8	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	128.4	117.8	25.3	92.9	0.4	28.8	10.1
Queue Length 50th (ft)	~264	~265	75	~290	3	301	54
Queue Length 95th (ft)	#445	#458	168	#407	4	350	137
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	328	334	417	731	3469	2483	768
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.14	1.11	0.66	1.12	0.31	0.83	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	150	386	385	1712	609	643	2118
v/c Ratio	0.37	0.87	0.84	0.77	0.64	0.92	0.66
Control Delay (s/veh)	29.5	44.5	40.9	30.2	5.7	53.8	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.5	44.5	40.9	30.2	5.7	53.8	3.1
Queue Length 50th (ft)	70	169	160	263	0	180	26
Queue Length 95th (ft)	125	#329	#304	310	80	m#232	m64
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	463	490	505	2222	951	709	3210
Starvation Cap Reductn	0	0	0	0	0	0	42
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.79	0.76	0.77	0.64	0.91	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1606	877	1175	623	314	897	897
v/c Ratio	0.77	0.78	0.84	0.39	0.34	1.01	1.01
Control Delay (s/veh)	36.3	7.9	45.1	0.8	17.0	59.7	61.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.3	7.9	45.1	0.8	17.0	59.7	61.0
Queue Length 50th (ft)	360	8	452	8	133	~685	~723
Queue Length 95th (ft)	413	133	m496	m8	196	#971	#974
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	2113	1127	1409	1615	922	890	885
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.78	0.83	0.39	0.34	1.01	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	834	1122	433	1011	812	249
v/c Ratio	0.30	0.99	0.98	0.26	1.00	0.43
Control Delay (s/veh)	7.5	45.8	90.5	8.1	77.0	7.2
Queue Delay	0.0	1.5	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.5	47.3	90.5	8.1	77.0	7.2
Queue Length 50th (ft)	41	544	169	93	~335	0
Queue Length 95th (ft)	m48	m#738	#272	111	#458	66
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	2859	1144	441	3857	814	573
Starvation Cap Reductn	0	9	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.99	0.98	0.26	1.00	0.43

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 7.7:

HORIZON YEAR (2050) WITH PROJECT OFF-RAMP QUEUING ANALYSIS

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Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	459	451	416	683	1365	1153	729
v/c Ratio	1.27	1.02	0.98	1.58	0.60	0.99	0.84
Control Delay (s/veh)	175.8	77.1	66.5	287.2	4.1	56.0	18.3
Queue Delay	0.0	3.6	0.0	0.0	9.0	37.9	0.0
Total Delay (s/veh)	175.8	80.7	66.5	287.2	13.1	93.9	18.3
Queue Length 50th (ft)	~350	~234	190	~583	97	340	98
Queue Length 95th (ft)	#545	#451	#391	m#358	m62	#486	#345
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	360	441	425	433	2286	1163	864
Starvation Cap Reductn	0	0	0	0	893	0	0
Spillback Cap Reductn	0	5	0	0	0	201	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.28	1.03	0.98	1.58	0.98	1.20	0.84

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	426	654	1577	1067	459	1501
v/c Ratio	0.98	1.49	1.51	1.19	1.09	0.71
Control Delay (s/veh)	74.3	259.1	263.4	112.1	79.3	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	48.5
Total Delay (s/veh)	74.3	259.1	263.4	112.1	79.3	61.5
Queue Length 50th (ft)	253	~535	~664	~474	~309	388
Queue Length 95th (ft)	#453	#760	#798	#718	m#281	m311
Internal Link Dist (ft)		1588	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	433	439	1042	897	423	2125
Starvation Cap Reductn	0	0	0	0	0	783
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	1.49	1.51	1.19	1.09	1.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	779	837	895	77	846
v/c Ratio	0.86	1.06	0.33	0.21	1.05
Control Delay (s/veh)	37.7	76.2	4.2	41.7	57.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.7	76.2	4.2	41.7	57.0
Queue Length 50th (ft)	171	~608	77	23	~167
Queue Length 95th (ft)	278	#841	99	45	#404
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	966	793	2747	363	802
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.81	1.06	0.33	0.21	1.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	498	205	327	67	274	323	323	55
v/c Ratio	0.49	0.79	0.19	0.40	0.68	0.82	0.76	0.11
Control Delay (s/veh)	32.7	58.8	13.9	49.3	14.9	51.8	46.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.7	58.8	13.9	49.3	14.9	51.8	46.6	0.4
Queue Length 50th (ft)	142	124	50	41	2	202	198	0
Queue Length 95th (ft)	202	#264	83	82	76	294	287	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	1024	264	1721	215	440	474	508	586
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.78	0.19	0.31	0.62	0.68	0.64	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	258	731	356	1508	709	549
v/c Ratio	0.41	1.17	0.92	0.79	0.83	0.69
Control Delay (s/veh)	25.5	120.4	50.3	17.5	42.6	8.0
Queue Delay	0.0	0.0	0.0	4.6	0.0	0.0
Total Delay (s/veh)	25.5	120.4	50.3	22.2	42.6	8.0
Queue Length 50th (ft)	112	~469	222	267	202	0
Queue Length 95th (ft)	182	#689	m170	m204	#290	90
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	622	623	402	1933	853	791
Starvation Cap Reductn	0	0	0	353	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	1.17	0.89	0.95	0.83	0.69

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	721	299	1695	364	601
v/c Ratio	1.27	0.44	1.32	1.60	0.30
Control Delay (s/veh)	165.0	7.1	176.4	314.1	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	165.0	7.1	176.4	314.1	13.0
Queue Length 50th (ft)	~523	16	~647	~313	80
Queue Length 95th (ft)	#737	77	#786	m#429	m123
Internal Link Dist (ft)	1339		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	567	683	1283	228	1973
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	6	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.27	0.44	1.33	1.60	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	352	343	319	1115	2143	849	143
v/c Ratio	1.38	1.31	0.97	0.85	0.58	0.55	0.29
Control Delay (s/veh)	223.8	195.8	70.1	24.6	1.6	30.8	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.8	0.0	0.0
Total Delay (s/veh)	223.8	195.8	70.1	24.6	2.4	30.8	5.6
Queue Length 50th (ft)	~282	~270	132	309	17	126	0
Queue Length 95th (ft)	#457	#457	#311	m#460	m38	127	37
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	256	262	329	1318	3700	2483	693
Starvation Cap Reductn	0	0	0	0	1129	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.38	1.31	0.97	0.85	0.83	0.34	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	391	375	354	2671	574	202	1149
v/c Ratio	0.79	0.73	0.67	0.97	0.58	0.73	0.39
Control Delay (s/veh)	40.9	32.0	25.6	37.9	5.3	67.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.9	32.0	25.6	37.9	5.3	67.4	0.9
Queue Length 50th (ft)	205	170	128	~484	14	52	3
Queue Length 95th (ft)	309	273	222	#559	90	m#68	m10
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	562	577	593	2767	982	277	2944
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.65	0.60	0.97	0.58	0.73	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1711	944	991	454	309	786	782
v/c Ratio	0.67	0.77	0.58	0.28	0.39	1.01	1.01
Control Delay (s/veh)	27.4	6.2	32.1	0.4	23.9	66.2	66.0
Queue Delay	0.0	0.0	0.0	0.0	0.1	13.1	0.0
Total Delay (s/veh)	27.4	6.2	32.1	0.4	24.0	79.3	66.0
Queue Length 50th (ft)	331	0	348	0	159	~629	~626
Queue Length 95th (ft)	379	80	m347	m0	234	#873	#870
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	2636	1237	1757	1615	783	777	773
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	31	30	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.76	0.56	0.28	0.41	1.05	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	758	1289	519	688	786	356
v/c Ratio	0.24	1.10	1.25	0.17	1.22	0.61
Control Delay (s/veh)	6.2	80.2	175.6	5.4	155.4	9.4
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.2	80.3	175.6	5.4	155.4	9.4
Queue Length 50th (ft)	36	~839	~251	49	~372	3
Queue Length 95th (ft)	m44	m#611	#358	62	#495	88
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3158	1171	414	4108	642	587
Starvation Cap Reductn	0	14	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	1.11	1.25	0.17	1.22	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	543	534	483	576	1269	1360	636
v/c Ratio	1.20	1.01	0.97	2.20	0.61	1.03	0.66
Control Delay (s/veh)	142.6	69.3	59.9	565.2	21.1	61.6	6.0
Queue Delay	0.0	2.1	0.0	0.0	4.4	0.0	0.0
Total Delay (s/veh)	142.7	71.4	59.9	565.2	25.5	61.6	6.0
Queue Length 50th (ft)	~398	~283	229	~540	388	~438	7
Queue Length 95th (ft)	#605	#518	#444	m#417	m321	#571	87
Internal Link Dist (ft)		1545			405	1085	
Turn Bay Length (ft)	345		340	285			
Base Capacity (vph)	451	529	499	262	2085	1323	964
Starvation Cap Reductn	0	0	0	0	725	0	0
Spillback Cap Reductn	2	4	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.21	1.02	0.97	2.20	0.93	1.03	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	344	592	1462	885	415	1951
v/c Ratio	0.84	1.49	1.35	0.99	0.87	0.86
Control Delay (s/veh)	52.2	262.5	192.5	40.5	25.1	7.0
Queue Delay	0.0	0.0	0.2	0.0	0.0	1.4
Total Delay (s/veh)	52.2	262.5	192.7	40.5	25.1	8.4
Queue Length 50th (ft)	196	~495	~578	202	188	168
Queue Length 95th (ft)	#353	#713	#712	#496	m171	m134
Internal Link Dist (ft)		1671	1087			405
Turn Bay Length (ft)	900					
Base Capacity (vph)	409	397	1083	891	480	2286
Starvation Cap Reductn	0	0	0	0	0	170
Spillback Cap Reductn	0	1	53	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	1.49	1.42	0.99	0.86	0.92

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1007	561	777	49	875
v/c Ratio	0.89	1.10	0.33	0.07	1.18
Control Delay (s/veh)	33.9	105.4	7.8	31.7	112.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.9	105.4	7.8	31.7	112.8
Queue Length 50th (ft)	255	~426	101	12	~406
Queue Length 95th (ft)	m336	#632	131	28	#644
Internal Link Dist (ft)	1137		1275	1633	
Turn Bay Length (ft)		300			415
Base Capacity (vph)	1184	510	2386	676	740
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.85	1.10	0.33	0.07	1.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	529	100	236	25	147	475	472	59
v/c Ratio	0.51	0.67	0.16	0.17	0.51	0.93	0.86	0.10
Control Delay (s/veh)	31.6	60.1	9.9	45.0	11.7	59.8	49.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.6	60.1	9.9	45.0	11.7	59.8	49.5	0.3
Queue Length 50th (ft)	149	62	17	15	0	303	292	0
Queue Length 95th (ft)	202	#149	32	41	45	#505	#474	0
Internal Link Dist (ft)	366		1137				1576	
Turn Bay Length (ft)		315						
Base Capacity (vph)	1037	150	1491	307	426	527	563	634
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.67	0.16	0.08	0.35	0.90	0.84	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	343	343	398	953	1262	909
v/c Ratio	0.92	0.75	0.97	0.40	0.97	0.97
Control Delay (s/veh)	67.2	28.6	40.5	8.5	48.5	35.7
Queue Delay	0.0	0.0	0.0	0.9	0.0	0.0
Total Delay (s/veh)	67.2	28.6	40.5	9.3	48.5	35.7
Queue Length 50th (ft)	191	96	199	126	365	227
Queue Length 95th (ft)	#348	#217	m189	m122	#515	#531
Internal Link Dist (ft)	1375			390	854	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	381	467	410	2400	1299	934
Starvation Cap Reductn	0	0	0	1065	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.73	0.97	0.71	0.97	0.97

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	488	363	1495	433	1173
v/c Ratio	0.93	0.68	1.12	1.42	0.54
Control Delay (s/veh)	58.3	26.9	92.2	228.3	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.4
Total Delay (s/veh)	58.3	26.9	92.2	228.3	19.4
Queue Length 50th (ft)	265	127	~463	~324	224
Queue Length 95th (ft)	#448	226	#593	m#350	m240
Internal Link Dist (ft)	1341		540		390
Turn Bay Length (ft)		310		100	
Base Capacity (vph)	542	550	1331	304	2169
Starvation Cap Reductn	0	0	0	0	473
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.90	0.66	1.12	1.42	0.69

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	360	359	276	827	1109	2172	405
v/c Ratio	1.10	1.07	0.68	1.13	0.32	0.87	0.53
Control Delay (s/veh)	114.5	106.7	27.9	98.0	0.5	30.9	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	114.5	106.7	27.9	98.0	0.5	30.9	10.9
Queue Length 50th (ft)	~246	~250	84	~295	4	327	60
Queue Length 95th (ft)	#424	#439	177	#412	5	379	146
Internal Link Dist (ft)		1318			395	822	
Turn Bay Length (ft)	360		360				125
Base Capacity (vph)	328	334	406	731	3469	2483	758
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	1.07	0.68	1.13	0.32	0.87	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	148	366	363	1726	598	661	2139
v/c Ratio	0.38	0.85	0.82	0.77	0.63	0.91	0.66
Control Delay (s/veh)	30.0	42.1	38.4	30.3	5.6	52.3	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.0	42.1	38.4	30.3	5.6	52.3	3.5
Queue Length 50th (ft)	70	157	147	266	0	186	27
Queue Length 95th (ft)	124	#300	254	314	79	m#230	m75
Internal Link Dist (ft)		1347		1217			395
Turn Bay Length (ft)	325		325		250		
Base Capacity (vph)	463	490	505	2228	945	725	3256
Starvation Cap Reductn	0	0	0	0	0	0	68
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.75	0.72	0.77	0.63	0.91	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBT	SBR
Lane Group Flow (vph)	1860	919	1263	622	314	1005	1009
v/c Ratio	0.88	0.85	0.90	0.39	0.34	1.14	1.15
Control Delay (s/veh)	41.2	14.7	49.0	0.8	17.1	102.6	105.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay (s/veh)	41.2	14.7	49.0	0.8	17.1	102.7	105.9
Queue Length 50th (ft)	444	87	494	5	133	~898	~907
Queue Length 95th (ft)	504	345	m485	m0	196	#1155	#1164
Internal Link Dist (ft)	1992		847			2051	
Turn Bay Length (ft)				180	550		475
Base Capacity (vph)	2113	1075	1409	1615	917	884	881
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	22	21	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.85	0.90	0.39	0.35	1.16	1.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	874	1335	444	1052	867	262
v/c Ratio	0.28	1.11	1.23	0.26	1.24	0.49
Control Delay (s/veh)	6.3	87.6	171.1	6.6	161.8	8.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.3	87.7	171.1	6.6	161.8	8.2
Queue Length 50th (ft)	37	~804	~212	88	~419	0
Queue Length 95th (ft)	m56	m#1024	#315	105	#543	71
Internal Link Dist (ft)	847			2113	1664	
Turn Bay Length (ft)			255			520
Base Capacity (vph)	3158	1198	360	4013	697	537
Starvation Cap Reductn	0	24	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	1.14	1.23	0.26	1.24	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 7.8:

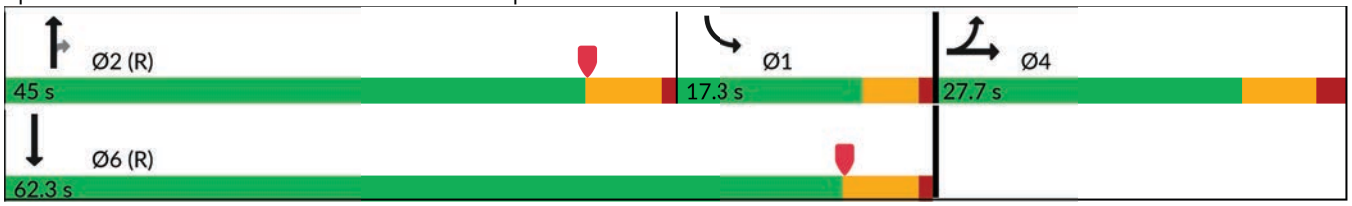
HORIZON YEAR (2050) WITHOUT PROJECT INTERSECTION ANALYSIS WITH IMPROVEMENTS

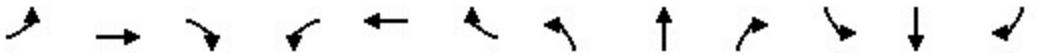
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Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	449	7	1428	951	436	1319
Future Volume (vph)	449	7	1428	951	436	1319
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	27.7	27.7	26.0	26.0	14.7	24.0
Total Split (s)	27.7	27.7	45.0	45.0	17.3	62.3
Total Split (%)	30.8%	30.8%	50.0%	50.0%	19.2%	69.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.7	5.0
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	20.7	20.7	39.0	39.0	12.6	56.3
Actuated g/C Ratio	0.23	0.23	0.43	0.43	0.14	0.63
v/c Ratio	1.14	1.47	0.96	0.92	1.05	0.61
Control Delay (s/veh)	125.2	250.0	41.0	22.6	61.9	3.0
Queue Delay	0.0	0.0	11.4	0.0	0.0	0.9
Total Delay (s/veh)	125.2	250.1	52.4	22.6	61.9	3.9
LOS	F	F	D	C	E	A
Approach Delay (s/veh)		197.5	40.5			18.3
Approach LOS		F	D			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 17.6 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.47	
Intersection Signal Delay (s/veh): 62.4	Intersection LOS: E
Intersection Capacity Utilization 117.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	7	504	0	0	0	0	1428	951	436	1319	0
Future Volume (veh/h)	449	7	504	0	0	0	0	1428	951	436	1319	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1900	1900				0	1900	1900	1700	1900	0
Adj Flow Rate, veh/h	473	7	469				0	1503	775	459	1388	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	394	5	366				0	1564	698	810	2736	0
Arrive On Green	0.23	0.23	0.23				0.00	0.43	0.43	0.52	1.00	0.00
Sat Flow, veh/h	1714	24	1590				0	3705	1610	3141	3705	0
Grp Volume(v), veh/h	473	0	476				0	1503	775	459	1388	0
Grp Sat Flow(s),veh/h/ln	1714	0	1614				0	1805	1610	1570	1805	0
Q Serve(g_s), s	20.7	0.0	20.7				0.0	36.4	39.0	9.0	0.0	0.0
Cycle Q Clear(g_c), s	20.7	0.0	20.7				0.0	36.4	39.0	9.0	0.0	0.0
Prop In Lane	1.00		0.99				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	394	0	371				0	1564	698	810	2736	0
V/C Ratio(X)	1.20	0.00	1.28				0.00	0.96	1.11	0.57	0.51	0.00
Avail Cap(c_a), veh/h	394	0	371				0	1564	698	810	2736	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	0.09	0.09	0.09	0.09	0.00
Uniform Delay (d), s/veh	34.7	0.0	34.7				0.0	24.8	25.5	18.3	0.0	0.0
Incr Delay (d2), s/veh	111.9	0.0	146.2				0.0	2.3	52.1	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(50%),veh/ln	20.6	0.0	23.0				0.0	14.1	23.1	2.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	146.5	0.0	180.9				0.0	27.0	77.6	18.4	0.1	0.0
LnGrp LOS	F		F					C	F	B	A	
Approach Vol, veh/h		949						2278			1847	
Approach Delay, s/veh		163.8						44.2			4.6	
Approach LOS		F						D			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	29.2	45.0		27.7		74.2
Change Period (Y+Rc), s	6.0	* 6		7.0		6.0
Max Green Setting (Gmax), s	12.6	* 39		20.7		56.3
Max Q Clear Time (g_c+I1), s	11.0	41.0		22.7		2.0
Green Ext Time (p_c), s	0.3	0.0		0.0		21.1

Intersection Summary	
HCM 7th Control Delay, s/veh	52.2
HCM 7th LOS	D

Notes

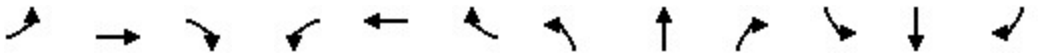
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	349	318	62	776	170	1460	186	1518
Future Volume (vph)	349	318	62	776	170	1460	186	1518
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	45.0	45.0	45.0	45.0	39.4	39.4	35.6	75.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	32.8%	32.8%	29.7%	62.5%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	39.3	39.3	39.3	39.3	34.7	34.7	10.5	49.7
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.34	0.34	0.10	0.49
v/c Ratio	5.17	0.28	0.19	0.81	1.34	0.81	0.59	0.66
Control Delay (s/veh)	Error	20.9	23.4	31.6	222.9	33.9	50.5	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	Error	20.9	23.4	31.6	222.9	33.9	50.5	19.9
LOS	F	C	C	C	F	C	D	B
Approach Delay (s/veh)		913.6		31.1		53.2		22.9
Approach LOS		F		C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.6	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 5.17	
Intersection Signal Delay (s/veh): 153.2	Intersection LOS: F
Intersection Capacity Utilization 114.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	349	318	71	62	776	335	170	1460	37	186	1518	222
Future Volume (veh/h)	349	318	71	62	776	335	170	1460	37	186	1518	222
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	367	335	58	65	817	195	179	1537	19	196	1598	215
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	192	1276	218	412	1198	286	286	1947	24	265	2338	314
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.52	0.52	0.52	0.12	0.71	0.71
Sat Flow, veh/h	536	3155	540	954	2963	707	470	5618	69	3238	4912	659
Grp Volume(v), veh/h	367	200	193	65	524	488	179	1040	516	196	1235	578
Grp Sat Flow(s),veh/h/ln	536	1900	1795	954	1900	1770	235	1900	1887	1619	1900	1771
Q Serve(g_s), s	21.3	4.8	4.9	3.5	17.9	17.9	28.4	21.6	21.6	5.7	17.6	17.7
Cycle Q Clear(g_c), s	39.2	4.8	4.9	8.3	17.9	17.9	33.6	21.6	21.6	5.7	17.6	17.7
Prop In Lane	1.00		0.30	1.00		0.40	1.00		0.04	1.00		0.37
Lane Grp Cap(c), veh/h	192	768	726	412	768	716	286	1317	654	265	1808	843
V/C Ratio(X)	1.91	0.26	0.27	0.16	0.68	0.68	0.63	0.79	0.79	0.74	0.68	0.69
Avail Cap(c_a), veh/h	192	768	726	412	768	716	286	1317	654	1036	2713	1264
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	12.3	12.3	14.3	14.9	14.9	29.1	20.4	20.4	41.5	9.8	9.8
Incr Delay (d2), s/veh	429.5	0.2	0.2	0.2	2.5	2.7	4.2	3.3	6.5	1.5	0.5	1.0
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(50%),veh/ln	27.0	1.8	1.7	0.6	5.8	5.4	2.1	7.3	7.8	2.2	4.4	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	461.6	12.5	12.5	14.4	17.4	17.5	33.4	23.7	26.8	43.1	10.2	10.8
LnGrp LOS	F	B	B	B	B	B	C	C	C	D	B	B
Approach Vol, veh/h		760			1077			1735			2009	
Approach Delay, s/veh		229.4			17.3			25.6			13.6	
Approach LOS		F			B			C			B	

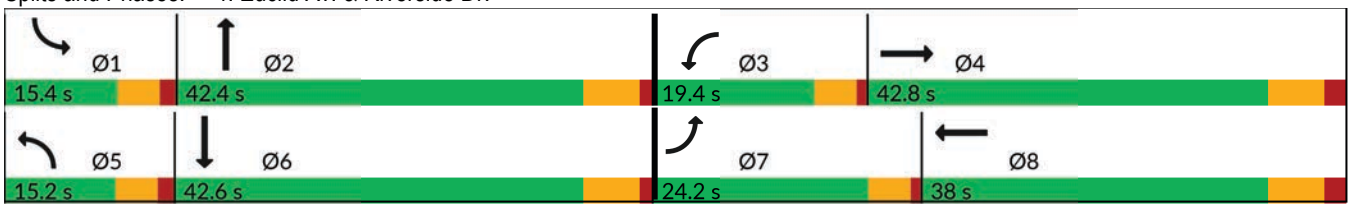
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.5	39.4		45.0		51.9		45.0				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	33.6		39.2		69.2		39.2				
Max Q Clear Time (g_c+I1), s	7.7	35.6		41.2		19.7		19.9				
Green Ext Time (p_c), s	0.3	0.0		0.0		18.7		6.3				

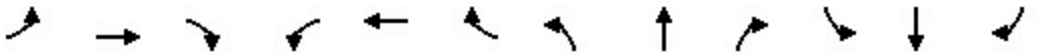
Intersection Summary												
HCM 7th Control Delay, s/veh			47.4									
HCM 7th LOS			D									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	271	340	143	821	87	1185	82	1415
Future Volume (vph)	271	340	143	821	87	1185	82	1415
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	15.2	36.0
Total Split (s)	24.2	42.8	19.4	38.0	15.2	42.4	15.4	42.6
Total Split (%)	20.2%	35.7%	16.2%	31.7%	12.7%	35.3%	12.8%	35.5%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	3.7	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	5.2	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.5	36.7	13.8	31.0	10.0	36.5	10.1	36.6
Actuated g/C Ratio	0.16	0.31	0.12	0.26	0.08	0.30	0.08	0.31
v/c Ratio	1.03	0.70	0.77	1.11	0.65	0.90	0.60	1.09
Control Delay (s/veh)	111.2	44.1	76.4	106.9	74.7	48.6	70.7	90.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	111.2	44.1	76.4	106.9	74.7	48.6	70.7	90.2
LOS	F	D	E	F	E	D	E	F
Approach Delay (s/veh)		72.0		103.0		50.2		89.2
Approach LOS		E		F		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay (s/veh): 78.7	Intersection LOS: E
Intersection Capacity Utilization 102.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	340	40	143	821	153	87	1185	150	82	1415	204
Future Volume (veh/h)	271	340	40	143	821	153	87	1185	150	82	1415	204
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	285	358	19	151	864	119	92	1247	117	86	1489	149
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	280	572	30	175	825	114	137	1481	139	135	1465	147
Arrive On Green	0.24	0.48	0.48	0.15	0.39	0.39	0.12	0.46	0.46	0.12	0.46	0.46
Sat Flow, veh/h	1714	1787	95	1714	3181	438	1714	4823	452	1714	4786	479
Grp Volume(v), veh/h	285	0	377	151	490	493	92	894	470	86	1076	562
Grp Sat Flow(s),veh/h/ln	1714	0	1881	1714	1805	1814	1714	1729	1818	1714	1729	1806
Q Serve(g_s), s	19.5	0.0	17.8	10.3	31.0	31.0	6.1	27.2	27.2	5.7	36.6	36.6
Cycle Q Clear(g_c), s	19.5	0.0	17.8	10.3	31.0	31.0	6.1	27.2	27.2	5.7	36.6	36.6
Prop In Lane	1.00		0.05	1.00		0.24	1.00		0.25	1.00		0.26
Lane Grp Cap(c), veh/h	280	0	602	175	468	470	137	1062	558	135	1059	553
V/C Ratio(X)	1.02	0.00	0.63	0.86	1.05	1.05	0.67	0.84	0.84	0.64	1.02	1.02
Avail Cap(c_a), veh/h	280	0	602	211	468	470	143	1062	558	146	1059	553
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	0.0	25.7	49.8	36.5	36.5	51.1	29.7	29.7	51.1	32.3	32.3
Incr Delay (d2), s/veh	58.8	0.0	2.4	22.4	54.5	54.4	11.1	6.2	11.2	7.9	31.7	42.5
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(50%),veh/ln	11.9	0.0	6.9	5.2	18.5	18.6	2.9	9.6	10.9	2.6	17.0	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	103.9	0.0	28.1	72.1	91.1	91.0	62.2	35.9	40.9	58.9	64.0	74.8
LnGrp LOS	F		C	E	F	F	E	D	D	E	F	F
Approach Vol, veh/h		662			1134			1456			1724	
Approach Delay, s/veh		60.8			88.5			39.2			67.3	
Approach LOS		E			F			D			E	

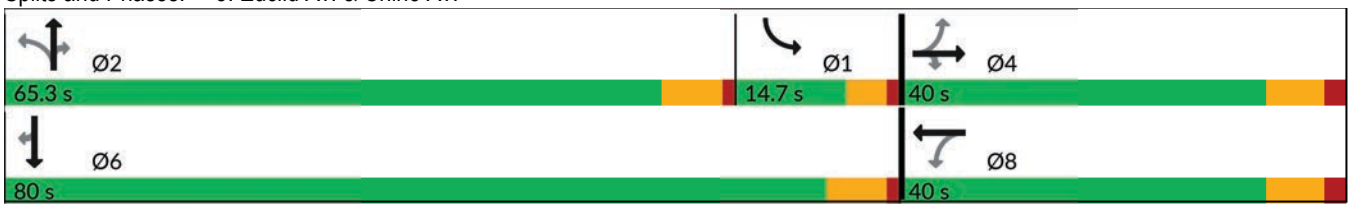
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	42.7	16.9	45.3	14.7	42.6	24.2	38.0
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	10.2	36.4	14.7	35.8	10.0	36.6	19.5	31.0
Max Q Clear Time (g_c+I1), s	7.7	29.2	12.3	19.8	8.1	38.6	21.5	33.0
Green Ext Time (p_c), s	0.0	4.3	0.0	2.6	0.0	0.0	0.0	0.0

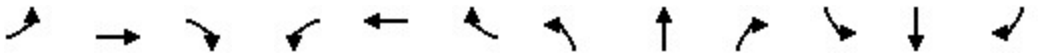
Intersection Summary	
HCM 7th Control Delay, s/veh	63.0
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	136	277	56	67	342	98	1210	103	64	1427	151
Future Volume (vph)	136	277	56	67	342	98	1210	103	64	1427	151
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	40.0	40.0	40.0	40.0	40.0	65.3	65.3	65.3	14.7	80.0	80.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	54.4%	54.4%	54.4%	12.3%	66.7%	66.7%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	32.9	32.9	32.9	32.9	32.9	59.0	59.0	59.0	10.0	70.5	70.5
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.28	0.50	0.50	0.50	0.09	0.60	0.60
v/c Ratio	1.23	0.55	0.11	0.34	0.79	1.36	0.70	0.13	0.46	0.69	0.16
Control Delay (s/veh)	197.2	41.2	2.9	40.5	51.3	252.5	25.6	4.4	63.1	17.8	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	197.2	41.2	2.9	40.5	51.3	252.5	25.6	4.4	63.1	17.8	2.7
LOS	F	D	A	D	D	F	C	A	E	B	A
Approach Delay (s/veh)		81.8			49.7		39.8			18.2	
Approach LOS		F			D		D			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.36	
Intersection Signal Delay (s/veh): 37.0	Intersection LOS: D
Intersection Capacity Utilization 100.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	277	56	67	342	52	98	1210	103	64	1427	151
Future Volume (veh/h)	136	277	56	67	342	52	98	1210	103	64	1427	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	143	292	38	71	360	48	103	1274	92	67	1502	128
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	142	527	447	223	454	61	173	1721	768	129	2191	977
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.72	0.72	0.72	0.11	0.91	0.91
Sat Flow, veh/h	941	1900	1610	1011	1639	219	297	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	143	292	38	71	0	408	103	1274	92	67	1502	128
Grp Sat Flow(s),veh/h/ln	941	1900	1610	1011	0	1857	297	1805	1610	1714	1805	1610
Q Serve(g_s), s	10.2	13.8	1.7	7.1	0.0	22.6	37.1	25.3	2.1	4.4	11.7	1.0
Cycle Q Clear(g_c), s	32.8	13.8	1.7	20.8	0.0	22.6	48.8	25.3	2.1	4.4	11.7	1.0
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	527	447	223	0	515	173	1721	768	129	2191	977
V/C Ratio(X)	1.01	0.55	0.09	0.32	0.00	0.79	0.60	0.74	0.12	0.52	0.69	0.13
Avail Cap(c_a), veh/h	142	527	447	223	0	515	179	1795	800	145	2243	1001
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	29.0	25.5	36.9	0.0	31.6	21.1	12.4	9.1	50.5	2.6	2.1
Incr Delay (d2), s/veh	77.9	1.3	0.1	0.8	0.0	8.2	5.0	1.6	0.1	1.2	0.9	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(50%),veh/ln	7.0	5.7	0.6	1.6	0.0	9.6	2.0	6.0	0.7	1.8	1.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	125.9	30.3	25.5	37.7	0.0	39.8	26.1	14.0	9.2	51.7	3.5	2.2
LnGrp LOS	F	C	C	D		D	C	B	A	D	A	A
Approach Vol, veh/h		473			479			1469			1697	
Approach Delay, s/veh		58.8			39.5			14.6			5.3	
Approach LOS		E			D			B			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.4	62.9		40.0		78.3		40.0				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	10.0	* 59		32.8		73.5		32.8				
Max Q Clear Time (g_c+I1), s	6.4	50.8		34.8		13.7		24.6				
Green Ext Time (p_c), s	0.0	5.6		0.0		15.6		1.6				

Intersection Summary	
HCM 7th Control Delay, s/veh	18.7
HCM 7th LOS	B

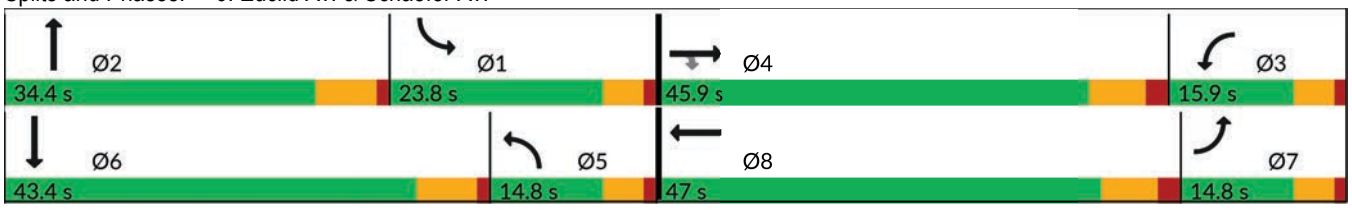
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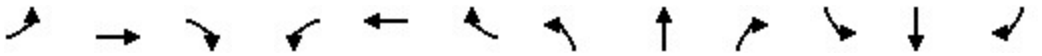
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	116	333	78	104	247	114	1008	255	1341
Future Volume (vph)	116	333	78	104	247	114	1008	255	1341
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	14.7	37.5
Total Split (s)	14.8	45.9	45.9	15.9	47.0	14.8	34.4	23.8	43.4
Total Split (%)	12.3%	38.3%	38.3%	13.3%	39.2%	12.3%	28.7%	19.8%	36.2%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	3.7	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	4.7	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	10.1	27.3	27.3	20.5	37.7	11.1	27.9	19.1	35.9
Actuated g/C Ratio	0.09	0.23	0.23	0.17	0.32	0.09	0.24	0.16	0.30
v/c Ratio	0.84	0.80	0.16	0.37	0.95	0.75	0.99	0.97	0.89
Control Delay (s/veh)	95.1	56.0	0.7	49.7	63.0	80.6	64.9	96.3	46.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	95.1	56.0	0.7	49.7	63.0	80.6	64.9	96.3	46.0
LOS	F	E	A	D	E	F	E	F	D
Approach Delay (s/veh)		56.4			60.8		66.2		53.5
Approach LOS		E			E		E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay (s/veh): 59.1	Intersection LOS: E
Intersection Capacity Utilization 98.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	333	78	104	247	292	114	1008	248	255	1341	109
Future Volume (veh/h)	116	333	78	104	247	292	114	1008	248	255	1341	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	122	351	45	109	260	288	120	1061	243	268	1412	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	145	390	331	353	269	298	178	1053	241	276	1582	68
Arrive On Green	0.13	0.31	0.31	0.31	0.49	0.49	0.16	0.35	0.35	0.24	0.44	0.44
Sat Flow, veh/h	1714	1900	1610	1714	824	912	1714	4484	1026	1714	5423	234
Grp Volume(v), veh/h	122	351	45	109	0	548	120	899	405	268	989	484
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	0	1736	1714	1900	1710	1714	1900	1857
Q Serve(g_s), s	8.3	21.0	2.4	5.8	0.0	36.3	7.8	27.9	27.9	18.4	28.5	28.5
Cycle Q Clear(g_c), s	8.3	21.0	2.4	5.8	0.0	36.3	7.8	27.9	27.9	18.4	28.5	28.5
Prop In Lane	1.00		1.00	1.00		0.53	1.00		0.60	1.00		0.13
Lane Grp Cap(c), veh/h	145	390	331	353	0	567	178	892	402	276	1109	542
V/C Ratio(X)	0.84	0.90	0.14	0.31	0.00	0.97	0.67	1.01	1.01	0.97	0.89	0.89
Avail Cap(c_a), veh/h	146	622	527	353	0	584	178	892	402	276	1180	577
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	39.9	33.5	34.6	0.0	29.6	48.3	38.5	38.5	44.8	31.7	31.7
Incr Delay (d2), s/veh	31.5	9.2	0.1	0.2	0.0	28.3	8.0	31.9	47.1	46.3	8.5	15.5
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(50%),veh/ln	4.6	9.5	0.9	2.3	0.0	16.4	3.5	14.5	14.8	10.2	11.5	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.5	49.1	33.6	34.8	0.0	58.0	56.2	70.4	85.5	91.1	40.2	47.2
LnGrp LOS	F	D	C	C		E	E	F	F	F	D	D
Approach Vol, veh/h		518			657			1424			1741	
Approach Delay, s/veh		55.6			54.1			73.5			50.0	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.8	34.4	29.2	31.4	17.0	41.2	14.8	45.8
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	19.1	27.9	11.2	38.9	10.1	36.9	10.1	40.0
Max Q Clear Time (g_c+I1), s	20.4	29.9	7.8	23.0	9.8	30.5	10.3	38.3
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	4.1	0.0	0.5

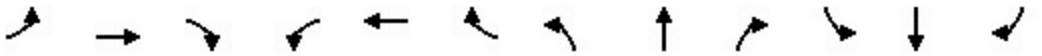
Intersection Summary	
HCM 7th Control Delay, s/veh	59.0
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	188	281	169	197	515	563	991	69	1190
Future Volume (vph)	188	281	169	197	515	563	991	69	1190
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	44.2	44.2	44.2	45.2	45.2	14.7	26.5	14.7	37.5
Total Split (s)	62.0	62.0	62.0	62.0	62.0	19.0	42.6	15.4	39.0
Total Split (%)	51.7%	51.7%	51.7%	51.7%	51.7%	15.8%	35.5%	12.8%	32.5%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	4.7	6.5
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	54.8	54.8	54.8	54.8	54.8	14.3	36.5	13.3	32.5
Actuated g/C Ratio	0.46	0.46	0.46	0.46	0.46	0.12	0.30	0.11	0.27
v/c Ratio	1.55	0.34	0.21	0.49	0.81	1.54	0.66	0.39	0.97
Control Delay (s/veh)	308.4	22.4	3.4	27.7	36.8	293.4	38.9	56.5	58.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	308.4	22.4	3.4	27.7	36.8	293.4	38.9	56.5	58.5
LOS	F	C	A	C	D	F	D	E	E
Approach Delay (s/veh)		101.6			34.7		126.6		58.4
Approach LOS		F			C		F		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.55	
Intersection Signal Delay (s/veh): 84.3	Intersection LOS: F
Intersection Capacity Utilization 113.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Euclid Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	281	169	197	515	138	563	991	80	69	1190	216
Future Volume (veh/h)	188	281	169	197	515	138	563	991	80	69	1190	216
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	198	296	138	207	542	136	593	1043	73	73	1253	206
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	203	868	735	421	669	168	386	1263	88	257	1293	213
Arrive On Green	0.69	0.69	0.69	0.69	0.69	0.69	0.18	0.36	0.36	0.22	0.41	0.41
Sat Flow, veh/h	733	1900	1610	919	1466	368	3238	5261	368	1714	4774	785
Grp Volume(v), veh/h	198	296	138	207	0	678	593	753	363	73	997	462
Grp Sat Flow(s),veh/h/ln	733	1900	1610	919	0	1833	1619	1900	1828	1714	1900	1759
Q Serve(g_s), s	23.4	7.7	3.7	16.8	0.0	31.4	14.3	21.6	21.7	4.2	30.8	30.8
Cycle Q Clear(g_c), s	54.8	7.7	3.7	24.5	0.0	31.4	14.3	21.6	21.7	4.2	30.8	30.8
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.20	1.00		0.45
Lane Grp Cap(c), veh/h	203	868	735	421	0	837	386	913	439	257	1029	476
V/C Ratio(X)	0.98	0.34	0.19	0.49	0.00	0.81	1.54	0.83	0.83	0.28	0.97	0.97
Avail Cap(c_a), veh/h	203	868	735	421	0	837	386	1143	550	257	1029	476
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	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	11.5	10.9	16.5	0.0	15.2	49.3	36.1	36.1	41.2	35.1	35.1
Incr Delay (d2), s/veh	56.0	0.2	0.1	0.9	0.0	6.0	254.2	4.1	8.3	0.2	20.9	33.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	2.8	1.2	2.7	0.0	9.2	18.8	8.7	8.9	1.7	14.3	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	93.9	11.7	11.0	17.4	0.0	21.2	303.5	40.2	44.4	41.4	56.0	68.4
LnGrp LOS	F	B	B	B		C	F	D	D	D	E	E
Approach Vol, veh/h		632			885			1709			1532	
Approach Delay, s/veh		37.3			20.3			132.5			59.0	
Approach LOS		D			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.7	35.3		62.0	19.0	39.0		62.0				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.7	36.1		54.8	14.3	32.5		54.8				
Max Q Clear Time (g_c+I1), s	6.2	23.7		56.8	16.3	32.8		33.4				
Green Ext Time (p_c), s	0.0	5.1		0.0	0.0	0.0		5.6				

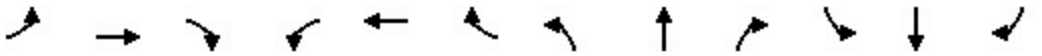
Intersection Summary	
HCM 7th Control Delay, s/veh	75.3
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	381	585	89	63	1288	499	83	880	295	837	397
Future Volume (vph)	381	585	89	63	1288	499	83	880	295	837	397
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	37.4	37.4
Total Split (s)	22.0	61.6	61.6	15.4	55.0	55.0	14.7	34.8	18.2	38.3	38.3
Total Split (%)	16.9%	47.4%	47.4%	11.8%	42.3%	42.3%	11.3%	26.8%	14.0%	29.5%	29.5%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	5.4	5.4
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.3	57.7	57.7	10.4	47.8	47.8	10.0	28.3	13.5	31.9	31.9
Actuated g/C Ratio	0.13	0.44	0.44	0.08	0.37	0.37	0.08	0.22	0.10	0.25	0.25
v/c Ratio	0.94	0.37	0.12	0.49	0.97	0.73	0.66	0.80	0.93	0.95	0.74
Control Delay (s/veh)	85.9	25.6	3.4	69.8	58.5	26.5	82.4	53.6	91.6	67.1	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.9	25.6	3.4	69.8	58.5	26.5	82.4	53.6	91.6	67.1	27.9
LOS	F	C	A	E	E	C	F	D	F	E	C
Approach Delay (s/veh)		45.5			50.2			55.9		61.7	
Approach LOS		D			D			E		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay (s/veh): 53.6	Intersection LOS: D
Intersection Capacity Utilization 98.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	381	585	89	63	1288	499	83	880	63	295	837	397
Future Volume (veh/h)	381	585	89	63	1288	499	83	880	63	295	837	397
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1700	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	401	616	75	66	1356	262	87	926	34	311	881	260
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	435	1639	694	120	1396	584	127	1171	43	339	931	389
Arrive On Green	0.20	0.65	0.65	0.11	0.55	0.55	0.11	0.32	0.32	0.16	0.37	0.37
Sat Flow, veh/h	3238	3800	1609	1714	3800	1588	1714	5464	200	3238	3800	1588
Grp Volume(v), veh/h	401	616	75	66	1356	262	87	644	316	311	881	260
Grp Sat Flow(s),veh/h/ln	1619	1900	1609	1714	1900	1588	1714	1900	1864	1619	1900	1588
Q Serve(g_s), s	15.7	9.7	2.3	4.7	44.4	12.7	6.3	19.9	19.9	12.2	29.0	17.7
Cycle Q Clear(g_c), s	15.7	9.7	2.3	4.7	44.4	12.7	6.3	19.9	19.9	12.2	29.0	17.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	435	1639	694	120	1396	584	127	814	399	339	931	389
V/C Ratio(X)	0.92	0.38	0.11	0.55	0.97	0.45	0.68	0.79	0.79	0.92	0.95	0.67
Avail Cap(c_a), veh/h	435	1639	694	142	1409	589	133	834	409	339	941	393
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	14.6	13.3	55.7	28.3	21.1	55.8	41.1	41.1	53.8	40.0	36.4
Incr Delay (d2), s/veh	24.7	0.1	0.1	3.8	17.3	0.2	10.4	5.1	10.0	28.3	17.8	4.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	3.6	0.8	2.1	18.5	4.0	2.9	8.5	8.9	5.8	13.5	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.5	14.8	13.4	59.5	45.5	21.3	66.2	46.2	51.1	82.0	57.7	40.6
LnGrp LOS	E	B	B	E	D	C	E	D	D	F	E	D
Approach Vol, veh/h		1092			1684			1047			1452	
Approach Delay, s/veh		37.0			42.3			49.3			59.9	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	34.1	13.8	62.8	14.3	38.1	22.0	54.6
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	* 6.5	4.7	7.2
Max Green Setting (Gmax), s	13.5	28.3	10.7	54.4	10.0	* 32	17.3	47.8
Max Q Clear Time (g_c+I1), s	14.2	21.9	6.7	11.7	8.3	31.0	17.7	46.4
Green Ext Time (p_c), s	0.0	2.8	0.0	4.3	0.0	0.6	0.0	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	47.4
HCM 7th LOS	D

Notes

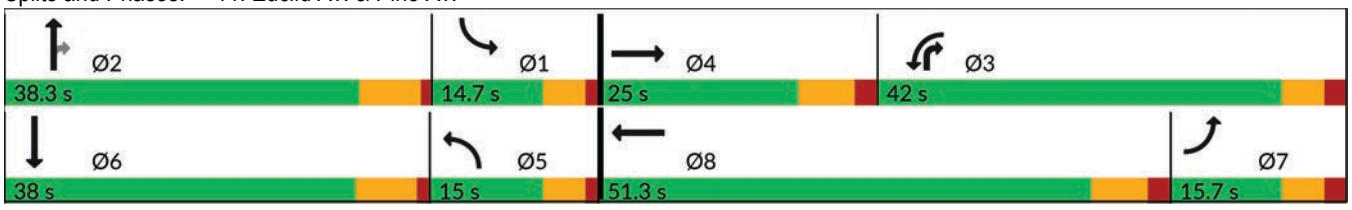
User approved pedestrian interval to be less than phase max green.

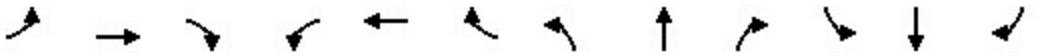
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	435	849	553	89	529	574	57	733
Future Volume (vph)	30	435	849	553	89	529	574	57	733
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	15.7	25.0	42.0	51.3	15.0	38.3	42.0	14.7	38.0
Total Split (%)	13.1%	20.8%	35.0%	42.8%	12.5%	31.9%	35.0%	12.3%	31.7%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.0	18.0	35.1	49.7	10.2	27.1	68.7	15.3	29.0
Actuated g/C Ratio	0.09	0.15	0.30	0.43	0.09	0.23	0.59	0.13	0.25
v/c Ratio	0.22	0.99	0.95	0.77	0.63	0.66	0.59	0.27	0.90
Control Delay (s/veh)	55.2	83.5	59.1	38.7	71.7	46.5	14.0	50.0	56.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.2	83.5	59.1	38.7	71.7	46.5	14.0	50.0	56.7
LOS	E	F	E	D	E	D	B	D	E
Approach Delay (s/veh)		81.9		50.7		32.8			56.2
Approach LOS		F		D		C			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay (s/veh): 50.8	Intersection LOS: D
Intersection Capacity Utilization 91.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	435	89	849	553	39	89	529	574	57	733	35
Future Volume (veh/h)	30	435	89	849	553	39	89	529	574	57	733	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	32	458	0	894	582	40	94	557	372	60	772	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	160	538		944	626	43	149	669	782	246	852	36
Arrive On Green	0.14	0.22	0.00	0.45	0.53	0.53	0.13	0.28	0.28	0.22	0.36	0.36
Sat Flow, veh/h	1714	3705	0	3141	1757	121	1714	3610	1610	1714	3523	151
Grp Volume(v), veh/h	32	458	0	894	0	622	94	557	372	60	395	410
Grp Sat Flow(s),veh/h/ln	1714	1805	0	1570	0	1878	1714	1805	1610	1714	1805	1869
Q Serve(g_s), s	1.8	13.1	0.0	29.4	0.0	33.1	5.6	15.7	0.0	3.1	22.4	22.5
Cycle Q Clear(g_c), s	1.8	13.1	0.0	29.4	0.0	33.1	5.6	15.7	0.0	3.1	22.4	22.5
Prop In Lane	1.00		0.00	1.00		0.06	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	160	538		944	0	669	149	669	782	246	437	452
V/C Ratio(X)	0.20	0.85		0.95	0.00	0.93	0.63	0.83	0.48	0.24	0.91	0.91
Avail Cap(c_a), veh/h	160	602		1056	0	771	164	1063	958	246	527	545
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	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	42.8	40.8	0.0	28.8	0.0	23.9	45.3	37.4	15.9	37.5	33.2	33.2
Incr Delay (d2), s/veh	0.2	11.0	0.0	15.0	0.0	17.0	4.3	1.6	0.2	0.2	15.6	15.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.0	0.0	10.4	0.0	13.4	2.4	6.0	4.9	1.2	9.6	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.0	51.8	0.0	43.8	0.0	40.9	49.6	39.0	16.1	37.7	48.9	48.5
LnGrp LOS	D	D		D		D	D	D	B	D	D	D
Approach Vol, veh/h		490			1516			1023			865	
Approach Delay, s/veh		51.2			42.6			31.7			47.9	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.2	26.5	38.2	23.1	14.1	32.6	15.8	45.4
Change Period (Y+Rc), s	4.7	6.5	5.7	7.0	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.0	31.8	36.3	18.0	10.3	31.5	10.0	44.3
Max Q Clear Time (g_c+I1), s	5.1	17.7	31.4	15.1	7.6	24.5	3.8	35.1
Green Ext Time (p_c), s	0.0	2.4	1.0	1.0	0.0	1.7	0.0	3.3

Intersection Summary	
HCM 7th Control Delay, s/veh	42.0
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	359	30	121	716	45	39	8	25	59	40	20
Future Vol, veh/h	15	359	30	121	716	45	39	8	25	59	40	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	378	32	127	754	47	41	8	26	62	42	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	801	0	0	409	0	0	1455	1481	394	1446	1473	777
Stage 1	-	-	-	-	-	-	425	425	-	1032	1032	-
Stage 2	-	-	-	-	-	-	1029	1056	-	414	441	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	831	-	-	1160	-	-	109	127	660	111	128	400
Stage 1	-	-	-	-	-	-	611	590	-	283	313	-
Stage 2	-	-	-	-	-	-	284	305	-	620	580	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	831	-	-	1160	-	-	76	111	660	90	112	400
Mov Cap-2 Maneuver	-	-	-	-	-	-	174	233	-	220	241	-
Stage 1	-	-	-	-	-	-	599	579	-	252	278	-
Stage 2	-	-	-	-	-	-	204	271	-	575	569	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.35	1.16	26.34	33.88
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	243	831	-	-	1160	-	-	246
HCM Lane V/C Ratio	0.311	0.019	-	-	0.11	-	-	0.509
HCM Ctrl Dly (s/v)	26.3	9.4	-	-	8.5	-	-	33.9
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1.3	0.1	-	-	0.4	-	-	2.6

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	681	47	102	753	0	13	2	24	0	7	0
Future Vol, veh/h	0	681	47	102	753	0	13	2	24	0	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	717	49	107	793	0	14	2	25	0	7	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	793	0	0	766	0	0	1753	1749	742	1725	1774	793
Stage 1	-	-	-	-	-	-	742	742	-	1007	1007	-
Stage 2	-	-	-	-	-	-	1011	1007	-	718	766	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	837	-	-	856	-	-	68	87	419	71	84	392
Stage 1	-	-	-	-	-	-	411	426	-	293	321	-
Stage 2	-	-	-	-	-	-	291	321	-	423	415	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	837	-	-	856	-	-	57	76	419	58	73	392
Mov Cap-2 Maneuver	-	-	-	-	-	-	207	232	-	189	209	-
Stage 1	-	-	-	-	-	-	411	426	-	256	281	-
Stage 2	-	-	-	-	-	-	248	281	-	396	415	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	1.17	18.74	22.9
HCM LOS			C	C

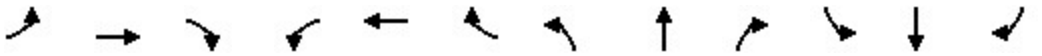
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	303	837	-	-	856	-	-	209
HCM Lane V/C Ratio	0.136	-	-	-	0.125	-	-	0.035
HCM Ctrl Dly (s/v)	18.7	0	-	-	9.8	-	-	22.9
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.4	-	-	0.1

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	474	26	260	65	672	66	446
Future Volume (vph)	54	474	26	260	65	672	66	446
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	44.0	44.0	44.0	44.0	76.0	76.0	76.0	76.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		38.8		38.8		54.6		54.6
Actuated g/C Ratio		0.37		0.37		0.52		0.52
v/c Ratio		0.97		0.58		0.93		0.77
Control Delay (s/veh)		64.2		33.1		40.1		26.6
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		64.2		33.1		40.1		26.6
LOS		E		C		D		C
Approach Delay (s/veh)		64.2		33.1		40.1		26.6
Approach LOS		E		C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 105.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay (s/veh): 41.8	Intersection LOS: D
Intersection Capacity Utilization 104.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 17: Bon View Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	474	58	26	260	59	65	672	44	66	446	71
Future Volume (veh/h)	54	474	58	26	260	59	65	672	44	66	446	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	57	499	61	27	274	62	68	707	46	69	469	75
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	89	553	65	70	511	110	97	770	49	104	597	91
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.74	0.74	0.74	0.74	0.74	0.74
Sat Flow, veh/h	115	1494	176	67	1379	298	105	1562	99	115	1210	185
Grp Volume(v), veh/h	617	0	0	363	0	0	821	0	0	613	0	0
Grp Sat Flow(s),veh/h/ln	1785	0	0	1744	0	0	1765	0	0	1510	0	0
Q Serve(g_s), s	16.4	0.0	0.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	27.0	0.0	0.0	10.6	0.0	0.0	33.3	0.0	0.0	19.2	0.0	0.0
Prop In Lane	0.09		0.10	0.07		0.17	0.08		0.06	0.11		0.12
Lane Grp Cap(c), veh/h	707	0	0	691	0	0	917	0	0	792	0	0
V/C Ratio(X)	0.87	0.00	0.00	0.53	0.00	0.00	0.90	0.00	0.00	0.77	0.00	0.00
Avail Cap(c_a), veh/h	843	0	0	823	0	0	1484	0	0	1313	0	0
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.7	0.0	0.0	14.3	0.0	0.0	9.6	0.0	0.0	7.6	0.0	0.0
Incr Delay (d2), s/veh	8.7	0.0	0.0	0.6	0.0	0.0	4.6	0.0	0.0	1.7	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(50%),veh/ln	8.2	0.0	0.0	3.5	0.0	0.0	5.7	0.0	0.0	3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.4	0.0	0.0	14.9	0.0	0.0	14.2	0.0	0.0	9.3	0.0	0.0
LnGrp LOS	C			B			B			A		
Approach Vol, veh/h		617			363			821			613	
Approach Delay, s/veh		26.4			14.9			14.2			9.3	
Approach LOS		C			B			B			A	

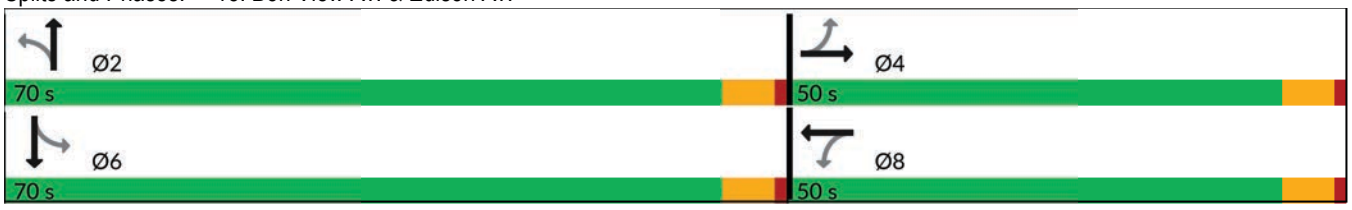
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		47.8		37.4		47.8		37.4				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		70.2		38.2		70.2		38.2				
Max Q Clear Time (g_c+I1), s		35.3		29.0		21.2		12.6				
Green Ext Time (p_c), s		6.8		2.6		4.8		2.1				

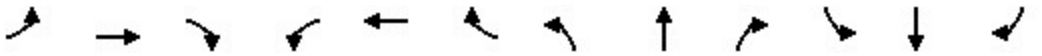
Intersection Summary												
HCM 7th Control Delay, s/veh			16.2									
HCM 7th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	48	288	12	536	105	499	35	458
Future Volume (vph)	48	288	12	536	105	499	35	458
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	50.0	50.0	50.0	50.0	70.0	70.0	70.0	70.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	58.3%	58.3%	58.3%	58.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		38.2		38.2		53.6		53.6
Actuated g/C Ratio		0.37		0.37		0.52		0.52
v/c Ratio		0.77		0.89		0.90		0.67
Control Delay (s/veh)		41.4		49.2		40.4		23.0
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		41.4		49.2		40.4		23.0
LOS		D		D		D		C
Approach Delay (s/veh)		41.4		49.2		40.4		23.0
Approach LOS		D		D		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay (s/veh): 38.4	Intersection LOS: D
Intersection Capacity Utilization 118.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 18: Bon View Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	288	57	12	536	32	105	499	41	35	458	80
Future Volume (veh/h)	48	288	57	12	536	32	105	499	41	35	458	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	303	60	13	564	34	111	525	43	37	482	84
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	92	447	83	50	645	38	149	608	48	75	710	120
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	119	1213	226	16	1749	104	201	1234	97	61	1441	243
Grp Volume(v), veh/h	414	0	0	611	0	0	679	0	0	603	0	0
Grp Sat Flow(s),veh/h/ln	1558	0	0	1868	0	0	1532	0	0	1745	0	0
Q Serve(g_s), s	0.0	0.0	0.0	7.0	0.0	0.0	12.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	18.1	0.0	0.0	25.6	0.0	0.0	34.2	0.0	0.0	21.2	0.0	0.0
Prop In Lane	0.12		0.14	0.02		0.06	0.16		0.06	0.06		0.14
Lane Grp Cap(c), veh/h	623	0	0	733	0	0	805	0	0	905	0	0
V/C Ratio(X)	0.66	0.00	0.00	0.83	0.00	0.00	0.84	0.00	0.00	0.67	0.00	0.00
Avail Cap(c_a), veh/h	877	0	0	1025	0	0	1233	0	0	1376	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.8	0.0	0.0	24.8	0.0	0.0	19.2	0.0	0.0	16.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	4.3	0.0	0.0	3.4	0.0	0.0	0.9	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(50%),veh/ln	6.1	0.0	0.0	10.7	0.0	0.0	11.0	0.0	0.0	7.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.1	0.0	0.0	29.0	0.0	0.0	22.6	0.0	0.0	16.9	0.0	0.0
LnGrp LOS	C			C			C			B		
Approach Vol, veh/h		414			611			679			603	
Approach Delay, s/veh		23.1			29.0			22.6			16.9	
Approach LOS		C			C			C			B	

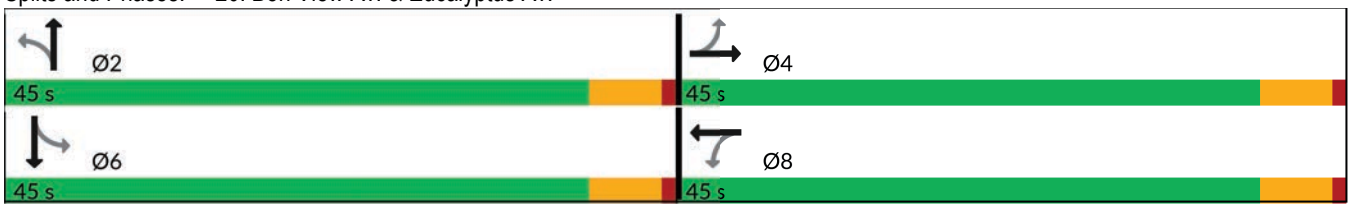
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		47.1		36.7		47.1		36.7				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		64.2		44.2		64.2		44.2				
Max Q Clear Time (g_c+I1), s		36.2		20.1		23.2		27.6				
Green Ext Time (p_c), s		5.1		2.5		4.3		3.3				

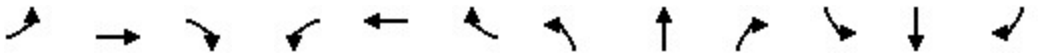
Intersection Summary												
HCM 7th Control Delay, s/veh			22.9									
HCM 7th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	76	556	36	474	29	30	189	144
Future Volume (vph)	76	556	36	474	29	30	189	144
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		39.4		39.4		35.7		35.7
Actuated g/C Ratio		0.45		0.45		0.41		0.41
v/c Ratio		0.99		0.74		0.17		0.94
Control Delay (s/veh)		56.3		27.4		10.8		45.9
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		56.3		27.4		10.8		45.9
LOS		E		C		B		D
Approach Delay (s/veh)		56.3		27.4		10.8		45.9
Approach LOS		E		C		B		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 86.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay (s/veh): 42.4	Intersection LOS: D
Intersection Capacity Utilization 105.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 20: Bon View Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	76	556	50	36	474	51	29	30	38	189	144	254
Future Volume (veh/h)	76	556	50	36	474	51	29	30	38	189	144	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	80	585	53	38	499	54	31	32	40	199	152	267
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	107	617	54	72	660	69	187	195	208	257	173	285
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	134	1365	119	60	1459	153	321	471	503	488	417	688
Grp Volume(v), veh/h	718	0	0	591	0	0	103	0	0	618	0	0
Grp Sat Flow(s),veh/h/ln	1619	0	0	1673	0	0	1295	0	0	1593	0	0
Q Serve(g_s), s	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0	0.0	0.0
Cycle Q Clear(g_c), s	37.9	0.0	0.0	24.3	0.0	0.0	3.1	0.0	0.0	32.1	0.0	0.0
Prop In Lane	0.11		0.07	0.06		0.09	0.30		0.39	0.32		0.43
Lane Grp Cap(c), veh/h	778	0	0	800	0	0	590	0	0	714	0	0
V/C Ratio(X)	0.92	0.00	0.00	0.74	0.00	0.00	0.17	0.00	0.00	0.87	0.00	0.00
Avail Cap(c_a), veh/h	778	0	0	800	0	0	644	0	0	774	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.1	0.0	0.0	19.2	0.0	0.0	15.8	0.0	0.0	24.1	0.0	0.0
Incr Delay (d2), s/veh	16.5	0.0	0.0	3.6	0.0	0.0	0.1	0.0	0.0	9.6	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(50%),veh/ln	15.8	0.0	0.0	9.2	0.0	0.0	1.2	0.0	0.0	12.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.6	0.0	0.0	22.8	0.0	0.0	15.9	0.0	0.0	33.7	0.0	0.0
LnGrp LOS	D			C			B			C		
Approach Vol, veh/h		718			591			103			618	
Approach Delay, s/veh		39.6			22.8			15.9			33.7	
Approach LOS		D			C			B			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.7		45.0		41.7		45.0				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		39.2		39.2		39.2		39.2				
Max Q Clear Time (g_c+I1), s		5.1		39.9		34.1		26.3				
Green Ext Time (p_c), s		0.6		0.0		1.8		3.0				

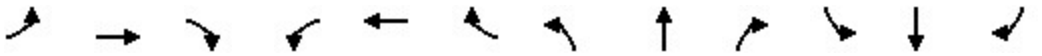
Intersection Summary												
HCM 7th Control Delay, s/veh			31.7									
HCM 7th LOS			C									

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	682	3	232	1012	346	505
Future Volume (vph)	682	3	232	1012	346	505
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	33.8	31.8	15.0	25.8
Total Split (s)	33.8	33.8	33.8	37.2	19.0	56.2
Total Split (%)	37.6%	37.6%	37.6%	41.3%	21.1%	62.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.8	5.8	5.0	5.8
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	23.5	23.5	23.5	31.4	17.5	53.9
Actuated g/C Ratio	0.26	0.26	0.26	0.35	0.19	0.60
v/c Ratio	0.85	0.81	0.41	1.19	1.09	0.23
Control Delay (s/veh)	50.3	45.3	5.5	119.0	124.9	3.2
Queue Delay	57.4	57.3	0.0	0.1	0.0	0.0
Total Delay (s/veh)	107.6	102.6	5.5	119.1	124.9	3.2
LOS	F	F	A	F	F	A
Approach Delay (s/veh)		79.9		119.1		52.7
Approach LOS		E		F		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay (s/veh): 90.7	Intersection LOS: F
Intersection Capacity Utilization 97.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	682	3	232	0	0	0	0	1012	481	346	505	0
Future Volume (veh/h)	682	3	232	0	0	0	0	1012	481	346	505	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.04	1.00	1.00	1.00
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	1800	1900	1900				0	1900	1976	1800	1900	0
Adj Flow Rate, veh/h	720	0	123				0	1065	253	364	532	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	802	0	377				0	1232	291	267	2379	0
Arrive On Green	0.35	0.00	0.35				0.00	0.62	0.62	0.16	0.63	0.00
Sat Flow, veh/h	3429	0	1610				0	2969	702	1714	3800	0
Grp Volume(v), veh/h	720	0	123				0	679	639	364	532	0
Grp Sat Flow(s),veh/h/ln	1714	0	1610				0	1900	1771	1714	1900	0
Q Serve(g_s), s	17.9	0.0	5.0				0.0	26.2	26.7	14.0	5.5	0.0
Cycle Q Clear(g_c), s	17.9	0.0	5.0				0.0	26.2	26.7	14.0	5.5	0.0
Prop In Lane	1.00		1.00				0.00		0.40	1.00		0.00
Lane Grp Cap(c), veh/h	802	0	377				0	788	735	267	2379	0
V/C Ratio(X)	0.90	0.00	0.33				0.00	0.86	0.87	1.36	0.22	0.00
Avail Cap(c_a), veh/h	1029	0	483				0	788	735	267	2379	0
HCM Platoon Ratio	1.50	1.50	1.50				1.00	1.50	1.50	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.49	0.49	0.00
Uniform Delay (d), s/veh	28.2	0.0	24.0				0.0	14.9	15.0	38.0	7.3	0.0
Incr Delay (d2), s/veh	7.6	0.0	0.2				0.0	11.9	13.3	175.8	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(50%),veh/ln	6.6	0.0	1.8				0.0	8.9	8.7	18.6	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.8	0.0	24.2				0.0	26.8	28.3	213.8	7.4	0.0
LnGrp LOS	D		C					C	C	F	A	
Approach Vol, veh/h		843						1318			896	
Approach Delay, s/veh		34.1						27.5			91.3	
Approach LOS		C						C			F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.0	43.1		27.9		62.1
Change Period (Y+Rc), s	5.0	5.8		6.8		5.8
Max Green Setting (Gmax), s	14.0	31.4		27.0		50.4
Max Q Clear Time (g_c+I1), s	16.0	28.7		19.9		7.5
Green Ext Time (p_c), s	0.0	1.7		1.1		2.8

Intersection Summary	
HCM 7th Control Delay, s/veh	48.0
HCM 7th LOS	D

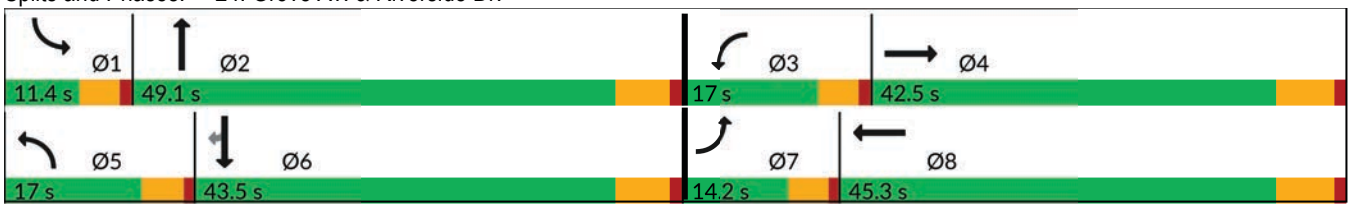
Notes

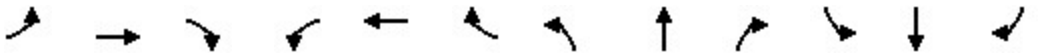
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	110	452	147	913	118	998	73	383	132
Future Volume (vph)	110	452	147	913	118	998	73	383	132
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	14.2	42.5	17.0	45.3	17.0	49.1	11.4	43.5	43.5
Total Split (%)	11.8%	35.4%	14.2%	37.8%	14.2%	40.9%	9.5%	36.3%	36.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.4	36.4	12.2	39.1	11.3	43.3	6.8	38.7	38.7
Actuated g/C Ratio	0.08	0.30	0.10	0.33	0.09	0.36	0.06	0.32	0.32
v/c Ratio	0.87	0.95	0.90	0.99	0.77	0.97	0.80	0.66	0.22
Control Delay (s/veh)	103.3	68.0	99.4	64.4	82.4	57.1	106.2	41.3	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	103.3	68.0	99.4	64.4	82.4	57.1	106.2	41.3	4.4
LOS	F	E	F	E	F	E	F	D	A
Approach Delay (s/veh)		74.2		68.6		59.3		41.1	
Approach LOS		E		E		E		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.8	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay (s/veh): 62.0	Intersection LOS: E
Intersection Capacity Utilization 93.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	452	61	147	913	180	118	998	192	73	383	132
Future Volume (veh/h)	110	452	61	147	913	180	118	998	192	73	383	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	116	476	32	155	961	94	124	1051	107	77	403	76
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	140	519	35	181	1057	103	149	1158	118	97	607	514
Arrive On Green	0.12	0.44	0.44	0.16	0.48	0.48	0.13	0.53	0.53	0.08	0.48	0.48
Sat Flow, veh/h	1714	1759	118	1714	3317	324	1714	3308	337	1714	1900	1610
Grp Volume(v), veh/h	116	0	508	155	523	532	124	573	585	77	403	76
Grp Sat Flow(s),veh/h/ln	1714	0	1877	1714	1805	1837	1714	1805	1839	1714	1900	1610
Q Serve(g_s), s	7.3	0.0	27.9	9.7	29.4	29.4	7.7	31.6	31.7	4.8	17.8	2.9
Cycle Q Clear(g_c), s	7.3	0.0	27.9	9.7	29.4	29.4	7.7	31.6	31.7	4.8	17.8	2.9
Prop In Lane	1.00		0.06	1.00		0.18	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	140	0	554	181	575	585	149	632	644	97	607	514
V/C Ratio(X)	0.83	0.00	0.92	0.86	0.91	0.91	0.83	0.91	0.91	0.80	0.66	0.15
Avail Cap(c_a), veh/h	150	0	621	194	643	654	194	712	726	106	653	553
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	29.3	45.4	27.2	27.2	46.9	24.5	24.5	49.6	24.1	20.2
Incr Delay (d2), s/veh	26.6	0.0	17.5	26.7	15.9	15.7	16.5	14.4	14.3	27.7	2.3	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(50%),veh/ln	3.9	0.0	12.4	5.1	12.0	12.2	3.8	12.5	12.8	2.7	6.7	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.0	0.0	46.9	72.1	43.1	42.9	63.4	38.8	38.8	77.4	26.4	20.3
LnGrp LOS	E		D	E	D	D	E	D	D	E	C	C
Approach Vol, veh/h		624			1210			1282			556	
Approach Delay, s/veh		51.9			46.8			41.2			32.6	
Approach LOS		D			D			D			C	

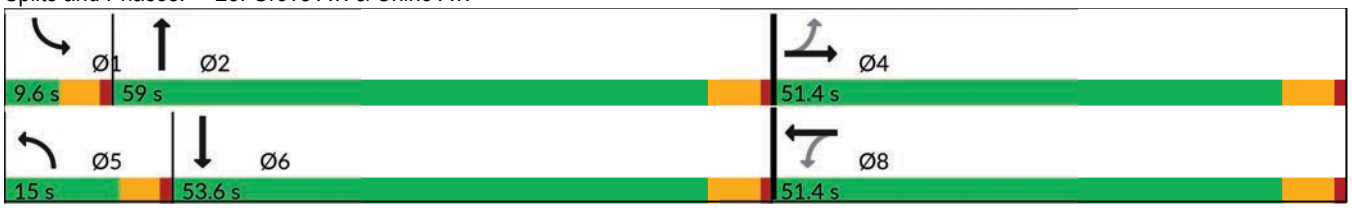
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	44.2	16.2	38.6	14.2	40.8	13.6	41.2
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	6.8	43.3	12.4	36.3	12.4	37.7	9.6	39.1
Max Q Clear Time (g_c+I1), s	6.8	33.7	11.7	29.9	9.7	19.8	9.3	31.4
Green Ext Time (p_c), s	0.0	4.7	0.0	1.5	0.0	2.3	0.0	3.6

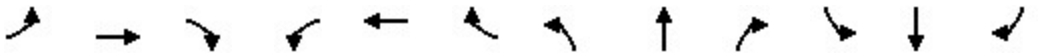
Intersection Summary	
HCM 7th Control Delay, s/veh	43.6
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	78	753	10	1041	129	908	25	615
Future Volume (vph)	78	753	10	1041	129	908	25	615
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	51.4	51.4	51.4	51.4	15.0	59.0	9.6	53.6
Total Split (%)	42.8%	42.8%	42.8%	42.8%	12.5%	49.2%	8.0%	44.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	45.6	45.6	45.6	45.6	10.4	54.2	5.0	44.8
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.09	0.46	0.04	0.38
v/c Ratio	1.34	0.64	0.09	0.84	0.89	1.13	0.36	0.92
Control Delay (s/veh)	261.6	31.6	26.4	39.3	103.8	104.2	69.5	53.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	261.6	31.6	26.4	39.3	103.8	104.2	69.5	53.8
LOS	F	C	C	D	F	F	E	D
Approach Delay (s/veh)		51.1		39.2		104.1		54.4
Approach LOS		D		D		F		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.34	
Intersection Signal Delay (s/veh): 63.2	Intersection LOS: E
Intersection Capacity Utilization 111.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 25: Grove Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	753	88	10	1041	71	129	908	33	25	615	20
Future Volume (veh/h)	78	753	88	10	1041	71	129	908	33	25	615	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	82	793	93	11	1096	38	136	956	19	26	647	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	131	1259	148	197	1376	48	151	838	17	42	723	11
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.13	0.68	0.68	0.04	0.58	0.58
Sat Flow, veh/h	478	3255	382	603	3558	123	1714	1856	37	1714	1866	29
Grp Volume(v), veh/h	82	440	446	11	556	578	136	0	975	26	0	657
Grp Sat Flow(s),veh/h/ln	478	1805	1831	603	1805	1876	1714	0	1893	1714	0	1894
Q Serve(g_s), s	17.3	19.0	19.0	1.5	28.3	28.3	9.2	0.0	53.2	1.8	0.0	35.7
Cycle Q Clear(g_c), s	45.6	19.0	19.0	20.5	28.3	28.3	9.2	0.0	53.2	1.8	0.0	35.7
Prop In Lane	1.00		0.21	1.00		0.07	1.00		0.02	1.00		0.02
Lane Grp Cap(c), veh/h	131	698	708	197	698	726	151	0	855	42	0	734
V/C Ratio(X)	0.63	0.63	0.63	0.06	0.80	0.80	0.90	0.00	1.14	0.62	0.00	0.90
Avail Cap(c_a), veh/h	131	698	708	197	698	726	151	0	855	73	0	768
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.2	19.1	19.2	25.9	21.1	21.1	50.6	0.0	19.0	56.3	0.0	22.6
Incr Delay (d2), s/veh	9.0	1.8	1.8	0.1	6.4	6.2	44.9	0.0	77.4	14.3	0.0	12.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	6.2	6.3	0.2	9.2	9.5	5.6	0.0	32.2	0.9	0.0	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.2	21.0	20.9	26.0	27.5	27.3	95.5	0.0	96.4	70.5	0.0	35.3
LnGrp LOS	D	C	C	C	C	C	F		F	E		D
Approach Vol, veh/h		968			1145			1111			683	
Approach Delay, s/veh		23.3			27.4			96.3			36.7	
Approach LOS		C			C			F			D	

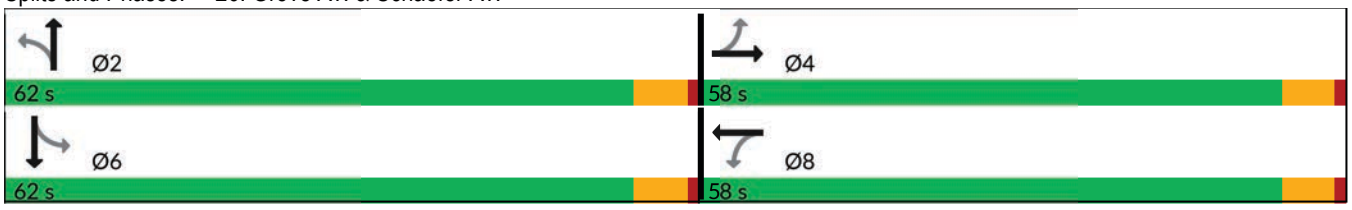
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	59.0		51.4	15.0	51.5		51.4				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	5.0	53.2		45.6	10.4	47.8		45.6				
Max Q Clear Time (g_c+I1), s	3.8	55.2		47.6	11.2	37.7		30.3				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	2.9		5.8				

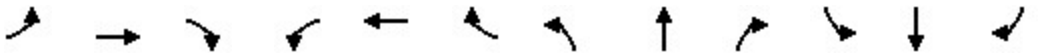
Intersection Summary		
HCM 7th Control Delay, s/veh		47.6
HCM 7th LOS		D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	66	463	142	305	28	801	67	630
Future Volume (vph)	66	463	142	305	28	801	67	630
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	58.0	58.0	58.0	58.0	62.0	62.0	62.0	62.0
Total Split (%)	48.3%	48.3%	48.3%	48.3%	51.7%	51.7%	51.7%	51.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	52.2	52.2	52.2	52.2	56.2	56.2	56.2	56.2
Actuated g/C Ratio	0.44	0.44	0.44	0.44	0.47	0.47	0.47	0.47
v/c Ratio	0.20	0.80	1.12	0.44	0.22	0.98	1.13	0.80
Control Delay (s/veh)	22.9	37.7	148.2	25.4	24.7	58.4	187.0	35.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.9	37.7	148.2	25.4	24.7	58.4	187.0	35.3
LOS	C	D	F	C	C	E	F	D
Approach Delay (s/veh)		36.2		61.2		57.3		49.2
Approach LOS		D		E		E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay (s/veh): 50.6	Intersection LOS: D
Intersection Capacity Utilization 112.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 26: Grove Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	463	150	142	305	40	28	801	27	67	630	42
Future Volume (veh/h)	66	463	150	142	305	40	28	801	27	67	630	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	69	487	79	149	321	21	29	843	17	71	663	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	395	656	106	230	726	47	273	905	18	131	891	31
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.73	0.73	0.73	0.73	0.73	0.73
Sat Flow, veh/h	1055	1595	259	858	1764	115	768	1856	37	653	1825	63
Grp Volume(v), veh/h	69	0	566	149	0	342	29	0	860	71	0	686
Grp Sat Flow(s),veh/h/ln	1055	0	1853	858	0	1879	768	0	1893	653	0	1889
Q Serve(g_s), s	4.4	0.0	24.9	19.1	0.0	11.0	2.7	0.0	44.0	12.2	0.0	24.7
Cycle Q Clear(g_c), s	15.4	0.0	24.9	44.0	0.0	11.0	27.4	0.0	44.0	56.2	0.0	24.7
Prop In Lane	1.00		0.14	1.00		0.06	1.00		0.02	1.00		0.03
Lane Grp Cap(c), veh/h	395	0	763	230	0	773	273	0	924	131	0	921
V/C Ratio(X)	0.17	0.00	0.74	0.65	0.00	0.44	0.11	0.00	0.93	0.54	0.00	0.74
Avail Cap(c_a), veh/h	439	0	840	266	0	852	273	0	924	131	0	921
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	17.7	33.3	0.0	15.1	19.3	0.0	13.8	37.6	0.0	11.2
Incr Delay (d2), s/veh	0.2	0.0	3.2	4.3	0.0	0.4	0.2	0.0	15.6	4.4	0.0	3.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	7.9	3.8	0.0	3.9	0.4	0.0	12.7	2.0	0.0	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.4	0.0	21.0	37.6	0.0	15.5	19.4	0.0	29.4	42.0	0.0	14.5
LnGrp LOS	B		C	D		B	B		C	D		B
Approach Vol, veh/h		635			491			889			757	
Approach Delay, s/veh		20.8			22.2			29.1			17.1	
Approach LOS		C			C			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.0		53.2		62.0		53.2				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		56.2		52.2		56.2		52.2				
Max Q Clear Time (g_c+I1), s		46.0		26.9		58.2		46.0				
Green Ext Time (p_c), s		4.2		3.8		0.0		1.4				

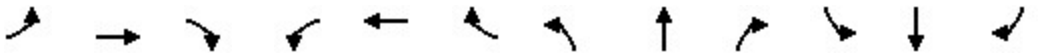
Intersection Summary	
HCM 7th Control Delay, s/veh	22.7
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	163	233	43	534	21	349	132	662
Future Volume (vph)	163	233	43	534	21	349	132	662
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	62.0	62.0	62.0	62.0	58.0	58.0	58.0	58.0
Total Split (%)	51.7%	51.7%	51.7%	51.7%	48.3%	48.3%	48.3%	48.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	57.4	57.4	57.4	57.4		53.4		53.4
Actuated g/C Ratio	0.48	0.48	0.48	0.48		0.45		0.45
v/c Ratio	1.33	0.30	0.09	0.81		0.54		1.48
Control Delay (s/veh)	222.8	19.8	17.9	34.5		27.3		252.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	222.8	19.8	17.9	34.5		27.3		252.4
LOS	F	B	B	C		C		F
Approach Delay (s/veh)		99.2		33.5		27.3		252.4
Approach LOS		F		C		C		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.48	
Intersection Signal Delay (s/veh): 125.8	Intersection LOS: F
Intersection Capacity Utilization 132.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 27: Grove Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	233	22	43	534	145	21	349	29	132	662	131
Future Volume (veh/h)	163	233	22	43	534	145	21	349	29	132	662	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	172	245	23	45	562	153	22	367	31	139	697	138
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	218	818	77	542	688	187	52	685	56	130	529	103
Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.72	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	747	1711	161	1129	1438	391	45	1539	126	216	1190	232
Grp Volume(v), veh/h	172	0	268	45	0	715	420	0	0	974	0	0
Grp Sat Flow(s),veh/h/ln	747	0	1871	1129	0	1830	1710	0	0	1638	0	0
Q Serve(g_s), s	25.4	0.0	6.2	1.8	0.0	32.0	0.0	0.0	0.0	39.9	0.0	0.0
Cycle Q Clear(g_c), s	57.4	0.0	6.2	8.0	0.0	32.0	13.5	0.0	0.0	53.4	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.21	0.05		0.07	0.14		0.14
Lane Grp Cap(c), veh/h	218	0	895	542	0	875	792	0	0	763	0	0
V/C Ratio(X)	0.79	0.00	0.30	0.08	0.00	0.82	0.53	0.00	0.00	1.28	0.00	0.00
Avail Cap(c_a), veh/h	218	0	895	542	0	875	792	0	0	763	0	0
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.0	0.0	9.7	11.2	0.0	13.4	13.3	0.0	0.0	21.1	0.0	0.0
Incr Delay (d2), s/veh	17.4	0.0	0.2	0.1	0.0	6.1	0.7	0.0	0.0	134.4	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(50%),veh/ln	5.6	0.0	2.2	0.4	0.0	9.1	4.5	0.0	0.0	43.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.4	0.0	9.9	11.2	0.0	19.5	14.0	0.0	0.0	155.6	0.0	0.0
LnGrp LOS	D		A	B		B	B			F		
Approach Vol, veh/h		440			760			420			974	
Approach Delay, s/veh		26.1			19.0			14.0			155.6	
Approach LOS		C			B			B			F	

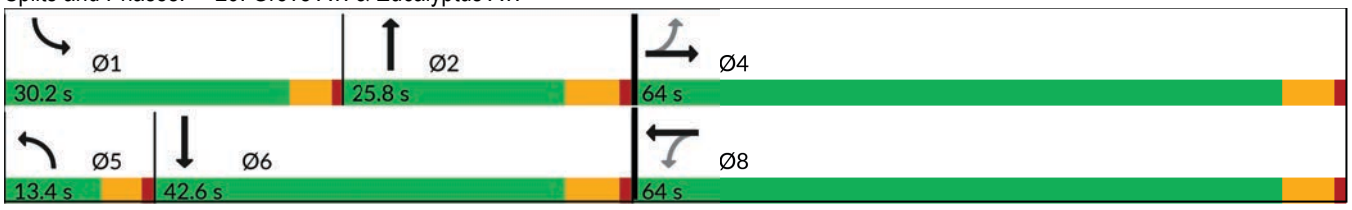
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.0		62.0		58.0		62.0				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		53.4		57.4		53.4		57.4				
Max Q Clear Time (g_c+I1), s		15.5		59.4		55.4		34.0				
Green Ext Time (p_c), s		2.7		0.0		0.0		5.2				

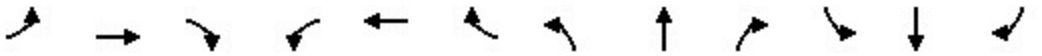
Intersection Summary												
HCM 7th Control Delay, s/veh			70.7									
HCM 7th LOS			E									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	61	438	74	505	99	132	330	232
Future Volume (vph)	61	438	74	505	99	132	330	232
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	64.0	64.0	64.0	64.0	13.4	25.8	30.2	42.6
Total Split (%)	53.3%	53.3%	53.3%	53.3%	11.2%	21.5%	25.2%	35.5%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	24.4	24.4	24.4	24.4	8.9	17.3	13.5	21.9
Actuated g/C Ratio	0.34	0.34	0.34	0.34	0.12	0.24	0.19	0.30
v/c Ratio	0.51	0.43	0.31	0.67	0.49	0.55	0.56	0.76
Control Delay (s/veh)	36.7	19.6	23.0	20.5	44.0	28.3	32.3	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.7	19.6	23.0	20.5	44.0	28.3	32.3	31.3
LOS	D	B	C	C	D	C	C	C
Approach Delay (s/veh)		21.5		20.7		32.9		31.7
Approach LOS		C		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 72.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 25.8	Intersection LOS: C
Intersection Capacity Utilization 78.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 29: Grove Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	438	51	74	505	286	99	132	104	330	232	176
Future Volume (veh/h)	61	438	51	74	505	286	99	132	104	330	232	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	64	461	54	78	532	301	104	139	109	347	244	185
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	226	1225	143	344	837	472	132	223	175	487	296	224
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.08	0.23	0.23	0.15	0.30	0.30
Sat Flow, veh/h	634	3257	380	852	2223	1256	1714	987	774	3326	1003	760
Grp Volume(v), veh/h	64	255	260	78	432	401	104	0	248	347	0	429
Grp Sat Flow(s),veh/h/ln	634	1805	1832	852	1805	1674	1714	0	1761	1663	0	1763
Q Serve(g_s), s	5.9	6.6	6.7	4.7	12.6	12.7	3.8	0.0	8.2	6.4	0.0	14.6
Cycle Q Clear(g_c), s	18.6	6.6	6.7	11.4	12.6	12.7	3.8	0.0	8.2	6.4	0.0	14.6
Prop In Lane	1.00		0.21	1.00		0.75	1.00		0.44	1.00		0.43
Lane Grp Cap(c), veh/h	226	679	689	344	679	630	132	0	398	487	0	520
V/C Ratio(X)	0.28	0.37	0.38	0.23	0.64	0.64	0.79	0.00	0.62	0.71	0.00	0.82
Avail Cap(c_a), veh/h	560	1630	1654	794	1630	1512	234	0	546	1321	0	1007
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.1	14.6	14.6	18.7	16.5	16.5	29.2	0.0	22.5	26.2	0.0	21.2
Incr Delay (d2), s/veh	0.7	0.3	0.3	0.3	1.0	1.1	9.8	0.0	1.6	1.9	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.3	2.4	0.9	4.6	4.3	1.8	0.0	3.1	2.4	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.8	14.9	15.0	19.1	17.5	17.6	39.0	0.0	24.1	28.1	0.0	24.5
LnGrp LOS	C	B	B	B	B	B	D		C	C		C
Approach Vol, veh/h		579			911			352			776	
Approach Delay, s/veh		16.0			17.6			28.5			26.1	
Approach LOS		B			B			C			C	

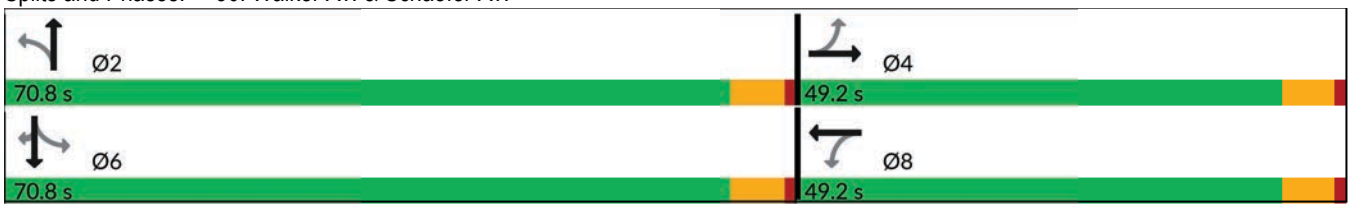
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	20.3		30.0	9.6	24.8		30.0				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	25.6	20.0		58.2	8.8	36.8		58.2				
Max Q Clear Time (g_c+I1), s	8.4	10.2		20.6	5.8	16.6		14.7				
Green Ext Time (p_c), s	1.1	0.9		3.6	0.1	2.4		6.6				

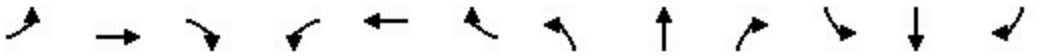
Intersection Summary		
HCM 7th Control Delay, s/veh		21.3
HCM 7th LOS		C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	226	311	79	132	231	634	132	460	126
Future Volume (vph)	226	311	79	132	231	634	132	460	126
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	49.2	49.2	49.2	49.2	70.8	70.8	70.8	70.8	70.8
Total Split (%)	41.0%	41.0%	41.0%	41.0%	59.0%	59.0%	59.0%	59.0%	59.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	31.9	31.9	31.9	31.9	43.1	43.1	43.1	43.1	43.1
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.49	0.49	0.49	0.49	0.49
v/c Ratio	0.56	0.81	0.60	0.29	0.70	0.79	0.86	0.52	0.15
Control Delay (s/veh)	31.1	36.8	47.3	21.4	31.1	26.1	66.4	18.0	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.1	36.8	47.3	21.4	31.1	26.1	66.4	18.0	2.9
LOS	C	D	D	C	C	C	E	B	A
Approach Delay (s/veh)		35.0		29.1		27.4		24.2	
Approach LOS		D		C		C		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 87.8	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 28.8	Intersection LOS: C
Intersection Capacity Utilization 101.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 30: Walker Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	311	206	79	132	56	231	634	57	132	460	126
Future Volume (veh/h)	226	311	206	79	132	56	231	634	57	132	460	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	238	327	112	83	139	33	243	667	34	139	484	70
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	413	450	154	204	494	117	403	940	48	272	998	845
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	1232	1353	463	965	1484	352	868	1790	91	757	1900	1610
Grp Volume(v), veh/h	238	0	439	83	0	172	243	0	701	139	484	70
Grp Sat Flow(s),veh/h/ln	1232	0	1817	965	0	1837	868	0	1881	757	1900	1610
Q Serve(g_s), s	14.4	0.0	17.3	6.7	0.0	5.6	20.2	0.0	23.0	13.9	13.2	1.8
Cycle Q Clear(g_c), s	20.0	0.0	17.3	24.1	0.0	5.6	33.4	0.0	23.0	36.9	13.2	1.8
Prop In Lane	1.00		0.26	1.00		0.19	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	413	0	604	204	0	611	403	0	988	272	998	845
V/C Ratio(X)	0.58	0.00	0.73	0.41	0.00	0.28	0.60	0.00	0.71	0.51	0.49	0.08
Avail Cap(c_a), veh/h	660	0	967	397	0	978	640	0	1500	479	1515	1284
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	0.0	23.9	34.5	0.0	20.0	23.0	0.0	14.7	28.6	12.3	9.6
Incr Delay (d2), s/veh	1.3	0.0	1.7	1.3	0.0	0.2	1.5	0.0	1.0	1.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	7.0	1.6	0.0	2.2	3.7	0.0	7.8	2.4	4.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.7	0.0	25.6	35.8	0.0	20.3	24.4	0.0	15.6	30.1	12.7	9.7
LnGrp LOS	C		C	D		C	C		B	C	B	A
Approach Vol, veh/h		677			255			944			693	
Approach Delay, s/veh		26.7			25.3			17.9			15.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.6		32.9		48.6		32.9				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		65.0		43.4		65.0		43.4				
Max Q Clear Time (g_c+I1), s		35.4		22.0		38.9		26.1				
Green Ext Time (p_c), s		6.2		3.3		3.9		1.1				

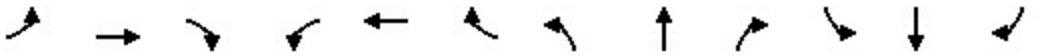
Intersection Summary												
HCM 7th Control Delay, s/veh			20.4									
HCM 7th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	40	286	99	519	85	528	84	179	580
Future Volume (vph)	40	286	99	519	85	528	84	179	580
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	23.8	9.6	23.8
Total Split (s)	10.0	25.4	18.6	34.0	14.2	53.9	53.9	22.1	61.8
Total Split (%)	8.3%	21.2%	15.5%	28.3%	11.8%	44.9%	44.9%	18.4%	51.5%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.7	20.4	11.3	25.5	9.2	37.8	37.8	15.6	47.9
Actuated g/C Ratio	0.06	0.20	0.11	0.25	0.09	0.37	0.37	0.15	0.46
v/c Ratio	0.45	0.47	0.56	0.82	0.59	0.80	0.13	0.73	0.83
Control Delay (s/veh)	69.7	42.5	60.7	46.0	67.8	40.0	0.4	63.3	35.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.7	42.5	60.7	46.0	67.8	40.0	0.4	63.3	35.9
LOS	E	D	E	D	E	D	A	E	D
Approach Delay (s/veh)		45.5		47.8		38.6			41.6
Approach LOS		D		D		D			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 43.2	Intersection LOS: D
Intersection Capacity Utilization 82.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	286	31	99	519	167	85	528	84	179	580	100
Future Volume (veh/h)	40	286	31	99	519	167	85	528	84	179	580	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	42	301	33	104	546	176	89	556	88	188	611	105
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	63	668	73	131	654	210	112	672	557	222	660	113
Arrive On Green	0.05	0.31	0.31	0.11	0.37	0.37	0.10	0.53	0.53	0.19	0.63	0.63
Sat Flow, veh/h	1714	3284	357	1714	2686	863	1714	1900	1576	1714	1579	271
Grp Volume(v), veh/h	42	164	170	104	366	356	89	556	88	188	0	716
Grp Sat Flow(s),veh/h/ln	1714	1805	1836	1714	1805	1743	1714	1900	1576	1714	0	1850
Q Serve(g_s), s	2.1	6.4	6.6	5.2	16.3	16.4	4.5	21.5	2.5	9.3	0.0	30.3
Cycle Q Clear(g_c), s	2.1	6.4	6.6	5.2	16.3	16.4	4.5	21.5	2.5	9.3	0.0	30.3
Prop In Lane	1.00		0.19	1.00		0.49	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	63	367	374	131	440	425	112	672	557	222	0	773
V/C Ratio(X)	0.67	0.45	0.45	0.79	0.83	0.84	0.79	0.83	0.16	0.84	0.00	0.93
Avail Cap(c_a), veh/h	105	403	409	273	579	559	187	1040	863	341	0	1179
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.0	26.6	26.6	38.2	26.3	26.3	39.0	18.4	13.9	34.5	0.0	15.2
Incr Delay (d2), s/veh	11.8	0.9	0.9	10.2	7.8	8.4	11.7	3.3	0.1	11.2	0.0	8.9
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(50%),veh/ln	1.1	2.6	2.7	2.4	6.6	6.4	2.1	6.7	0.8	4.0	0.0	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.8	27.4	27.5	48.4	34.1	34.7	50.7	21.7	14.1	45.8	0.0	24.1
LnGrp LOS	D	C	C	D	C	C	D	C	B	D		C
Approach Vol, veh/h		376			826			733			904	
Approach Delay, s/veh		30.3			36.2			24.3			28.6	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	36.9	11.3	23.7	10.4	42.5	7.8	27.2
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	17.5	48.1	14.0	19.6	9.6	56.0	5.4	28.2
Max Q Clear Time (g_c+I1), s	11.3	23.5	7.2	8.6	6.5	32.3	4.1	18.4
Green Ext Time (p_c), s	0.2	3.4	0.1	1.3	0.0	4.4	0.0	3.0

Intersection Summary	
HCM 7th Control Delay, s/veh	29.9
HCM 7th LOS	C

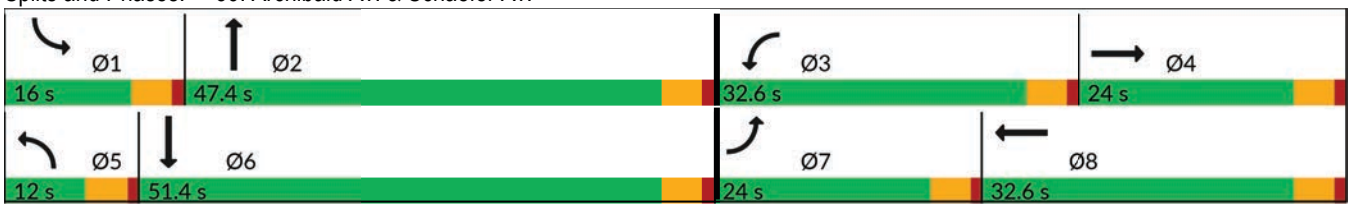
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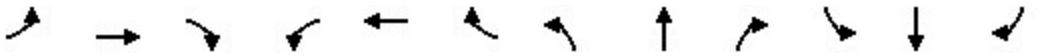
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	231	73	78	50	75	1272	103	1094
Future Volume (vph)	231	73	78	50	75	1272	103	1094
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	24.0	24.0	32.6	32.6	12.0	47.4	16.0	51.4
Total Split (%)	20.0%	20.0%	27.2%	27.2%	10.0%	39.5%	13.3%	42.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.3	16.4	12.3	12.3	7.5	38.6	9.9	40.9
Actuated g/C Ratio	0.19	0.17	0.13	0.13	0.08	0.39	0.10	0.42
v/c Ratio	0.76	0.31	0.38	0.58	0.60	0.68	0.63	0.85
Control Delay (s/veh)	56.8	37.3	45.8	29.7	68.7	27.7	62.6	32.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.8	37.3	45.8	29.7	68.7	27.7	62.6	32.9
LOS	E	D	D	C	E	C	E	C
Approach Delay (s/veh)		51.2		35.0		29.9		35.3
Approach LOS		D		C		C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.9	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 34.5	Intersection LOS: C
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	73	19	78	50	108	75	1272	46	103	1094	110
Future Volume (veh/h)	231	73	19	78	50	108	75	1272	46	103	1094	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	243	77	20	82	53	101	79	1339	48	108	1152	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	285	322	84	106	69	131	100	2010	72	136	1366	137
Arrive On Green	0.25	0.33	0.33	0.09	0.18	0.18	0.09	0.59	0.59	0.12	0.62	0.62
Sat Flow, veh/h	1714	1454	378	1714	585	1115	1714	5135	184	1714	3312	333
Grp Volume(v), veh/h	243	0	97	82	0	154	79	902	485	108	627	641
Grp Sat Flow(s),veh/h/ln	1714	0	1832	1714	0	1699	1714	1729	1861	1714	1805	1840
Q Serve(g_s), s	10.1	0.0	2.9	3.5	0.0	6.5	3.4	13.2	13.2	4.6	20.7	20.8
Cycle Q Clear(g_c), s	10.1	0.0	2.9	3.5	0.0	6.5	3.4	13.2	13.2	4.6	20.7	20.8
Prop In Lane	1.00		0.21	1.00		0.66	1.00		0.10	1.00		0.18
Lane Grp Cap(c), veh/h	285	0	406	106	0	200	100	1353	728	136	744	759
V/C Ratio(X)	0.85	0.00	0.24	0.77	0.00	0.77	0.79	0.67	0.67	0.80	0.84	0.84
Avail Cap(c_a), veh/h	445	0	475	642	0	636	170	1978	1065	261	1129	1151
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	0.0	20.4	33.4	0.0	29.9	33.7	12.1	12.1	32.4	12.3	12.4
Incr Delay (d2), s/veh	9.4	0.0	0.3	11.2	0.0	6.2	13.0	0.6	1.1	4.0	3.7	3.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	1.1	1.7	0.0	2.7	1.6	3.3	3.7	1.8	5.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.6	0.0	20.7	44.6	0.0	36.1	46.7	12.7	13.2	36.3	16.1	16.1
LnGrp LOS	D		C	D		D	D	B	B	D	B	B
Approach Vol, veh/h		340			236			1466			1376	
Approach Delay, s/veh		32.1			39.0			14.7			17.7	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	33.9	9.2	21.2	9.0	35.4	17.0	13.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	11.4	42.8	28.0	19.4	7.4	46.8	19.4	28.0
Max Q Clear Time (g_c+I1), s	6.6	15.2	5.5	4.9	5.4	22.8	12.1	8.5
Green Ext Time (p_c), s	0.0	9.4	0.2	0.3	0.0	8.0	0.4	0.7

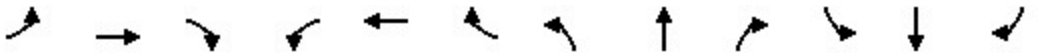
Intersection Summary	
HCM 7th Control Delay, s/veh	19.3
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	263	1308	162	1297	198	228	381	129	221
Future Volume (vph)	263	1308	162	1297	198	228	381	129	221
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.8	9.6	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	25.3	38.8	20.9	34.4	34.4	22.7	44.9	15.4	37.6
Total Split (%)	21.1%	32.3%	17.4%	28.7%	28.7%	18.9%	37.4%	12.8%	31.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.3	35.5	14.6	29.8	29.8	17.8	39.6	10.7	32.4
Actuated g/C Ratio	0.17	0.30	0.12	0.25	0.25	0.15	0.33	0.09	0.27
v/c Ratio	0.95	0.72	0.81	0.96	0.38	0.94	0.97	0.89	0.79
Control Delay (s/veh)	90.5	38.9	79.2	59.5	6.9	93.2	68.5	102.1	49.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.5	38.9	79.2	59.5	6.9	93.2	68.5	102.1	49.6
LOS	F	D	E	E	A	F	E	F	D
Approach Delay (s/veh)		46.5		55.1			75.6		62.9
Approach LOS		D		E			E		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay (s/veh): 56.1	Intersection LOS: E
Intersection Capacity Utilization 94.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	1308	218	162	1297	198	228	381	184	129	221	160
Future Volume (veh/h)	263	1308	218	162	1297	198	228	381	184	129	221	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	277	1377	222	171	1365	201	240	401	168	136	233	150
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	299	1986	319	196	1429	394	261	416	174	156	289	186
Arrive On Green	0.26	0.47	0.47	0.17	0.38	0.38	0.23	0.49	0.49	0.14	0.40	0.40
Sat Flow, veh/h	1714	6386	1027	1714	5700	1572	1714	1264	529	1714	1080	695
Grp Volume(v), veh/h	277	1229	370	171	1365	201	240	0	569	136	0	383
Grp Sat Flow(s),veh/h/ln	1714	1900	1713	1714	1900	1572	1714	0	1793	1714	0	1775
Q Serve(g_s), s	18.7	20.2	20.3	11.5	27.7	11.7	16.2	0.0	36.4	9.2	0.0	22.7
Cycle Q Clear(g_c), s	18.7	20.2	20.3	11.5	27.7	11.7	16.2	0.0	36.4	9.2	0.0	22.7
Prop In Lane	1.00		0.60	1.00		1.00	1.00		0.30	1.00		0.39
Lane Grp Cap(c), veh/h	299	1772	533	196	1429	394	261	0	590	156	0	475
V/C Ratio(X)	0.93	0.69	0.70	0.87	0.95	0.51	0.92	0.00	0.96	0.87	0.00	0.81
Avail Cap(c_a), veh/h	299	1772	533	235	1430	395	261	0	609	156	0	493
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.1	27.2	27.2	48.4	36.4	31.4	45.1	0.0	29.4	50.6	0.0	32.8
Incr Delay (d2), s/veh	33.0	1.2	3.9	22.7	14.5	1.1	34.2	0.0	27.3	36.8	0.0	9.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	7.6	7.3	5.8	12.7	4.1	8.6	0.0	16.8	5.3	0.0	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.2	28.4	31.2	71.1	50.9	32.5	79.3	0.0	56.7	87.4	0.0	42.1
LnGrp LOS	E	C	C	E	D	C	E		E	F		D
Approach Vol, veh/h		1876			1737			809			519	
Approach Delay, s/veh		36.0			50.7			63.4			54.0	
Approach LOS		D			D			E			D	

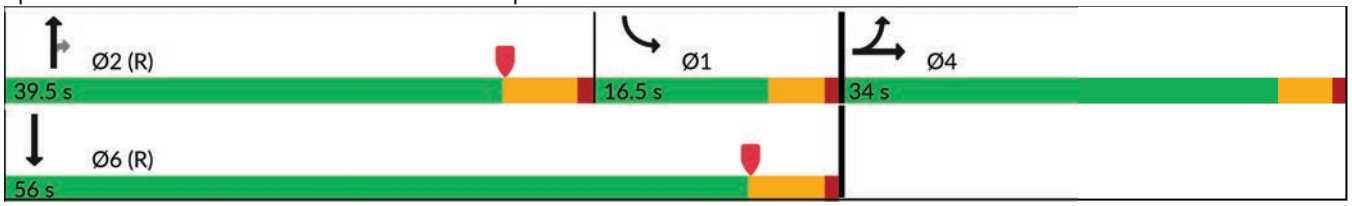
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	43.7	18.2	41.5	22.7	36.4	25.3	34.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	10.8	40.3	16.3	34.2	18.1	33.0	20.7	29.8
Max Q Clear Time (g_c+I1), s	11.2	38.4	13.5	22.3	18.2	24.7	20.7	29.7
Green Ext Time (p_c), s	0.0	0.7	0.1	7.5	0.0	1.4	0.0	0.1

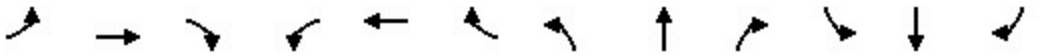
Intersection Summary	
HCM 7th Control Delay, s/veh	47.6
HCM 7th LOS	D

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	363	1	1301	756	394	1766
Future Volume (vph)	363	1	1301	756	394	1766
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	29.0	29.0	14.7	27.0
Total Split (s)	34.0	34.0	39.5	39.5	16.5	56.0
Total Split (%)	37.8%	37.8%	43.9%	43.9%	18.3%	62.2%
Yellow Time (s)	3.6	3.6	5.0	5.0	3.7	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	29.4	29.4	33.5	33.5	11.8	50.0
Actuated g/C Ratio	0.33	0.33	0.37	0.37	0.13	0.56
v/c Ratio	0.65	1.04	1.02	0.74	1.01	0.93
Control Delay (s/veh)	32.7	81.9	58.8	6.9	56.9	21.3
Queue Delay	0.1	4.2	1.4	0.0	0.0	45.2
Total Delay (s/veh)	32.8	86.1	60.3	6.9	56.9	66.6
LOS	C	F	E	A	E	E
Approach Delay (s/veh)		65.0	40.6			64.8
Approach LOS		E	D			E

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay (s/veh): 55.0	Intersection LOS: D
Intersection Capacity Utilization 146.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	363	1	463	0	0	0	0	1301	756	394	1766	0
Future Volume (veh/h)	363	1	463	0	0	0	0	1301	756	394	1766	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99				1.00		0.98	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	1800	1900	1900				0	1900	1900	1700	1900	0
Adj Flow Rate, veh/h	382	1	428				0	1369	637	415	1859	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	514	1	475				0	1344	590	451	2103	0
Arrive On Green	0.30	0.30	0.30				0.00	0.37	0.37	0.14	0.58	0.00
Sat Flow, veh/h	1714	4	1585				0	3705	1586	3141	3705	0
Grp Volume(v), veh/h	382	0	429				0	1369	637	415	1859	0
Grp Sat Flow(s),veh/h/ln	1714	0	1589				0	1805	1586	1570	1805	0
Q Serve(g_s), s	18.1	0.0	23.3				0.0	33.5	33.5	11.7	39.9	0.0
Cycle Q Clear(g_c), s	18.1	0.0	23.3				0.0	33.5	33.5	11.7	39.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	514	0	476				0	1344	590	451	2103	0
V/C Ratio(X)	0.74	0.00	0.90				0.00	1.02	1.08	0.92	0.88	0.00
Avail Cap(c_a), veh/h	560	0	519				0	1344	590	451	2103	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	1.00				0.00	0.09	0.09	0.09	0.09	0.00
Uniform Delay (d), s/veh	28.4	0.0	30.2				0.0	28.3	28.3	38.0	16.2	0.0
Incr Delay (d2), s/veh	4.9	0.0	17.9				0.0	12.8	39.1	3.3	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
%ile BackOfQ(50%),veh/ln	7.9	0.0	11.0				0.0	15.4	17.8	4.5	13.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.3	0.0	48.1				0.0	41.0	67.3	41.3	16.8	0.0
LnGrp LOS	C		D					F	F	D	B	
Approach Vol, veh/h		811						2006			2274	
Approach Delay, s/veh		41.1						49.4			21.2	
Approach LOS		D						D			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	18.9	39.5		31.6		58.4
Change Period (Y+Rc), s	6.0	* 6		4.6		6.0
Max Green Setting (Gmax), s	11.8	* 34		29.4		50.0
Max Q Clear Time (g_c+I1), s	13.7	35.5		25.3		41.9
Green Ext Time (p_c), s	0.0	0.0		1.7		7.2

Intersection Summary	
HCM 7th Control Delay, s/veh	35.5
HCM 7th LOS	D

Notes

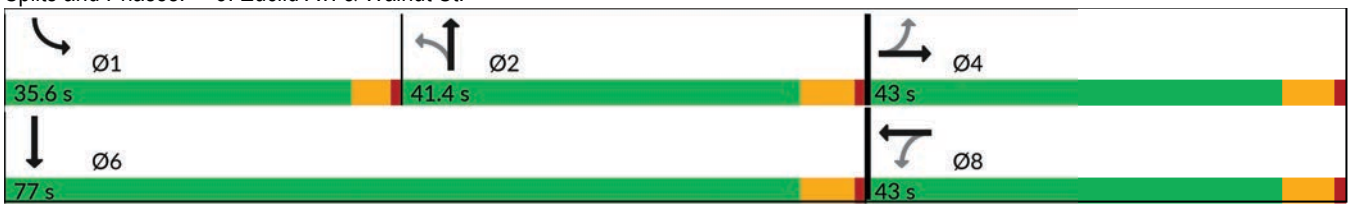
User approved volume balancing among the lanes for turning movement.

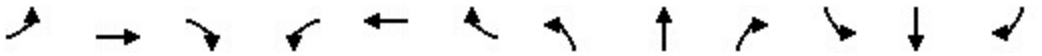
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	290	696	65	502	156	1361	334	1580
Future Volume (vph)	290	696	65	502	156	1361	334	1580
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	43.0	43.0	43.0	43.0	41.4	41.4	35.6	77.0
Total Split (%)	35.8%	35.8%	35.8%	35.8%	34.5%	34.5%	29.7%	64.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	37.3	37.3	37.3	37.3	36.7	36.7	16.3	57.6
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.34	0.34	0.15	0.54
v/c Ratio	2.18	0.81	0.92	0.62	1.33	0.84	0.74	0.70
Control Delay (s/veh)	575.3	37.5	125.2	29.5	226.0	37.5	52.9	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	575.3	37.5	125.2	29.5	226.0	37.5	52.9	19.1
LOS	F	D	F	C	F	D	D	B
Approach Delay (s/veh)		164.3		37.3		56.2		24.3
Approach LOS		F		D		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.18	
Intersection Signal Delay (s/veh): 64.6	Intersection LOS: E
Intersection Capacity Utilization 102.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	696	242	65	502	228	156	1361	53	334	1580	252
Future Volume (veh/h)	290	696	242	65	502	228	156	1361	53	334	1580	252
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	305	733	233	68	528	135	164	1433	29	352	1663	238
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	252	973	309	155	1032	263	285	1815	37	417	2406	343
Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.54	0.52	0.52	0.52	0.20	0.79	0.79
Sat Flow, veh/h	743	2684	853	560	2847	725	418	5232	106	3141	4586	654
Grp Volume(v), veh/h	305	493	473	68	334	329	164	947	515	352	1252	649
Grp Sat Flow(s),veh/h/ln	743	1805	1732	560	1805	1767	209	1729	1880	1570	1729	1782
Q Serve(g_s), s	25.1	21.7	21.7	11.8	12.0	12.1	35.6	22.9	22.9	11.1	17.3	17.6
Cycle Q Clear(g_c), s	37.2	21.7	21.7	33.5	12.0	12.1	35.6	22.9	22.9	11.1	17.3	17.6
Prop In Lane	1.00		0.49	1.00		0.41	1.00		0.06	1.00		0.37
Lane Grp Cap(c), veh/h	252	654	628	155	654	640	285	1199	652	417	1814	935
V/C Ratio(X)	1.21	0.75	0.75	0.44	0.51	0.51	0.57	0.79	0.79	0.84	0.69	0.69
Avail Cap(c_a), veh/h	252	654	628	155	654	640	285	1199	652	949	2399	1236
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	19.9	19.9	32.8	17.7	17.7	26.7	21.6	21.6	40.1	7.0	7.1
Incr Delay (d2), s/veh	126.2	4.9	5.1	2.0	0.7	0.7	2.8	3.6	6.5	1.8	0.6	1.1
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(50%),veh/ln	14.6	7.3	7.0	1.5	4.1	4.1	1.8	7.3	8.5	3.9	3.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	159.2	24.8	25.0	34.8	18.3	18.4	29.5	25.2	28.1	41.9	7.6	8.2
LnGrp LOS	F	C	C	C	B	B	C	C	C	D	A	A
Approach Vol, veh/h		1271			731			1626			2253	
Approach Delay, s/veh		57.1			19.9			26.5			13.1	
Approach LOS		E			B			C			B	

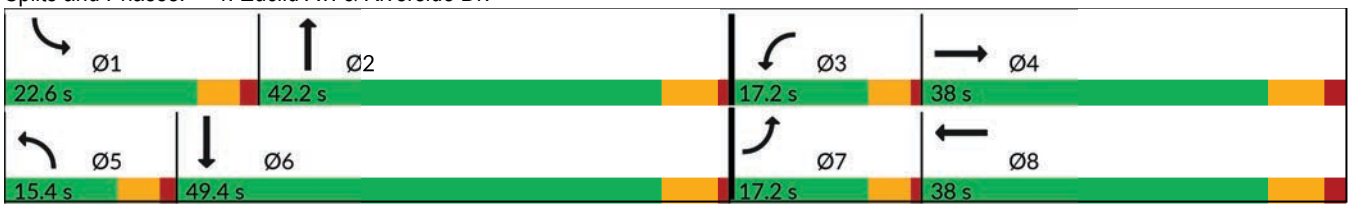
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	18.2	41.4		43.0		59.6		43.0				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	35.6		37.2		71.2		37.2				
Max Q Clear Time (g_c+I1), s	13.1	37.6		39.2		19.6		35.5				
Green Ext Time (p_c), s	0.6	0.0		0.0		20.6		0.8				

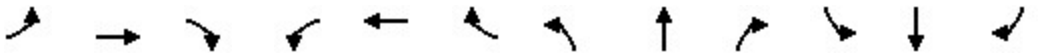
Intersection Summary		
HCM 7th Control Delay, s/veh		27.2
HCM 7th LOS		C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	152	427	142	553	90	1222	225	1225
Future Volume (vph)	152	427	142	553	90	1222	225	1225
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	15.2	36.0
Total Split (s)	17.2	38.0	17.2	38.0	15.4	42.2	22.6	49.4
Total Split (%)	14.3%	31.7%	14.3%	31.7%	12.8%	35.2%	18.8%	41.2%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	3.7	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	5.2	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.4	31.0	12.4	31.0	10.2	36.2	17.4	43.4
Actuated g/C Ratio	0.10	0.26	0.10	0.26	0.09	0.30	0.15	0.36
v/c Ratio	0.90	1.05	0.84	0.76	0.66	0.99	0.96	0.92
Control Delay (s/veh)	100.4	98.2	89.7	46.1	74.9	61.0	98.9	43.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.4	98.2	89.7	46.1	74.9	61.0	98.9	43.7
LOS	F	F	F	D	E	E	F	D
Approach Delay (s/veh)		98.7		53.8		61.9		50.5
Approach LOS		F		D		E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay (s/veh): 61.0	Intersection LOS: E
Intersection Capacity Utilization 97.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	427	59	142	553	111	90	1222	229	225	1225	386
Future Volume (veh/h)	152	427	59	142	553	111	90	1222	229	225	1225	386
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	160	449	40	149	582	78	95	1286	153	237	1289	314
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	181	450	40	173	821	110	138	1390	165	252	1506	366
Arrive On Green	0.16	0.39	0.39	0.15	0.39	0.39	0.12	0.45	0.45	0.22	0.54	0.54
Sat Flow, veh/h	1714	1717	153	1714	3193	427	1714	4686	557	1714	4149	1010
Grp Volume(v), veh/h	160	0	489	149	328	332	95	949	490	237	1074	529
Grp Sat Flow(s),veh/h/ln	1714	0	1870	1714	1805	1814	1714	1729	1785	1714	1729	1701
Q Serve(g_s), s	10.8	0.0	30.9	10.0	18.2	18.3	6.3	30.6	30.6	16.1	31.4	31.4
Cycle Q Clear(g_c), s	10.8	0.0	30.9	10.0	18.2	18.3	6.3	30.6	30.6	16.1	31.4	31.4
Prop In Lane	1.00		0.08	1.00		0.24	1.00		0.31	1.00		0.59
Lane Grp Cap(c), veh/h	181	0	490	173	464	467	138	1026	530	252	1255	617
V/C Ratio(X)	0.88	0.00	1.00	0.86	0.71	0.71	0.69	0.92	0.92	0.94	0.86	0.86
Avail Cap(c_a), veh/h	181	0	490	181	473	475	148	1057	546	252	1268	623
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	0.0	35.9	49.4	32.6	32.6	50.6	31.6	31.6	45.6	24.3	24.3
Incr Delay (d2), s/veh	35.5	0.0	40.3	29.4	5.2	5.3	11.6	13.1	21.5	40.7	5.9	11.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	17.2	5.4	7.4	7.5	3.0	11.7	13.3	8.9	10.7	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	84.6	0.0	76.2	78.9	37.8	37.9	62.2	44.7	53.1	86.3	30.3	35.6
LnGrp LOS	F		E	E	D	D	E	D	D	F	C	D
Approach Vol, veh/h		649			809			1534			1840	
Approach Delay, s/veh		78.3			45.4			48.4			39.0	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.6	41.1	16.7	38.0	14.8	49.0	17.2	37.5
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	17.4	36.2	12.5	31.0	10.2	43.4	12.5	31.0
Max Q Clear Time (g_c+I1), s	18.1	32.6	12.0	32.9	8.3	33.4	12.8	20.3
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.0	6.6	0.0	3.7

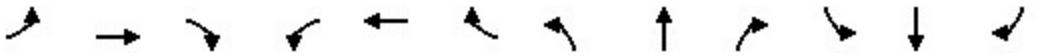
Intersection Summary	
HCM 7th Control Delay, s/veh	48.4
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	156	628	45	108	146	44	1359	247	92	1291	76
Future Volume (vph)	156	628	45	108	146	44	1359	247	92	1291	76
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	56.0	56.0	56.0	56.0	56.0	49.3	49.3	49.3	14.7	64.0	64.0
Total Split (%)	46.7%	46.7%	46.7%	46.7%	46.7%	41.1%	41.1%	41.1%	12.3%	53.3%	53.3%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	48.8	48.8	48.8	48.8	48.8	42.8	42.8	42.8	10.0	57.5	57.5
Actuated g/C Ratio	0.41	0.41	0.41	0.41	0.41	0.36	0.36	0.36	0.08	0.48	0.48
v/c Ratio	0.39	0.86	0.07	1.27	0.31	0.78	1.11	0.41	0.68	0.79	0.10
Control Delay (s/veh)	28.7	45.0	0.5	215.8	22.7	105.6	98.4	19.9	77.7	30.2	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.7	45.0	0.5	215.8	22.7	105.6	98.4	19.9	77.7	30.2	7.2
LOS	C	D	A	F	C	F	F	B	E	C	A
Approach Delay (s/veh)		39.5			85.7		86.8			32.0	
Approach LOS		D			F		F			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay (s/veh): 58.8	Intersection LOS: E
Intersection Capacity Utilization 108.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	628	45	108	146	77	44	1359	247	92	1291	76
Future Volume (veh/h)	156	628	45	108	146	77	44	1359	247	92	1291	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	164	661	34	114	154	75	46	1431	207	97	1359	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	435	764	647	141	485	236	102	1273	568	136	1752	762
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.53	0.53	0.53	0.12	0.73	0.73
Sat Flow, veh/h	1108	1900	1610	721	1207	588	366	3610	1610	1714	3610	1570
Grp Volume(v), veh/h	164	661	34	114	0	229	46	1431	207	97	1359	54
Grp Sat Flow(s),veh/h/ln	1108	1900	1610	721	0	1794	366	1805	1610	1714	1805	1570
Q Serve(g_s), s	11.3	35.1	1.1	13.7	0.0	7.6	14.2	42.8	9.1	6.6	28.6	1.2
Cycle Q Clear(g_c), s	19.0	35.1	1.1	48.8	0.0	7.6	42.8	42.8	9.1	6.6	28.6	1.2
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	435	764	647	141	0	721	102	1273	568	136	1752	762
V/C Ratio(X)	0.38	0.87	0.05	0.81	0.00	0.32	0.45	1.12	0.36	0.71	0.78	0.07
Avail Cap(c_a), veh/h	435	764	647	141	0	721	102	1273	568	141	1752	762
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	21.4	14.6	43.6	0.0	15.9	43.4	28.6	20.7	52.2	12.4	8.7
Incr Delay (d2), s/veh	0.5	10.2	0.0	28.6	0.0	0.3	3.1	66.8	0.4	12.8	2.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	13.8	0.4	4.4	0.0	2.8	1.3	25.1	3.0	3.1	6.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.1	31.6	14.7	72.2	0.0	16.2	46.5	95.4	21.1	64.9	14.6	8.7
LnGrp LOS	C	C	B	E		B	D	F	C	E	B	A
Approach Vol, veh/h		859			343			1684			1510	
Approach Delay, s/veh		29.0			34.8			84.9			17.7	
Approach LOS		C			C			F			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.1	49.3		56.0		65.4		56.0				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	10.0	* 43		48.8		57.5		48.8				
Max Q Clear Time (g_c+I1), s	8.6	44.8		37.1		30.6		50.8				
Green Ext Time (p_c), s	0.0	0.0		3.9		10.4		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	47.0	
HCM 7th LOS	D	

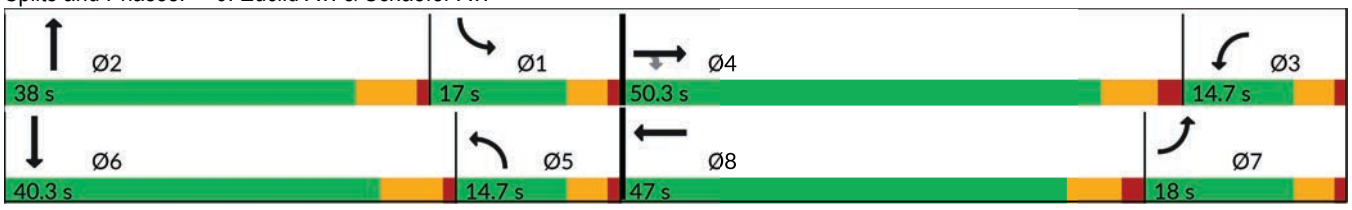
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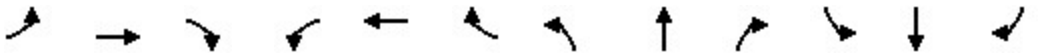
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	218	584	134	107	175	76	1331	195	1181
Future Volume (vph)	218	584	134	107	175	76	1331	195	1181
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	14.7	37.5
Total Split (s)	18.0	50.3	50.3	14.7	47.0	14.7	38.0	17.0	40.3
Total Split (%)	15.0%	41.9%	41.9%	12.3%	39.2%	12.3%	31.7%	14.2%	33.6%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	3.7	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	4.7	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	24.9	40.4	40.4	10.0	25.5	10.0	31.5	12.3	37.0
Actuated g/C Ratio	0.21	0.34	0.34	0.09	0.22	0.09	0.27	0.10	0.32
v/c Ratio	0.63	0.94	0.23	0.77	0.77	0.55	1.05	1.15	0.77
Control Delay (s/veh)	52.8	60.9	7.7	86.5	50.6	67.4	79.1	158.1	40.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.8	60.9	7.7	86.5	50.6	67.4	79.1	158.1	40.9
LOS	D	E	A	F	D	E	E	F	D
Approach Delay (s/veh)		51.4			60.1		78.5		56.1
Approach LOS		D			E		E		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay (s/veh): 63.5	Intersection LOS: E
Intersection Capacity Utilization 99.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	584	134	107	175	125	76	1331	187	195	1181	126
Future Volume (veh/h)	218	584	134	107	175	125	76	1331	187	195	1181	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	229	615	80	113	184	120	80	1401	194	205	1243	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	394	646	547	144	208	136	186	1329	184	182	1414	102
Arrive On Green	0.34	0.51	0.51	0.13	0.29	0.29	0.16	0.41	0.41	0.16	0.40	0.40
Sat Flow, veh/h	1714	1900	1609	1714	1073	700	1714	4885	676	1714	5240	379
Grp Volume(v), veh/h	229	615	80	113	0	304	80	1090	505	205	901	432
Grp Sat Flow(s),veh/h/ln	1714	1900	1609	1714	0	1773	1714	1900	1761	1714	1900	1819
Q Serve(g_s), s	12.7	35.7	3.1	7.4	0.0	18.9	4.9	31.5	31.5	12.3	25.4	25.4
Cycle Q Clear(g_c), s	12.7	35.7	3.1	7.4	0.0	18.9	4.9	31.5	31.5	12.3	25.4	25.4
Prop In Lane	1.00		1.00	1.00		0.39	1.00		0.38	1.00		0.21
Lane Grp Cap(c), veh/h	394	646	547	144	0	344	186	1034	479	182	1025	491
V/C Ratio(X)	0.58	0.95	0.15	0.78	0.00	0.88	0.43	1.05	1.05	1.13	0.88	0.88
Avail Cap(c_a), veh/h	394	711	602	148	0	612	186	1034	479	182	1109	531
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	27.5	19.5	49.6	0.0	39.8	45.2	34.3	34.3	48.7	32.7	32.7
Incr Delay (d2), s/veh	1.4	21.6	0.1	21.0	0.0	5.7	0.6	43.3	56.3	104.4	7.9	14.9
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(50%),veh/ln	4.8	16.3	1.1	3.8	0.0	7.7	2.0	17.6	18.0	10.0	10.3	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.8	49.1	19.6	70.6	0.0	45.5	45.8	77.6	90.5	153.1	40.6	47.6
LnGrp LOS	C	D	B	E		D	D	F	F	F	D	D
Approach Vol, veh/h		924			417			1675			1538	
Approach Delay, s/veh		43.0			52.3			80.0			57.6	
Approach LOS		D			D			E			E	

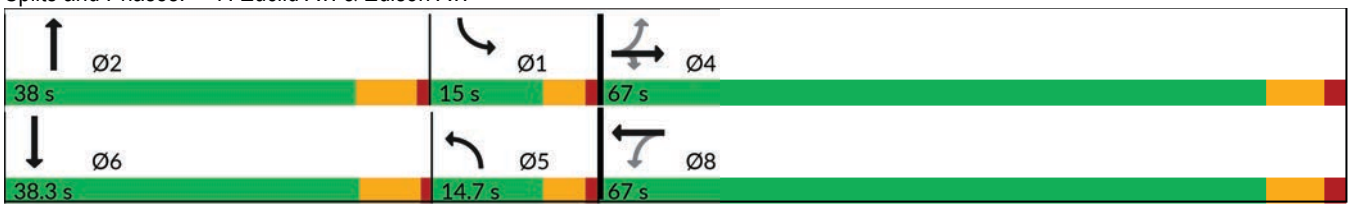
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	38.0	14.4	46.3	17.3	37.7	31.3	29.5
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	12.3	31.5	10.0	43.3	10.0	33.8	13.3	40.0
Max Q Clear Time (g_c+I1), s	14.3	33.5	9.4	37.7	6.9	27.4	14.7	20.9
Green Ext Time (p_c), s	0.0	0.0	0.0	1.6	0.0	3.8	0.0	1.2

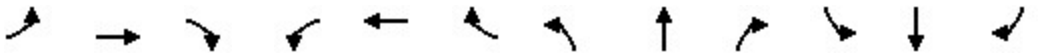
Intersection Summary	
HCM 7th Control Delay, s/veh	62.4
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	241	857	232	100	360	248	1316	158	991
Future Volume (vph)	241	857	232	100	360	248	1316	158	991
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4			8	5	2	1	6
Permitted Phases	4		4	8					
Detector Phase	4	4	4	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	44.2	44.2	44.2	45.2	45.2	14.7	26.5	14.7	37.5
Total Split (s)	67.0	67.0	67.0	67.0	67.0	14.7	38.0	15.0	38.3
Total Split (%)	55.8%	55.8%	55.8%	55.8%	55.8%	12.3%	31.7%	12.5%	31.9%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	3.7	5.5	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	4.7	6.5	4.7	6.5
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	59.8	59.8	59.8	59.8	59.8	10.5	31.5	10.3	31.3
Actuated g/C Ratio	0.50	0.50	0.50	0.50	0.50	0.09	0.26	0.09	0.26
v/c Ratio	0.73	0.95	0.27	1.75	0.50	0.92	1.03	1.14	0.86
Control Delay (s/veh)	38.8	49.5	5.8	422.0	21.7	91.3	73.3	165.0	47.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.8	49.5	5.8	422.0	21.7	91.3	73.3	165.0	47.9
LOS	D	D	A	F	C	F	E	F	D
Approach Delay (s/veh)		40.0			96.1		75.9		61.4
Approach LOS		D			F		E		E

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Natural Cycle: 110		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.75		
Intersection Signal Delay (s/veh): 64.4	Intersection LOS: E	
Intersection Capacity Utilization 112.3%	ICU Level of Service H	
Analysis Period (min) 15		

Splits and Phases: 7: Euclid Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	241	857	232	100	360	77	248	1316	130	158	991	218
Future Volume (veh/h)	241	857	232	100	360	77	248	1316	130	158	991	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	254	902	176	105	379	76	261	1385	122	166	1043	202
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	419	947	802	101	764	153	314	1354	119	147	1163	225
Arrive On Green	0.75	0.75	0.75	0.75	0.75	0.75	0.15	0.39	0.39	0.13	0.38	0.38
Sat Flow, veh/h	900	1900	1610	504	1532	307	3238	5157	454	1714	4623	894
Grp Volume(v), veh/h	254	902	176	105	0	455	261	1021	486	166	857	388
Grp Sat Flow(s),veh/h/ln	900	1900	1610	504	0	1840	1619	1900	1811	1714	1900	1717
Q Serve(g_s), s	23.6	50.0	4.0	9.8	0.0	11.9	9.4	31.5	31.5	10.3	25.5	25.5
Cycle Q Clear(g_c), s	35.5	50.0	4.0	59.8	0.0	11.9	9.4	31.5	31.5	10.3	25.5	25.5
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.25	1.00		0.52
Lane Grp Cap(c), veh/h	419	947	802	101	0	917	314	997	475	147	956	432
V/C Ratio(X)	0.61	0.95	0.22	1.04	0.00	0.50	0.83	1.02	1.02	1.13	0.90	0.90
Avail Cap(c_a), veh/h	419	947	802	101	0	917	314	997	475	147	1007	455
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	13.9	8.1	43.0	0.0	9.1	50.3	36.4	36.4	52.3	35.9	35.9
Incr Delay (d2), s/veh	2.5	18.8	0.1	99.7	0.0	0.4	16.2	34.5	47.3	112.8	10.3	19.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	14.6	1.3	5.6	0.0	3.5	4.2	16.5	17.4	8.6	10.9	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.7	32.7	8.2	142.7	0.0	9.5	66.6	70.9	83.7	165.0	46.2	55.7
LnGrp LOS	B	C	A	F		A	E	F	F	F	D	E
Approach Vol, veh/h		1332			560			1768			1411	
Approach Delay, s/veh		26.8			34.5			73.7			62.8	
Approach LOS		C			C			E			E	

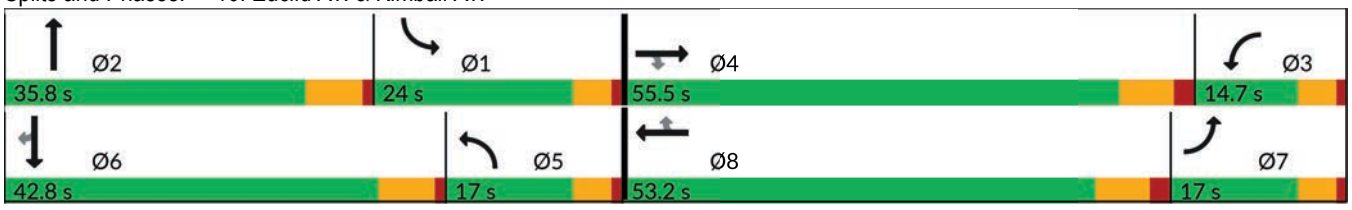
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	38.0		67.0	16.3	36.7		67.0				
Change Period (Y+Rc), s	4.7	6.5		7.2	4.7	6.5		7.2				
Max Green Setting (Gmax), s	10.3	31.5		59.8	10.0	31.8		59.8				
Max Q Clear Time (g_c+I1), s	12.3	33.5		52.0	11.4	27.5		61.8				
Green Ext Time (p_c), s	0.0	0.0		4.7	0.0	2.6		0.0				

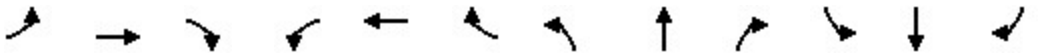
Intersection Summary	
HCM 7th Control Delay, s/veh	54.0
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	357	1126	81	65	733	240	174	914	613	795	297
Future Volume (vph)	357	1126	81	65	733	240	174	914	613	795	297
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	37.4	37.4
Total Split (s)	17.0	55.5	55.5	14.7	53.2	53.2	17.0	35.8	24.0	42.8	42.8
Total Split (%)	13.1%	42.7%	42.7%	11.3%	40.9%	40.9%	13.1%	27.5%	18.5%	32.9%	32.9%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	5.4	5.4
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	6.4	6.4
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.4	45.2	45.2	10.1	34.2	34.2	14.4	27.2	19.6	32.5	32.5
Actuated g/C Ratio	0.14	0.37	0.37	0.08	0.28	0.28	0.12	0.22	0.16	0.27	0.27
v/c Ratio	0.82	0.84	0.12	0.48	0.72	0.40	0.91	0.83	1.25	0.83	0.54
Control Delay (s/veh)	66.5	42.4	0.4	69.0	43.4	5.4	99.0	51.9	168.1	50.3	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.5	42.4	0.4	69.0	43.4	5.4	99.0	51.9	168.1	50.3	16.3
LOS	E	D	A	E	D	A	F	D	F	D	B
Approach Delay (s/veh)		45.7			36.2			58.9		86.7	
Approach LOS		D			D			E		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 121.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay (s/veh): 59.5	Intersection LOS: E
Intersection Capacity Utilization 97.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	357	1126	81	65	733	240	174	914	88	613	795	297
Future Volume (veh/h)	357	1126	81	65	733	240	174	914	88	613	795	297
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
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	1700	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	376	1185	53	68	772	160	183	962	62	645	837	286
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	620	1330	556	130	889	377	210	1138	73	530	975	407
Arrive On Green	0.29	0.52	0.52	0.11	0.35	0.35	0.18	0.32	0.32	0.25	0.39	0.39
Sat Flow, veh/h	3238	3800	1590	1714	3800	1610	1714	5298	341	3238	3800	1584
Grp Volume(v), veh/h	376	1185	53	68	772	160	183	689	335	645	837	286
Grp Sat Flow(s),veh/h/ln	1619	1900	1590	1714	1900	1610	1714	1900	1839	1619	1900	1584
Q Serve(g_s), s	11.8	32.8	2.0	4.4	22.4	8.9	12.2	19.9	20.0	19.3	23.9	17.9
Cycle Q Clear(g_c), s	11.8	32.8	2.0	4.4	22.4	8.9	12.2	19.9	20.0	19.3	23.9	17.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	620	1330	556	130	889	377	210	816	395	530	975	407
V/C Ratio(X)	0.61	0.89	0.10	0.52	0.87	0.42	0.87	0.84	0.85	1.22	0.86	0.70
Avail Cap(c_a), veh/h	620	1557	651	145	1483	628	210	944	457	530	1173	489
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	26.0	18.7	50.3	36.6	32.2	47.2	38.1	38.1	44.5	34.3	32.5
Incr Delay (d2), s/veh	1.2	6.2	0.1	3.3	1.5	0.3	29.1	6.3	12.4	113.9	5.6	3.6
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(50%),veh/ln	4.3	12.1	0.7	1.9	8.8	3.2	6.4	8.4	8.8	15.0	9.6	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.4	32.2	18.8	53.5	38.1	32.5	76.3	44.5	50.5	158.4	39.9	36.0
LnGrp LOS	D	C	B	D	D	C	E	D	D	F	D	D
Approach Vol, veh/h		1614			1000			1207			1768	
Approach Delay, s/veh		33.4			38.2			51.0			82.5	
Approach LOS		C			D			D			F	

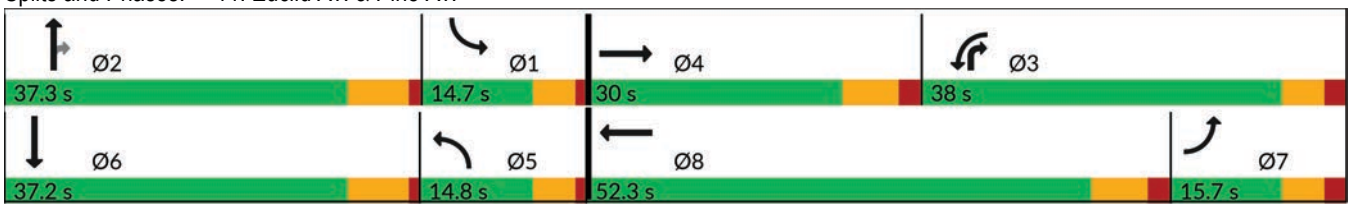
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	31.8	13.6	48.5	19.2	36.7	27.3	34.8
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	19.3	29.3	10.0	48.3	12.3	36.4	12.3	46.0
Max Q Clear Time (g_c+I1), s	21.3	22.0	6.4	34.8	14.2	25.9	13.8	24.4
Green Ext Time (p_c), s	0.0	3.3	0.0	6.4	0.0	4.4	0.0	3.2

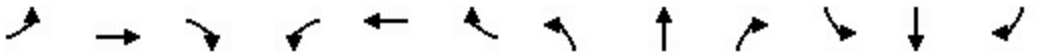
Intersection Summary	
HCM 7th Control Delay, s/veh	53.6
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	40	621	450	364	56	700	853	116	658
Future Volume (vph)	40	621	450	364	56	700	853	116	658
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	15.7	30.0	38.0	52.3	14.8	37.3	38.0	14.7	37.2
Total Split (%)	13.1%	25.0%	31.7%	43.6%	12.3%	31.1%	31.7%	12.3%	31.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.0	23.0	32.4	47.9	10.1	26.2	59.3	10.0	29.2
Actuated g/C Ratio	0.12	0.20	0.28	0.41	0.09	0.23	0.51	0.09	0.25
v/c Ratio	0.20	1.09	0.52	0.56	0.40	0.86	1.04	0.82	0.76
Control Delay (s/veh)	49.3	104.2	38.2	32.2	59.6	53.6	65.3	92.3	46.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.3	104.2	38.2	32.2	59.6	53.6	65.3	92.3	46.5
LOS	D	F	D	C	E	D	E	F	D
Approach Delay (s/veh)		101.4		35.3		60.0			53.1
Approach LOS		F		D		E			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay (s/veh): 61.3	Intersection LOS: E
Intersection Capacity Utilization 96.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	621	119	450	364	50	56	700	853	116	658	34
Future Volume (veh/h)	40	621	119	450	364	50	56	700	853	116	658	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	42	654	0	474	383	48	59	737	431	122	693	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	202	790		553	450	56	199	891	648	183	806	42
Arrive On Green	0.18	0.33	0.00	0.26	0.41	0.41	0.17	0.35	0.35	0.16	0.34	0.34
Sat Flow, veh/h	1714	3705	0	3238	1652	207	1714	3800	1589	1714	3576	186
Grp Volume(v), veh/h	42	654	0	474	0	431	59	737	431	122	368	361
Grp Sat Flow(s),veh/h/ln	1714	1805	0	1619	0	1860	1714	1900	1589	1714	1900	1862
Q Serve(g_s), s	1.9	14.9	0.0	12.4	0.0	18.7	2.7	15.8	0.4	5.9	16.1	16.1
Cycle Q Clear(g_c), s	1.9	14.9	0.0	12.4	0.0	18.7	2.7	15.8	0.4	5.9	16.1	16.1
Prop In Lane	1.00		0.00	1.00		0.11	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	202	790		553	0	506	199	891	648	183	428	419
V/C Ratio(X)	0.21	0.83		0.86	0.00	0.85	0.30	0.83	0.67	0.67	0.86	0.86
Avail Cap(c_a), veh/h	202	934		1176	0	947	199	1316	826	193	656	643
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	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	33.1	28.3	0.0	32.0	0.0	24.7	33.5	27.2	17.2	35.8	28.1	28.1
Incr Delay (d2), s/veh	0.2	5.9	0.0	1.5	0.0	5.8	0.3	1.8	0.7	6.1	4.6	4.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.9	0.0	4.2	0.0	6.9	1.0	5.8	5.3	2.5	6.2	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.3	34.2	0.0	33.6	0.0	30.5	33.9	29.0	17.9	41.9	32.7	32.9
LnGrp LOS	C	C		C		C	C	C	B	D	C	C
Approach Vol, veh/h		696			905			1227			851	
Approach Delay, s/veh		34.2			32.1			25.3			34.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	27.3	20.9	26.5	15.0	26.5	16.2	31.2
Change Period (Y+Rc), s	4.7	6.5	5.7	7.0	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.0	30.8	32.3	23.0	10.1	30.7	10.0	45.3
Max Q Clear Time (g_c+I1), s	7.9	17.8	14.4	16.9	4.7	18.1	3.9	20.7
Green Ext Time (p_c), s	0.0	3.1	0.8	2.6	0.0	1.9	0.0	3.5

Intersection Summary	
HCM 7th Control Delay, s/veh	30.7
HCM 7th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	847	40	30	398	61	30	42	121	44	9	15
Future Vol, veh/h	20	847	40	30	398	61	30	42	121	44	9	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	21	892	42	32	419	64	32	44	127	46	9	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	483	0	0	934	0	0	1442	1501	913	1470	1490	451
Stage 1	-	-	-	-	-	-	955	955	-	514	514	-
Stage 2	-	-	-	-	-	-	487	546	-	956	976	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1090	-	-	741	-	-	111	123	334	106	125	613
Stage 1	-	-	-	-	-	-	313	340	-	547	539	-
Stage 2	-	-	-	-	-	-	566	521	-	313	332	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1090	-	-	741	-	-	98	116	334	53	117	613
Mov Cap-2 Maneuver	-	-	-	-	-	-	261	278	-	124	259	-
Stage 1	-	-	-	-	-	-	307	333	-	524	516	-
Stage 2	-	-	-	-	-	-	518	499	-	165	326	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.18	0.62	36.85	42.67
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	307	1090	-	-	741	-	-	165
HCM Lane V/C Ratio	0.661	0.019	-	-	0.043	-	-	0.435
HCM Ctrl Dly (s/v)	36.9	8.4	-	-	10.1	-	-	42.7
HCM Lane LOS	E	A	-	-	B	-	-	E
HCM 95th %tile Q(veh)	4.4	0.1	-	-	0.1	-	-	2

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	796	18	42	757	0	53	8	84	0	2	0
Future Vol, veh/h	0	796	18	42	757	0	53	8	84	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	838	19	44	797	0	56	8	88	0	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	797	0	0	857	0	0	1734	1733	847	1727	1742	797
Stage 1	-	-	-	-	-	-	847	847	-	885	885	-
Stage 2	-	-	-	-	-	-	886	885	-	842	857	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	834	-	-	792	-	-	70	89	365	70	88	390
Stage 1	-	-	-	-	-	-	359	381	-	342	366	-
Stage 2	-	-	-	-	-	-	342	366	-	362	377	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	834	-	-	792	-	-	65	84	365	49	83	390
Mov Cap-2 Maneuver	-	-	-	-	-	-	235	255	-	179	241	-
Stage 1	-	-	-	-	-	-	359	381	-	323	345	-
Stage 2	-	-	-	-	-	-	321	345	-	268	377	-

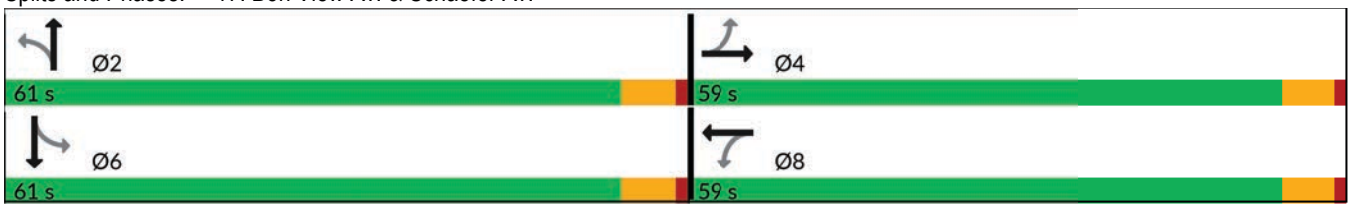
Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.52	29.21	20.1
HCM LOS			D	C

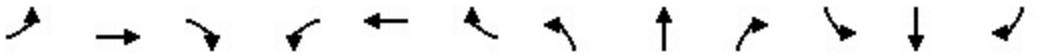
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	297	834	-	-	792	-	-	241
HCM Lane V/C Ratio	0.513	-	-	-	0.056	-	-	0.009
HCM Ctrl Dly (s/v)	29.2	0	-	-	9.8	-	-	20.1
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	2.7	0	-	-	0.2	-	-	0

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	83	516	61	442	52	563	50	625
Future Volume (vph)	83	516	61	442	52	563	50	625
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	59.0	59.0	59.0	59.0	61.0	61.0	61.0	61.0
Total Split (%)	49.2%	49.2%	49.2%	49.2%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		53.2		53.2		55.2		55.2
Actuated g/C Ratio		0.44		0.44		0.46		0.46
v/c Ratio		1.10		0.94		0.98		1.09
Control Delay (s/veh)		99.0		54.8		61.5		91.7
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		99.0		54.8		61.5		91.7
LOS		F		D		E		F
Approach Delay (s/veh)		99.0		54.8		61.5		91.7
Approach LOS		F		D		E		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay (s/veh): 78.0	Intersection LOS: E
Intersection Capacity Utilization 114.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 17: Bon View Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	516	80	61	442	105	52	563	55	50	625	123
Future Volume (veh/h)	83	516	80	61	442	105	52	563	55	50	625	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	87	543	42	64	465	58	55	593	58	53	658	66
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	90	467	35	79	494	59	65	550	52	62	579	57
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	127	1053	79	104	1115	134	71	1196	113	66	1258	123
Grp Volume(v), veh/h	672	0	0	587	0	0	706	0	0	777	0	0
Grp Sat Flow(s),veh/h/ln	1258	0	0	1353	0	0	1381	0	0	1447	0	0
Q Serve(g_s), s	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	53.2	0.0	0.0	48.6	0.0	0.0	55.2	0.0	0.0	55.2	0.0	0.0
Prop In Lane	0.13		0.06	0.11		0.10	0.08		0.08	0.07		0.08
Lane Grp Cap(c), veh/h	592	0	0	633	0	0	668	0	0	698	0	0
V/C Ratio(X)	1.14	0.00	0.00	0.93	0.00	0.00	1.06	0.00	0.00	1.11	0.00	0.00
Avail Cap(c_a), veh/h	592	0	0	633	0	0	668	0	0	698	0	0
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	0.0	0.0	17.4	0.0	0.0	17.6	0.0	0.0	17.9	0.0	0.0
Incr Delay (d2), s/veh	80.4	0.0	0.0	20.0	0.0	0.0	51.1	0.0	0.0	69.7	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(50%),veh/ln	24.0	0.0	0.0	10.5	0.0	0.0	16.7	0.0	0.0	22.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	100.9	0.0	0.0	37.3	0.0	0.0	68.7	0.0	0.0	87.6	0.0	0.0
LnGrp LOS	F			D			F			F		
Approach Vol, veh/h		672			587			706			777	
Approach Delay, s/veh		100.9			37.3			68.7			87.6	
Approach LOS		F			D			E			F	

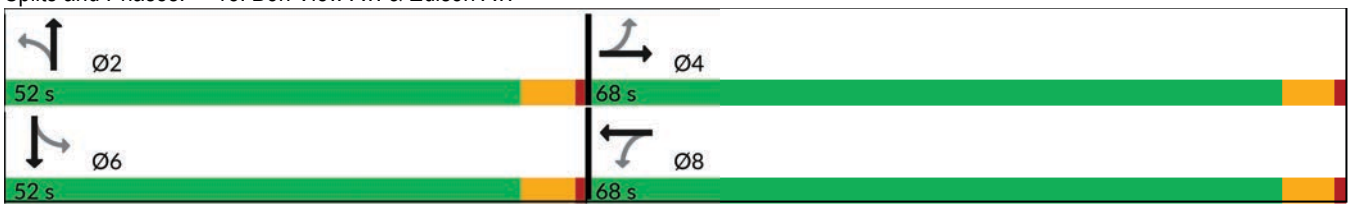
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	61.0	59.0	61.0	59.0
Change Period (Y+Rc), s	5.8	5.8	5.8	5.8
Max Green Setting (Gmax), s	55.2	53.2	55.2	53.2
Max Q Clear Time (g_c+I1), s	57.2	55.2	57.2	50.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9

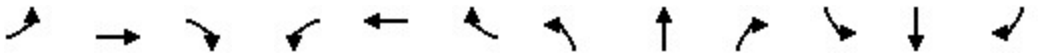
Intersection Summary	
HCM 7th Control Delay, s/veh	75.2
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	88	631	26	351	48	525	28	477
Future Volume (vph)	88	631	26	351	48	525	28	477
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	68.0	68.0	68.0	68.0	52.0	52.0	52.0	52.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		62.2		62.2		46.2		46.2
Actuated g/C Ratio		0.52		0.52		0.39		0.39
v/c Ratio		1.04		0.50		0.99		0.85
Control Delay (s/veh)		69.7		20.9		71.4		47.1
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		69.7		20.9		71.4		47.1
LOS		E		C		E		D
Approach Delay (s/veh)		69.7		20.9		71.4		47.1
Approach LOS		E		C		E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay (s/veh): 56.3	Intersection LOS: E
Intersection Capacity Utilization 124.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 18: Bon View Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	631	129	26	351	55	48	525	12	28	477	45
Future Volume (veh/h)	88	631	129	26	351	55	48	525	12	28	477	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	664	136	27	369	58	51	553	13	29	502	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	111	670	134	58	702	107	66	545	12	50	568	52
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	150	1292	259	50	1355	206	87	1416	32	47	1476	135
Grp Volume(v), veh/h	893	0	0	454	0	0	617	0	0	578	0	0
Grp Sat Flow(s),veh/h/ln	1701	0	0	1610	0	0	1535	0	0	1658	0	0
Q Serve(g_s), s	43.5	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	62.2	0.0	0.0	18.7	0.0	0.0	46.2	0.0	0.0	38.5	0.0	0.0
Prop In Lane	0.10		0.15	0.06		0.13	0.08		0.02	0.05		0.08
Lane Grp Cap(c), veh/h	915	0	0	867	0	0	623	0	0	670	0	0
V/C Ratio(X)	0.98	0.00	0.00	0.52	0.00	0.00	0.99	0.00	0.00	0.86	0.00	0.00
Avail Cap(c_a), veh/h	915	0	0	867	0	0	623	0	0	670	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.0	0.0	0.0	18.4	0.0	0.0	37.1	0.0	0.0	33.6	0.0	0.0
Incr Delay (d2), s/veh	24.0	0.0	0.0	0.6	0.0	0.0	33.3	0.0	0.0	11.3	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(50%),veh/ln	29.2	0.0	0.0	7.5	0.0	0.0	23.4	0.0	0.0	16.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.1	0.0	0.0	19.0	0.0	0.0	70.4	0.0	0.0	44.9	0.0	0.0
LnGrp LOS	D			B			E			D		
Approach Vol, veh/h		893			454			617			578	
Approach Delay, s/veh		53.1			19.0			70.4			44.9	
Approach LOS		D			B			E			D	

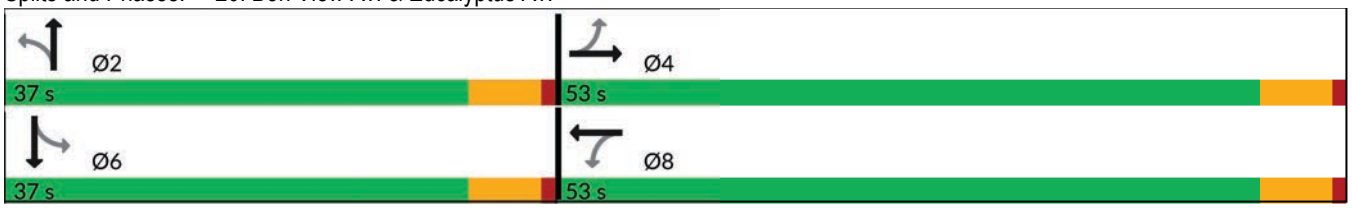
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		52.0		68.0		52.0		68.0				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		46.2		62.2		46.2		62.2				
Max Q Clear Time (g_c+I1), s		48.2		64.2		40.5		20.7				
Green Ext Time (p_c), s		0.0		0.0		1.7		2.9				

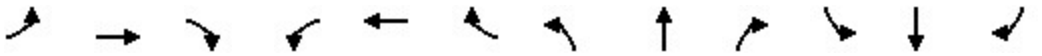
Intersection Summary												
HCM 7th Control Delay, s/veh			49.3									
HCM 7th LOS			D									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	208	541	54	599	64	161	70	55
Future Volume (vph)	208	541	54	599	64	161	70	55
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	53.0	53.0	53.0	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		47.4		47.4		18.2		18.2
Actuated g/C Ratio		0.61		0.61		0.24		0.24
v/c Ratio		1.21		0.84		0.78		0.71
Control Delay (s/veh)		128.2		22.7		41.0		33.6
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		128.2		22.7		41.0		33.6
LOS		F		C		D		C
Approach Delay (s/veh)		128.2		22.7		41.0		33.6
Approach LOS		F		C		D		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 77.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay (s/veh): 66.0	Intersection LOS: E
Intersection Capacity Utilization 121.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 20: Bon View Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	541	51	54	599	170	64	161	51	70	55	95
Future Volume (veh/h)	208	541	51	54	599	170	64	161	51	70	55	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	219	569	54	57	631	179	67	169	54	74	58	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	227	504	46	96	811	223	121	224	65	140	101	135
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	260	793	72	70	1276	350	296	1075	314	366	484	645
Grp Volume(v), veh/h	842	0	0	867	0	0	290	0	0	232	0	0
Grp Sat Flow(s),veh/h/ln	1126	0	0	1697	0	0	1684	0	0	1495	0	0
Q Serve(g_s), s	20.6	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	47.2	0.0	0.0	26.6	0.0	0.0	12.1	0.0	0.0	10.7	0.0	0.0
Prop In Lane	0.26		0.06	0.07		0.21	0.23		0.19	0.32		0.43
Lane Grp Cap(c), veh/h	776	0	0	1130	0	0	411	0	0	376	0	0
V/C Ratio(X)	1.08	0.00	0.00	0.77	0.00	0.00	0.71	0.00	0.00	0.62	0.00	0.00
Avail Cap(c_a), veh/h	776	0	0	1130	0	0	759	0	0	691	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.2	0.0	0.0	9.5	0.0	0.0	27.9	0.0	0.0	27.3	0.0	0.0
Incr Delay (d2), s/veh	57.8	0.0	0.0	3.2	0.0	0.0	2.2	0.0	0.0	1.7	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(50%),veh/ln	23.0	0.0	0.0	7.6	0.0	0.0	4.7	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.0	0.0	0.0	12.8	0.0	0.0	30.2	0.0	0.0	28.9	0.0	0.0
LnGrp LOS	F			B			C			C		
Approach Vol, veh/h		842			867			290			232	
Approach Delay, s/veh		74.0			12.8			30.2			28.9	
Approach LOS		E			B			C			C	

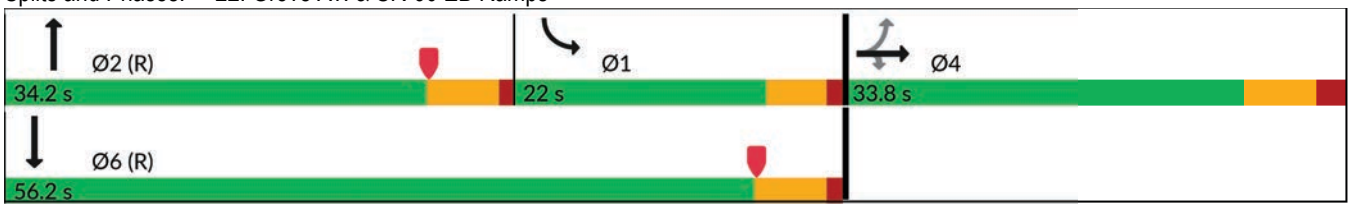
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	21.3	53.0	21.3	53.0
Change Period (Y+Rc), s	5.8	5.8	5.8	5.8
Max Green Setting (Gmax), s	31.2	47.2	31.2	47.2
Max Q Clear Time (g_c+I1), s	14.1	49.2	12.7	28.6
Green Ext Time (p_c), s	1.4	0.0	1.2	6.2

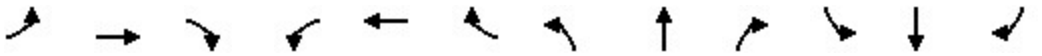
Intersection Summary	
HCM 7th Control Delay, s/veh	39.8
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	463	1	321	748	409	991
Future Volume (vph)	463	1	321	748	409	991
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	33.8	31.8	15.0	25.8
Total Split (s)	33.8	33.8	33.8	34.2	22.0	56.2
Total Split (%)	37.6%	37.6%	37.6%	38.0%	24.4%	62.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.8	5.8	5.0	5.8
Lead/Lag				Lead	Lag	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	19.1	19.1	19.1	36.3	17.0	58.3
Actuated g/C Ratio	0.21	0.21	0.21	0.40	0.19	0.65
v/c Ratio	0.67	0.67	0.81	0.91	1.33	0.45
Control Delay (s/veh)	40.7	40.8	37.3	33.9	192.1	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	40.7	40.8	37.3	33.9	192.1	13.6
LOS	D	D	D	C	F	B
Approach Delay (s/veh)		39.4		33.9		65.8
Approach LOS		D		C		E

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay (s/veh): 48.1	Intersection LOS: D
Intersection Capacity Utilization 101.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	463	1	321	0	0	0	0	748	527	409	991	0
Future Volume (veh/h)	463	1	321	0	0	0	0	748	527	409	991	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	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	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	488	0	180				0	787	292	431	1043	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	606	0	268				0	806	299	536	2501	0
Arrive On Green	0.17	0.00	0.17				0.00	0.32	0.32	0.63	1.00	0.00
Sat Flow, veh/h	3619	0	1604				0	2649	947	1714	3705	0
Grp Volume(v), veh/h	488	0	180				0	556	523	431	1043	0
Grp Sat Flow(s),veh/h/ln	1810	0	1604				0	1805	1696	1714	1805	0
Q Serve(g_s), s	11.7	0.0	9.5				0.0	27.4	27.5	17.1	0.0	0.0
Cycle Q Clear(g_c), s	11.7	0.0	9.5				0.0	27.4	27.5	17.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.56	1.00		0.00
Lane Grp Cap(c), veh/h	606	0	268				0	570	535	536	2501	0
V/C Ratio(X)	0.81	0.00	0.67				0.00	0.98	0.98	0.80	0.42	0.00
Avail Cap(c_a), veh/h	1086	0	481				0	570	535	536	2501	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	0.44	0.44	0.00
Uniform Delay (d), s/veh	36.1	0.0	35.1				0.0	30.5	30.5	14.8	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	1.1				0.0	32.2	33.7	3.7	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	4.9	0.0	3.6				0.0	16.0	15.2	4.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.0	0.0	36.2				0.0	62.7	64.2	18.5	0.2	0.0
LnGrp LOS	D		D					E	E	B	A	
Approach Vol, veh/h		668						1079			1474	
Approach Delay, s/veh		36.8						63.4			5.6	
Approach LOS		D						E			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	33.9	34.2		21.9		68.1
Change Period (Y+Rc), s	5.8	* 5.8		6.8		5.8
Max Green Setting (Gmax), s	17.0	* 28		27.0		50.4
Max Q Clear Time (g_c+I1), s	19.1	29.5		13.7		2.0
Green Ext Time (p_c), s	0.0	0.0		1.1		6.6

Intersection Summary	
HCM 7th Control Delay, s/veh	31.4
HCM 7th LOS	C

Notes

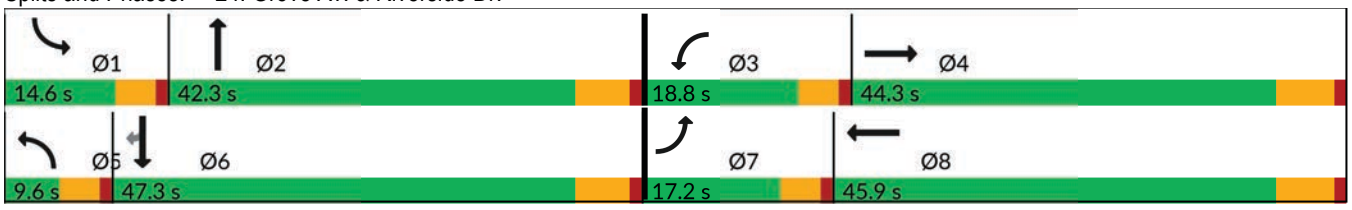
User approved volume balancing among the lanes for turning movement.

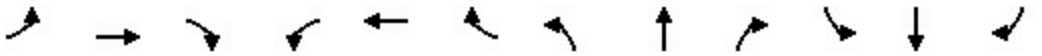
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	155	498	178	734	32	828	118	585	149
Future Volume (vph)	155	498	178	734	32	828	118	585	149
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	17.2	44.3	18.8	45.9	9.6	42.3	14.6	47.3	47.3
Total Split (%)	14.3%	36.9%	15.7%	38.3%	8.0%	35.3%	12.2%	39.4%	39.4%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.5	38.1	14.1	39.7	5.0	36.5	9.9	45.2	45.2
Actuated g/C Ratio	0.10	0.32	0.12	0.33	0.04	0.30	0.08	0.38	0.38
v/c Ratio	0.92	1.00	0.93	0.93	0.48	0.96	0.88	0.86	0.23
Control Delay (s/veh)	101.8	78.3	100.0	51.4	78.3	59.2	103.9	48.8	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	101.8	78.3	100.0	51.4	78.3	59.2	103.9	48.8	8.0
LOS	F	E	F	D	E	E	F	D	A
Approach Delay (s/veh)		83.3		58.5		59.8		49.3	
Approach LOS		F		E		E		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.8	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay (s/veh): 61.5	Intersection LOS: E
Intersection Capacity Utilization 93.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	498	69	178	734	307	32	828	158	118	585	149
Future Volume (veh/h)	155	498	69	178	734	307	32	828	158	118	585	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	163	524	41	187	773	165	34	872	87	124	616	94
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	188	548	43	212	973	208	50	958	96	148	659	558
Arrive On Green	0.16	0.47	0.47	0.19	0.49	0.49	0.04	0.43	0.43	0.13	0.52	0.52
Sat Flow, veh/h	1714	1737	136	1714	2951	630	1714	3315	331	1714	1900	1610
Grp Volume(v), veh/h	163	0	565	187	473	465	34	475	484	124	616	94
Grp Sat Flow(s),veh/h/ln	1714	0	1873	1714	1805	1776	1714	1805	1840	1714	1900	1610
Q Serve(g_s), s	10.6	0.0	33.2	12.2	24.9	24.9	2.2	28.1	28.1	8.1	34.6	3.5
Cycle Q Clear(g_c), s	10.6	0.0	33.2	12.2	24.9	24.9	2.2	28.1	28.1	8.1	34.6	3.5
Prop In Lane	1.00		0.07	1.00		0.35	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	188	0	591	212	595	585	50	522	532	148	659	558
V/C Ratio(X)	0.87	0.00	0.96	0.88	0.79	0.79	0.69	0.91	0.91	0.84	0.94	0.17
Avail Cap(c_a), veh/h	189	0	624	213	627	617	75	576	588	150	690	584
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	0.0	29.3	45.8	25.7	25.7	54.2	31.0	31.0	49.0	26.3	18.8
Incr Delay (d2), s/veh	31.0	0.0	24.8	31.4	6.7	6.8	6.1	17.6	17.4	30.2	19.7	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(50%),veh/ln	5.7	0.0	15.5	6.5	9.2	9.1	1.0	12.5	12.7	4.5	15.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	77.9	0.0	54.1	77.1	32.4	32.5	60.3	48.6	48.3	79.2	45.9	18.9
LnGrp LOS	E		D	E	C	C	E	D	D	E	D	B
Approach Vol, veh/h		728			1125			993			834	
Approach Delay, s/veh		59.5			39.9			48.9			47.8	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	38.9	18.7	42.3	7.9	45.4	17.1	43.9
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	10.0	36.5	14.2	38.1	5.0	41.5	12.6	39.7
Max Q Clear Time (g_c+I1), s	10.1	30.1	14.2	35.2	4.2	36.6	12.6	26.9
Green Ext Time (p_c), s	0.0	2.9	0.0	0.9	0.0	1.8	0.0	4.4

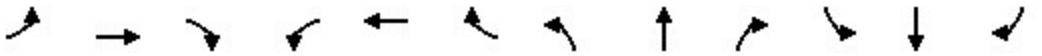
Intersection Summary	
HCM 7th Control Delay, s/veh	48.0
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	120	188	45	97	51	744	22	645
Future Volume (vph)	120	188	45	97	51	744	22	645
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	30.0	30.0	30.0	30.0	14.4	79.7	10.3	75.6
Total Split (%)	25.0%	25.0%	25.0%	25.0%	12.0%	66.4%	8.6%	63.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.2	16.2	16.2	16.2	8.6	43.6	6.6	39.7
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.11	0.57	0.09	0.52
v/c Ratio	0.50	0.51	0.32	0.19	0.28	0.81	0.16	0.71
Control Delay (s/veh)	41.8	17.1	40.8	23.6	45.8	20.5	49.3	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.8	17.1	40.8	23.6	45.8	20.5	49.3	19.4
LOS	D	B	D	C	D	C	D	B
Approach Delay (s/veh)		22.5		27.8		22.0		20.3
Approach LOS		C		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 76.3	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 22.1	Intersection LOS: C
Intersection Capacity Utilization 80.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 25: Grove Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	188	238	45	97	44	51	744	84	22	645	19
Future Volume (veh/h)	120	188	238	45	97	44	51	744	84	22	645	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	126	198	251	47	102	46	54	783	88	23	679	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	334	398	350	182	543	232	81	854	96	45	897	26
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.07	0.77	0.77	0.04	0.73	0.73
Sat Flow, veh/h	1193	1805	1589	906	2463	1052	1714	1673	188	1714	1836	54
Grp Volume(v), veh/h	126	198	251	47	73	75	54	0	871	23	0	699
Grp Sat Flow(s),veh/h/ln	1193	1805	1589	906	1805	1711	1714	0	1861	1714	0	1890
Q Serve(g_s), s	6.0	5.8	9.2	3.3	1.9	2.1	2.0	0.0	24.5	0.9	0.0	14.8
Cycle Q Clear(g_c), s	8.1	5.8	9.2	12.5	1.9	2.1	2.0	0.0	24.5	0.9	0.0	14.8
Prop In Lane	1.00		1.00	1.00		0.62	1.00		0.10	1.00		0.03
Lane Grp Cap(c), veh/h	334	398	350	182	398	377	81	0	949	45	0	924
V/C Ratio(X)	0.38	0.50	0.72	0.26	0.18	0.20	0.66	0.00	0.92	0.52	0.00	0.76
Avail Cap(c_a), veh/h	505	657	578	312	657	622	253	0	2068	147	0	1984
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	19.3	20.4	25.9	18.0	18.1	30.4	0.0	6.7	31.5	0.0	6.5
Incr Delay (d2), s/veh	0.7	1.0	2.8	0.7	0.2	0.3	8.9	0.0	4.1	8.9	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.1	2.9	0.6	0.7	0.7	1.0	0.0	4.0	0.4	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.6	20.3	23.2	26.7	18.2	18.3	39.3	0.0	10.8	40.5	0.0	7.8
LnGrp LOS	C	C	C	C	B	B	D		B	D		A
Approach Vol, veh/h		575			195			925			722	
Approach Delay, s/veh		21.9			20.3			12.5			8.8	
Approach LOS		C			C			B			A	

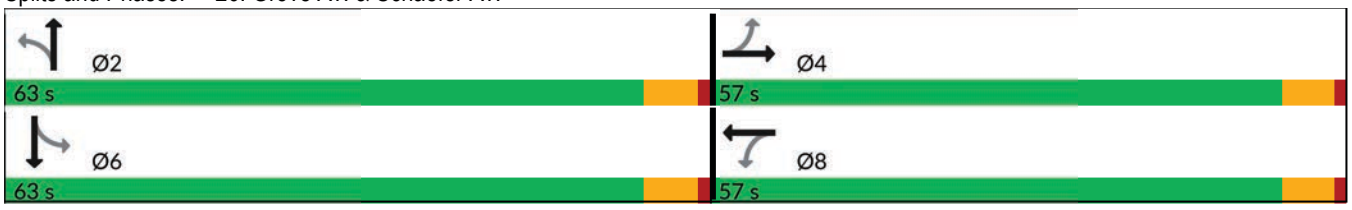
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	39.7		20.5	7.8	38.3		20.5				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	5.7	73.9		24.2	9.8	69.8		24.2				
Max Q Clear Time (g_c+I1), s	2.9	26.5		11.2	4.0	16.8		14.5				
Green Ext Time (p_c), s	0.0	7.4		2.4	0.0	5.1		0.6				

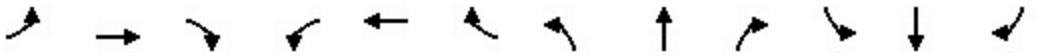
Intersection Summary		
HCM 7th Control Delay, s/veh		14.2
HCM 7th LOS		B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	100	631	90	455	163	716	94	653
Future Volume (vph)	100	631	90	455	163	716	94	653
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	57.0	57.0	57.0	57.0	63.0	63.0	63.0	63.0
Total Split (%)	47.5%	47.5%	47.5%	47.5%	52.5%	52.5%	52.5%	52.5%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	51.2	51.2	51.2	51.2	57.2	57.2	57.2	57.2
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.48	0.48	0.48	0.48
v/c Ratio	0.55	0.87	1.13	0.69	1.40	0.83	0.93	0.81
Control Delay (s/veh)	38.7	44.3	173.3	33.0	249.6	37.0	104.9	35.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.7	44.3	173.3	33.0	249.6	37.0	104.9	35.3
LOS	D	D	F	C	F	D	F	D
Approach Delay (s/veh)		43.5		53.6		76.5		43.7
Approach LOS		D		D		E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.40	
Intersection Signal Delay (s/veh): 55.1	Intersection LOS: E
Intersection Capacity Utilization 108.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 26: Grove Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	631	33	90	455	68	163	716	0	94	653	40
Future Volume (veh/h)	100	631	33	90	455	68	163	716	0	94	653	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	105	664	19	95	479	40	172	754	0	99	687	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	287	781	22	167	735	61	238	909	0	205	877	27
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.72	0.72	0.00	0.72	0.72	0.72
Sat Flow, veh/h	896	1838	53	770	1730	144	752	1900	0	721	1834	56
Grp Volume(v), veh/h	105	0	683	95	0	519	172	754	0	99	0	708
Grp Sat Flow(s),veh/h/ln	896	0	1891	770	0	1874	752	1900	0	721	0	1890
Q Serve(g_s), s	10.5	0.0	34.2	14.3	0.0	20.6	26.9	33.2	0.0	14.5	0.0	28.9
Cycle Q Clear(g_c), s	31.1	0.0	34.2	48.6	0.0	20.6	55.8	33.2	0.0	47.6	0.0	28.9
Prop In Lane	1.00		0.03	1.00		0.08	1.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	287	0	803	167	0	796	238	909	0	205	0	904
V/C Ratio(X)	0.37	0.00	0.85	0.57	0.00	0.65	0.72	0.83	0.00	0.48	0.00	0.78
Avail Cap(c_a), veh/h	290	0	809	169	0	802	238	909	0	205	0	904
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	18.7	37.9	0.0	16.2	30.9	13.5	0.0	30.1	0.0	12.9
Incr Delay (d2), s/veh	0.8	0.0	8.5	4.3	0.0	1.9	10.3	6.5	0.0	1.8	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	11.9	2.6	0.0	6.6	4.9	9.2	0.0	2.3	0.0	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.6	0.0	27.2	42.2	0.0	18.1	41.2	20.0	0.0	31.9	0.0	17.5
LnGrp LOS	C		C	D		B	D	C		C		B
Approach Vol, veh/h		788			614			926			807	
Approach Delay, s/veh		27.1			21.8			24.0			19.2	
Approach LOS		C			C			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.0		56.6		63.0		56.6				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		57.2		51.2		57.2		51.2				
Max Q Clear Time (g_c+I1), s		57.8		36.2		49.6		50.6				
Green Ext Time (p_c), s		0.0		4.3		3.1		0.3				

Intersection Summary	
HCM 7th Control Delay, s/veh	23.1
HCM 7th LOS	C

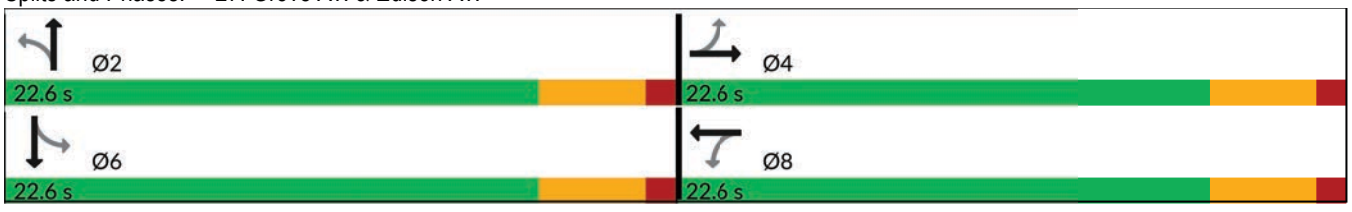
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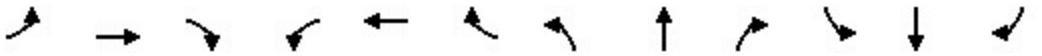
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	182	587	5	354	33	623	175	246
Future Volume (vph)	182	587	5	354	33	623	175	246
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		4.6		4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		18.0		18.0		18.0		18.0
Actuated g/C Ratio		0.40		0.40		0.40		0.40
v/c Ratio		1.49		0.62		0.95		1.38
Control Delay (s/veh)		248.1		14.5		40.8		204.3
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		248.1		14.5		40.8		204.3
LOS		F		B		D		F
Approach Delay (s/veh)		248.1		14.5		40.8		204.3
Approach LOS		F		B		D		F

Intersection Summary	
Cycle Length: 45.2	
Actuated Cycle Length: 45.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.49	
Intersection Signal Delay (s/veh): 139.6	Intersection LOS: F
Intersection Capacity Utilization 146.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 27: Grove Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	587	17	5	354	84	33	623	1	175	246	120
Future Volume (veh/h)	182	587	17	5	354	84	33	623	1	175	246	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	192	618	18	5	373	88	35	656	1	184	259	126
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	489	14	83	596	139	102	719	1	225	238	102
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	317	1228	34	5	1497	350	47	1805	3	301	598	256
Grp Volume(v), veh/h	828	0	0	466	0	0	692	0	0	569	0	0
Grp Sat Flow(s),veh/h/ln	1579	0	0	1852	0	0	1855	0	0	1155	0	0
Q Serve(g_s), s	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0
Cycle Q Clear(g_c), s	18.0	0.0	0.0	9.2	0.0	0.0	16.1	0.0	0.0	18.0	0.0	0.0
Prop In Lane	0.23		0.02	0.01		0.19	0.05		0.00	0.32		0.22
Lane Grp Cap(c), veh/h	727	0	0	818	0	0	822	0	0	565	0	0
V/C Ratio(X)	1.14	0.00	0.00	0.57	0.00	0.00	0.84	0.00	0.00	1.01	0.00	0.00
Avail Cap(c_a), veh/h	727	0	0	818	0	0	822	0	0	565	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.6	0.0	0.0	11.0	0.0	0.0	12.9	0.0	0.0	14.9	0.0	0.0
Incr Delay (d2), s/veh	78.6	0.0	0.0	0.9	0.0	0.0	7.9	0.0	0.0	39.5	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(50%),veh/ln	21.2	0.0	0.0	2.8	0.0	0.0	6.1	0.0	0.0	10.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	93.3	0.0	0.0	11.9	0.0	0.0	20.8	0.0	0.0	54.4	0.0	0.0
LnGrp LOS	F			B			C			F		
Approach Vol, veh/h		828			466			692			569	
Approach Delay, s/veh		93.3			11.9			20.8			54.4	
Approach LOS		F			B			C			D	

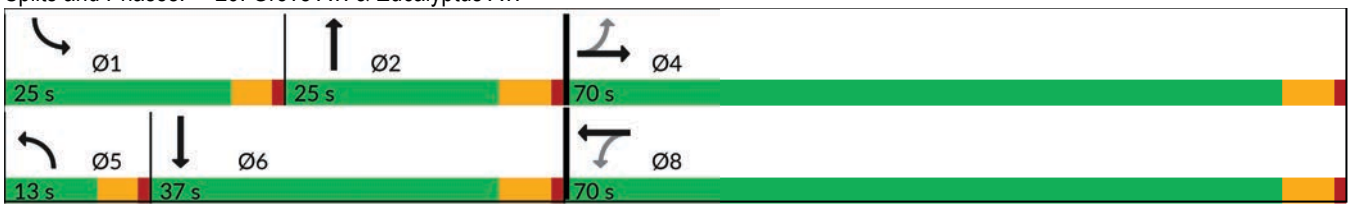
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.6		22.6		22.6		22.6				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		18.1		20.0		20.0		11.2				
Green Ext Time (p_c), s		0.0		0.0		0.0		1.5				

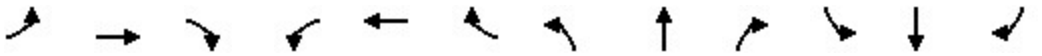
Intersection Summary	
HCM 7th Control Delay, s/veh	50.1
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	164	581	120	520	67	270	393	171
Future Volume (vph)	164	581	120	520	67	270	393	171
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	70.0	70.0	70.0	70.0	13.0	25.0	25.0	37.0
Total Split (%)	58.3%	58.3%	58.3%	58.3%	10.8%	20.8%	20.8%	30.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	37.7	37.7	37.7	37.7	8.0	20.2	16.1	31.4
Actuated g/C Ratio	0.41	0.41	0.41	0.41	0.09	0.22	0.18	0.34
v/c Ratio	0.98	0.48	0.57	0.55	0.47	0.95	0.71	0.22
Control Delay (s/veh)	88.9	18.8	30.2	17.6	57.4	72.6	45.1	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	88.9	18.8	30.2	17.6	57.4	72.6	45.1	21.0
LOS	F	B	C	B	E	E	D	C
Approach Delay (s/veh)		32.6		19.3		70.3		35.7
Approach LOS		C		B		E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.1	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay (s/veh): 34.9	Intersection LOS: C
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 29: Grove Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	581	91	120	520	262	67	270	105	393	171	83
Future Volume (veh/h)	164	581	91	120	520	262	67	270	105	393	171	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	173	612	96	126	547	276	71	284	111	414	180	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	284	1522	238	332	1131	570	90	256	100	499	705	327
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.05	0.20	0.20	0.15	0.29	0.29
Sat Flow, veh/h	640	3127	490	713	2324	1170	1714	1300	508	3326	2396	1110
Grp Volume(v), veh/h	173	353	355	126	425	398	71	0	395	414	134	133
Grp Sat Flow(s),veh/h/ln	640	1805	1812	713	1805	1689	1714	0	1809	1663	1805	1700
Q Serve(g_s), s	24.2	12.1	12.2	13.4	15.4	15.4	4.0	0.0	19.2	11.8	5.5	5.8
Cycle Q Clear(g_c), s	39.7	12.1	12.2	25.6	15.4	15.4	4.0	0.0	19.2	11.8	5.5	5.8
Prop In Lane	1.00		0.27	1.00		0.69	1.00		0.28	1.00		0.65
Lane Grp Cap(c), veh/h	284	879	882	332	879	822	90	0	356	499	531	500
V/C Ratio(X)	0.61	0.40	0.40	0.38	0.48	0.48	0.79	0.00	1.11	0.83	0.25	0.27
Avail Cap(c_a), veh/h	394	1189	1194	454	1189	1113	148	0	356	696	578	544
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	15.9	16.0	24.1	16.8	16.8	45.6	0.0	39.1	40.2	26.2	26.3
Incr Delay (d2), s/veh	2.1	0.3	0.3	0.7	0.4	0.4	13.9	0.0	80.2	6.0	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.6	4.6	2.2	6.0	5.6	2.0	0.0	16.0	5.0	2.3	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.2	16.2	16.3	24.8	17.2	17.2	59.5	0.0	119.3	46.2	26.4	26.6
LnGrp LOS	C	B	B	C	B	B	E		F	D	C	C
Approach Vol, veh/h		881			949			466			681	
Approach Delay, s/veh		19.4			18.2			110.2			38.5	
Approach LOS		B			B			F			D	

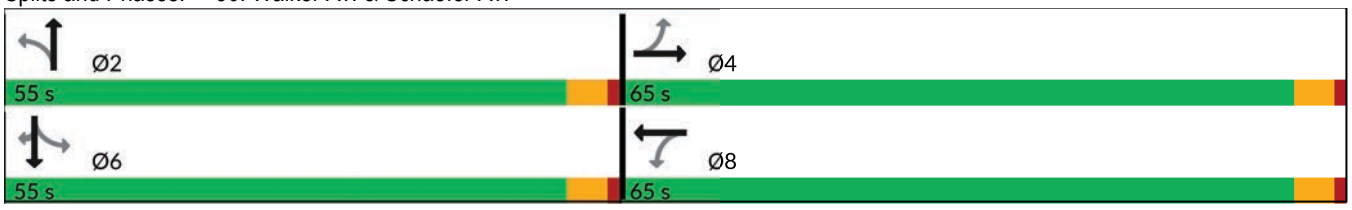
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.2	25.0		53.2	9.7	34.5		53.2				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	20.4	19.2		64.2	8.4	31.2		64.2				
Max Q Clear Time (g_c+I1), s	13.8	21.2		41.7	6.0	7.8		27.6				
Green Ext Time (p_c), s	0.8	0.0		5.8	0.0	1.3		7.1				

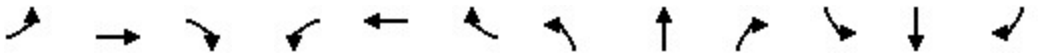
Intersection Summary												
HCM 7th Control Delay, s/veh			37.6									
HCM 7th LOS			D									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	246	104	50	385	230	498	74	408	266
Future Volume (vph)	246	104	50	385	230	498	74	408	266
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	65.0	65.0	65.0	65.0	55.0	55.0	55.0	55.0	55.0
Total Split (%)	54.2%	54.2%	54.2%	54.2%	45.8%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	Max	Max	Max	Max	Max
Act Effct Green (s)	58.2	58.2	58.2	58.2	50.5	50.5	50.5	50.5	50.5
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.43	0.43	0.43	0.43	0.43
v/c Ratio	1.00	0.54	0.17	0.62	0.86	0.70	0.44	0.53	0.33
Control Delay (s/veh)	87.4	13.2	18.2	24.3	61.3	33.4	34.3	28.4	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	87.4	13.2	18.2	24.3	61.3	33.4	34.3	28.4	3.6
LOS	F	B	B	C	E	C	C	C	A
Approach Delay (s/veh)		38.3		23.8		41.8		20.1	
Approach LOS		D		C		D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay (s/veh): 31.4	Intersection LOS: C
Intersection Capacity Utilization 92.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 30: Walker Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	104	376	50	385	151	230	498	35	74	408	266
Future Volume (veh/h)	246	104	376	50	385	151	230	498	35	74	408	266
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	259	109	238	53	405	80	242	524	26	78	429	143
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	342	259	565	434	747	148	291	779	39	237	824	699
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	925	531	1160	1050	1534	303	854	1795	89	871	1900	1610
Grp Volume(v), veh/h	259	0	347	53	0	485	242	0	550	78	429	143
Grp Sat Flow(s),veh/h/ln	925	0	1691	1050	0	1838	854	0	1884	871	1900	1610
Q Serve(g_s), s	31.5	0.0	15.4	4.0	0.0	21.4	31.2	0.0	27.1	9.1	19.2	6.4
Cycle Q Clear(g_c), s	52.9	0.0	15.4	19.4	0.0	21.4	50.4	0.0	27.1	36.2	19.2	6.4
Prop In Lane	1.00		0.69	1.00		0.16	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	342	0	823	434	0	895	291	0	818	237	824	699
V/C Ratio(X)	0.76	0.00	0.42	0.12	0.00	0.54	0.83	0.00	0.67	0.33	0.52	0.20
Avail Cap(c_a), veh/h	373	0	880	469	0	956	291	0	818	237	824	699
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	19.2	25.5	0.0	20.8	43.3	0.0	26.3	40.8	24.0	20.4
Incr Delay (d2), s/veh	8.0	0.0	0.3	0.1	0.0	0.5	23.2	0.0	4.4	3.7	2.3	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	5.7	1.0	0.0	8.7	8.5	0.0	12.1	2.1	8.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.2	0.0	19.6	25.6	0.0	21.3	66.4	0.0	30.7	44.5	26.4	21.1
LnGrp LOS	D		B	C		C	E		C	D	C	C
Approach Vol, veh/h		606			538			792			650	
Approach Delay, s/veh		31.4			21.7			41.6			27.4	
Approach LOS		C			C			D			C	

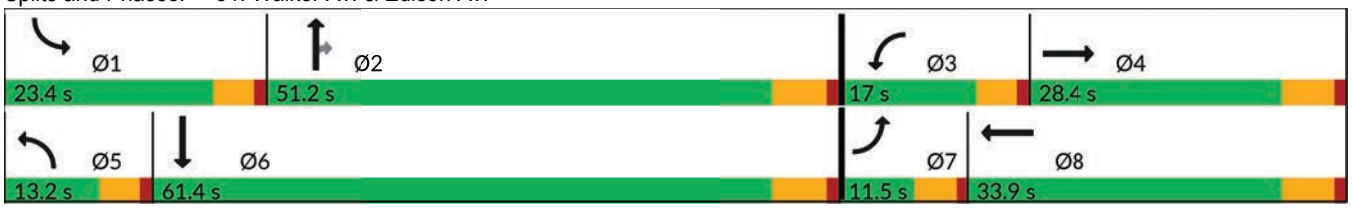
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		55.0		61.1		55.0		61.1				
Change Period (Y+Rc), s		4.6		4.6		4.6		4.6				
Max Green Setting (Gmax), s		50.4		60.4		50.4		60.4				
Max Q Clear Time (g_c+I1), s		52.4		54.9		38.2		23.4				
Green Ext Time (p_c), s		0.0		1.7		2.5		3.3				

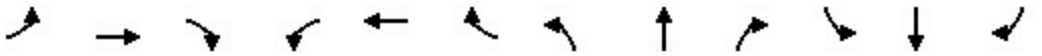
Intersection Summary												
HCM 7th Control Delay, s/veh			31.5									
HCM 7th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	38	620	170	393	45	654	197	267	356
Future Volume (vph)	38	620	170	393	45	654	197	267	356
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	23.8	9.6	23.8
Total Split (s)	11.5	28.4	17.0	33.9	13.2	51.2	51.2	23.4	61.4
Total Split (%)	9.6%	23.7%	14.2%	28.3%	11.0%	42.7%	42.7%	19.5%	51.2%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.6	22.6	12.4	30.5	7.7	44.6	44.6	18.8	57.8
Actuated g/C Ratio	0.06	0.19	0.10	0.26	0.06	0.37	0.37	0.16	0.48
v/c Ratio	0.42	1.01	1.01	0.63	0.43	0.97	0.29	1.04	0.43
Control Delay (s/veh)	68.5	86.1	123.8	40.6	65.7	64.1	5.4	116.2	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.5	86.1	123.8	40.6	65.7	64.1	5.4	116.2	22.5
LOS	E	F	F	D	E	E	A	F	C
Approach Delay (s/veh)		85.1		60.2		51.3			61.7
Approach LOS		F		E		D			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay (s/veh): 63.7	Intersection LOS: E
Intersection Capacity Utilization 95.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	620	37	170	393	158	45	654	197	267	356	14
Future Volume (veh/h)	38	620	37	170	393	158	45	654	197	267	356	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	40	653	39	179	414	166	47	688	207	281	375	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	53	657	39	179	664	263	60	709	601	271	900	36
Arrive On Green	0.05	0.28	0.28	0.16	0.39	0.39	0.05	0.56	0.56	0.24	0.74	0.74
Sat Flow, veh/h	1714	3461	207	1714	2524	1001	1714	1900	1610	1714	1813	73
Grp Volume(v), veh/h	40	340	352	179	295	285	47	688	207	281	0	390
Grp Sat Flow(s),veh/h/ln	1714	1805	1863	1714	1805	1720	1714	1900	1610	1714	0	1885
Q Serve(g_s), s	2.7	22.4	22.4	12.4	15.6	15.9	3.2	41.5	8.3	18.8	0.0	9.1
Cycle Q Clear(g_c), s	2.7	22.4	22.4	12.4	15.6	15.9	3.2	41.5	8.3	18.8	0.0	9.1
Prop In Lane	1.00		0.11	1.00		0.58	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	53	343	354	179	475	453	60	709	601	271	0	936
V/C Ratio(X)	0.76	0.99	0.99	1.00	0.62	0.63	0.79	0.97	0.34	1.04	0.00	0.42
Avail Cap(c_a), veh/h	99	343	354	179	475	453	124	725	614	271	0	936
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	42.5	42.5	50.2	31.3	31.4	56.0	25.5	18.2	45.4	0.0	8.8
Incr Delay (d2), s/veh	19.5	46.6	46.3	68.0	2.5	2.8	20.2	25.9	0.3	64.9	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	13.3	13.7	8.3	6.2	6.1	1.7	18.0	2.8	11.7	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.8	89.1	88.8	118.2	33.7	34.2	76.2	51.4	18.6	110.3	0.0	9.1
LnGrp LOS	E	F	F	F	C	C	E	D	B	F		A
Approach Vol, veh/h		732			759			942			671	
Approach Delay, s/veh		88.2			53.8			45.4			51.5	
Approach LOS		F			D			D			D	

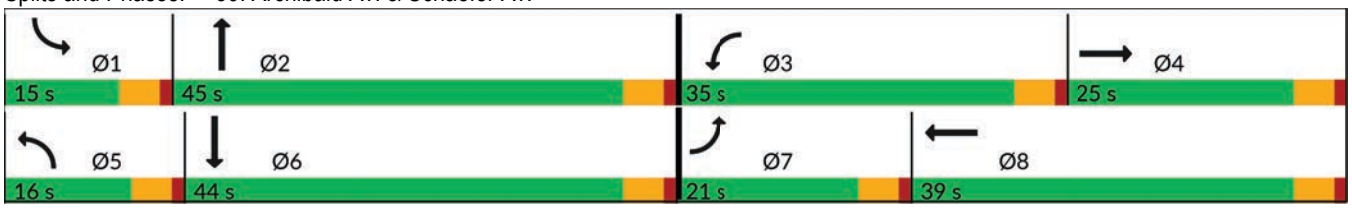
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.4	50.2	17.0	28.4	8.7	64.9	8.3	37.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	18.8	45.4	12.4	22.6	8.6	55.6	6.9	28.1
Max Q Clear Time (g_c+I1), s	20.8	43.5	14.4	24.4	5.2	11.1	4.7	17.9
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.0	2.1	0.0	2.4

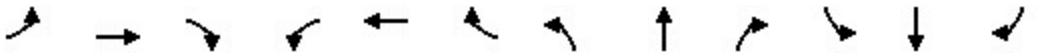
Intersection Summary	
HCM 7th Control Delay, s/veh	58.9
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	325	113	66	89	167	1538	147	1370
Future Volume (vph)	325	113	66	89	167	1538	147	1370
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	21.0	25.0	35.0	39.0	16.0	45.0	15.0	44.0
Total Split (%)	17.5%	20.8%	29.2%	32.5%	13.3%	37.5%	12.5%	36.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.5	21.3	11.8	14.4	11.5	40.7	10.5	39.7
Actuated g/C Ratio	0.16	0.21	0.12	0.14	0.11	0.40	0.10	0.39
v/c Ratio	1.22	0.56	0.34	0.51	0.90	0.80	0.87	1.30
Control Delay (s/veh)	164.7	38.7	44.4	39.4	89.9	31.0	87.7	168.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	164.7	38.7	44.4	39.4	89.9	31.0	87.7	168.1
LOS	F	D	D	D	F	C	F	F
Approach Delay (s/veh)		115.0		41.0		36.6		161.8
Approach LOS		F		D		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay (s/veh): 100.1	Intersection LOS: F
Intersection Capacity Utilization 100.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	113	99	66	89	45	167	1538	49	147	1370	353
Future Volume (veh/h)	325	113	99	66	89	45	167	1538	49	147	1370	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	342	119	104	69	94	45	176	1619	49	155	1442	372
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	296	206	180	89	121	58	205	2209	67	184	1186	296
Arrive On Green	0.26	0.33	0.33	0.08	0.15	0.15	0.18	0.64	0.64	0.16	0.62	0.62
Sat Flow, veh/h	1714	935	817	1714	1214	581	1714	5173	157	1714	2862	715
Grp Volume(v), veh/h	342	0	223	69	0	139	176	1082	586	155	892	922
Grp Sat Flow(s),veh/h/ln	1714	0	1753	1714	0	1795	1714	1729	1872	1714	1805	1771
Q Serve(g_s), s	16.4	0.0	10.0	3.8	0.0	7.1	9.5	20.1	20.2	8.3	39.4	39.4
Cycle Q Clear(g_c), s	16.4	0.0	10.0	3.8	0.0	7.1	9.5	20.1	20.2	8.3	39.4	39.4
Prop In Lane	1.00		0.47	1.00		0.32	1.00		0.08	1.00		0.40
Lane Grp Cap(c), veh/h	296	0	386	89	0	179	205	1477	799	184	748	734
V/C Ratio(X)	1.16	0.00	0.58	0.77	0.00	0.78	0.86	0.73	0.73	0.84	1.19	1.26
Avail Cap(c_a), veh/h	296	0	386	548	0	650	206	1477	799	188	748	734
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	28.1	43.3	0.0	39.4	38.2	13.4	13.4	39.1	18.0	18.0
Incr Delay (d2), s/veh	101.5	0.0	2.1	13.3	0.0	7.0	28.6	1.9	3.5	26.4	99.4	126.0
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(50%),veh/ln	14.1	0.0	3.9	1.8	0.0	3.2	5.1	5.1	5.9	4.5	28.5	33.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	136.7	0.0	30.3	56.5	0.0	46.4	66.8	15.3	16.9	65.5	117.4	144.0
LnGrp LOS	F		C	E		D	E	B	B	E	F	F
Approach Vol, veh/h		565			208			1844			1969	
Approach Delay, s/veh		94.7			49.8			20.7			125.7	
Approach LOS		F			D			C			F	

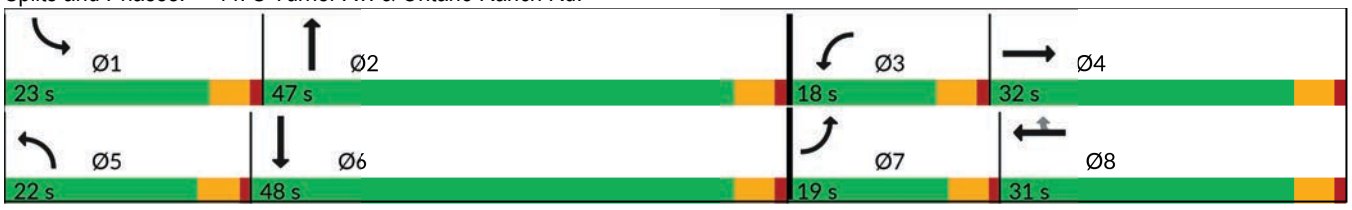
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	45.2	9.5	25.5	16.0	44.0	21.0	14.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	10.4	40.4	30.4	20.4	11.4	39.4	16.4	34.4
Max Q Clear Time (g_c+I1), s	10.3	22.2	5.8	12.0	11.5	41.4	18.4	9.1
Green Ext Time (p_c), s	0.0	9.8	0.1	0.7	0.0	0.0	0.0	0.7

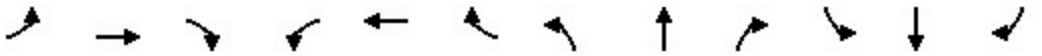
Intersection Summary	
HCM 7th Control Delay, s/veh	76.2
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	215	1418	185	1340	172	257	334	231	396
Future Volume (vph)	215	1418	185	1340	172	257	334	231	396
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.6	9.6	22.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	19.0	32.0	18.0	31.0	31.0	22.0	47.0	23.0	48.0
Total Split (%)	15.8%	26.7%	15.0%	25.8%	25.8%	18.3%	39.2%	19.2%	40.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.4	27.4	13.4	26.4	26.4	17.4	42.7	18.1	43.4
Actuated g/C Ratio	0.12	0.23	0.11	0.22	0.22	0.15	0.36	0.15	0.36
v/c Ratio	1.10	1.01	1.03	1.13	0.36	1.10	0.88	0.94	1.08
Control Delay (s/veh)	141.7	68.8	124.8	110.1	7.7	133.4	50.8	93.5	94.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	141.7	68.8	124.8	110.1	7.7	133.4	50.8	93.5	94.6
LOS	F	E	F	F	A	F	D	F	F
Approach Delay (s/veh)		77.2		101.3			77.4		94.3
Approach LOS		E		F			E		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay (s/veh): 87.9	Intersection LOS: F
Intersection Capacity Utilization 106.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	1418	231	185	1340	172	257	334	209	231	396	283
Future Volume (veh/h)	215	1418	231	185	1340	172	257	334	209	231	396	283
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	226	1493	138	195	1411	97	271	352	115	243	417	193
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	208	1586	146	194	1271	359	252	473	155	266	432	200
Arrive On Green	0.18	0.35	0.35	0.17	0.33	0.33	0.22	0.52	0.52	0.23	0.53	0.53
Sat Flow, veh/h	1714	6853	633	1714	5700	1610	1714	1371	448	1714	1223	566
Grp Volume(v), veh/h	226	1241	390	195	1411	97	271	0	467	243	0	610
Grp Sat Flow(s),veh/h/ln	1714	1900	1786	1714	1900	1610	1714	0	1818	1714	0	1788
Q Serve(g_s), s	14.4	25.0	25.1	13.4	26.4	5.2	17.4	0.0	23.9	16.4	0.0	38.9
Cycle Q Clear(g_c), s	14.4	25.0	25.1	13.4	26.4	5.2	17.4	0.0	23.9	16.4	0.0	38.9
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.25	1.00		0.32
Lane Grp Cap(c), veh/h	208	1319	413	194	1271	359	252	0	628	266	0	632
V/C Ratio(X)	1.08	0.94	0.94	1.01	1.11	0.27	1.08	0.00	0.74	0.91	0.00	0.97
Avail Cap(c_a), veh/h	208	1319	413	194	1271	359	252	0	651	266	0	655
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.4	37.9	37.9	49.2	39.4	32.4	46.2	0.0	24.5	44.7	0.0	27.2
Incr Delay (d2), s/veh	86.6	13.2	30.1	66.0	61.3	0.4	78.4	0.0	4.5	32.8	0.0	26.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	11.5	12.8	8.8	17.7	2.0	12.0	0.0	8.8	8.6	0.0	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.0	51.1	68.0	115.2	100.7	32.8	124.5	0.0	28.9	77.5	0.0	53.5
LnGrp LOS	F	D	E	F	F	C	F		C	E		D
Approach Vol, veh/h		1857			1703			738			853	
Approach Delay, s/veh		64.9			98.5			64.0			60.4	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	45.5	18.0	32.0	22.0	46.4	19.0	31.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	18.4	42.4	13.4	27.4	17.4	43.4	14.4	26.4
Max Q Clear Time (g_c+I1), s	18.4	25.9	15.4	27.1	19.4	40.9	16.4	28.4
Green Ext Time (p_c), s	0.0	2.4	0.0	0.3	0.0	0.9	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	75.1
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

APPENDIX 7.9:

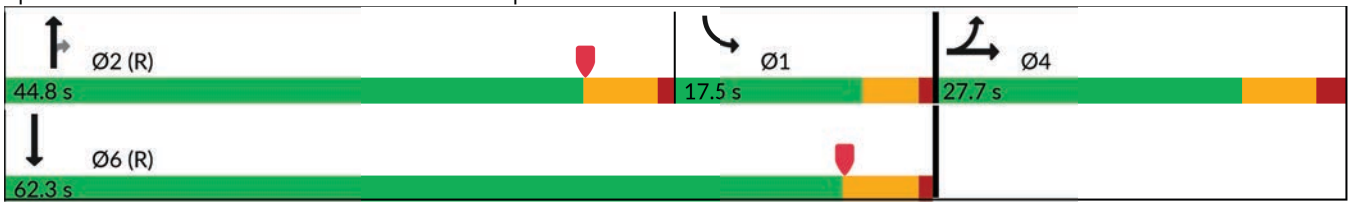
HORIZON YEAR (2050) WITH PROJECT INTERSECTION ANALYSIS WITH IMPROVEMENTS

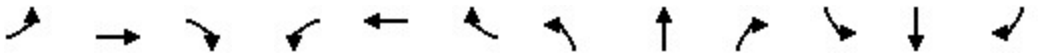
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Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	449	7	1498	1014	436	1426
Future Volume (vph)	449	7	1498	1014	436	1426
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	27.7	27.7	26.0	26.0	14.7	24.0
Total Split (s)	27.7	27.7	44.8	44.8	17.5	62.3
Total Split (%)	30.8%	30.8%	49.8%	49.8%	19.4%	69.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.7	5.0
All-Red Time (s)	2.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	20.7	20.7	38.8	38.8	12.8	56.3
Actuated g/C Ratio	0.23	0.23	0.43	0.43	0.14	0.63
v/c Ratio	1.14	1.68	1.01	0.99	1.03	0.66
Control Delay (s/veh)	125.2	342.9	52.9	35.0	56.2	3.4
Queue Delay	0.0	0.0	25.8	0.0	0.0	1.5
Total Delay (s/veh)	125.2	343.0	78.7	35.0	56.2	4.9
LOS	F	F	E	C	E	A
Approach Delay (s/veh)		257.1	61.0			16.9
Approach LOS		F	E			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 36.6 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.68	
Intersection Signal Delay (s/veh): 83.1	Intersection LOS: F
Intersection Capacity Utilization 121.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	7	570	0	0	0	0	1498	1014	436	1426	0
Future Volume (veh/h)	449	7	570	0	0	0	0	1498	1014	436	1426	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1800	1900	1900				0	1900	1900	1700	1900	0
Adj Flow Rate, veh/h	408	97	337				0	1577	841	459	1501	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	394	86	298				0	1556	694	793	2709	0
Arrive On Green	0.23	0.23	0.23				0.00	0.43	0.43	0.51	1.00	0.00
Sat Flow, veh/h	1714	373	1294				0	3705	1610	3141	3705	0
Grp Volume(v), veh/h	408	0	434				0	1577	841	459	1501	0
Grp Sat Flow(s),veh/h/ln	1714	0	1667				0	1805	1610	1570	1805	0
Q Serve(g_s), s	20.7	0.0	20.7				0.0	38.8	38.8	9.2	0.0	0.0
Cycle Q Clear(g_c), s	20.7	0.0	20.7				0.0	38.8	38.8	9.2	0.0	0.0
Prop In Lane	1.00		0.78				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	394	0	383				0	1556	694	793	2709	0
V/C Ratio(X)	1.03	0.00	1.13				0.00	1.01	1.21	0.58	0.55	0.00
Avail Cap(c_a), veh/h	394	0	383				0	1556	694	793	2709	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	0.09	0.09	0.09	0.09	0.00
Uniform Delay (d), s/veh	34.7	0.0	34.7				0.0	25.6	25.6	18.9	0.0	0.0
Incr Delay (d2), s/veh	54.6	0.0	86.9				0.0	10.5	96.5	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(50%),veh/ln	14.3	0.0	17.4				0.0	16.8	31.6	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	89.2	0.0	121.5				0.0	36.1	122.1	19.0	0.1	0.0
LnGrp LOS	F		F					F	F	B	A	
Approach Vol, veh/h		842						2418			1960	
Approach Delay, s/veh		105.9						66.0			4.5	
Approach LOS		F						E			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	28.7	44.8		27.7		73.5
Change Period (Y+Rc), s	6.0	* 6		7.0		6.0
Max Green Setting (Gmax), s	12.8	* 39		20.7		56.3
Max Q Clear Time (g_c+I1), s	11.2	40.8		22.7		2.0
Green Ext Time (p_c), s	0.3	0.0		0.0		24.0

Intersection Summary	
HCM 7th Control Delay, s/veh	49.4
HCM 7th LOS	D

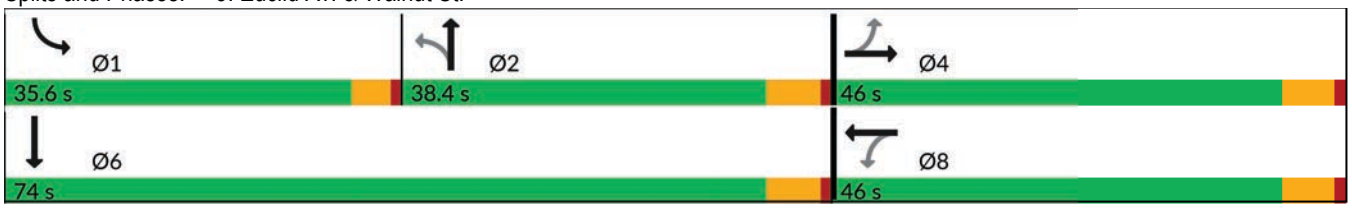
Notes

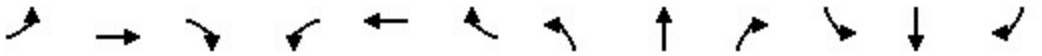
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	321	303	62	838	167	1560	209	1624
Future Volume (vph)	321	303	62	838	167	1560	209	1624
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	46.0	46.0	46.0	46.0	38.4	38.4	35.6	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	32.0%	32.0%	29.7%	61.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	40.4	40.4	40.4	40.4	35.9	35.9	11.5	51.9
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.35	0.35	0.11	0.50
v/c Ratio	4.90	0.27	0.18	0.89	1.34	0.86	0.62	0.69
Control Delay (s/veh)	Error	22.4	25.1	38.1	228.7	37.0	52.6	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	Error	22.4	25.1	38.1	228.7	37.0	52.6	20.9
LOS	F	C	C	D	F	D	D	C
Approach Delay (s/veh)		849.2		37.5		55.2		24.1
Approach LOS		F		D		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.90	
Intersection Signal Delay (s/veh): 135.2	Intersection LOS: F
Intersection Capacity Utilization 118.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	303	70	62	838	389	167	1560	37	209	1624	224
Future Volume (veh/h)	321	303	70	62	838	389	167	1560	37	209	1624	224
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	338	319	74	65	882	251	176	1642	19	220	1709	131
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	164	1228	280	419	1170	332	275	1876	22	289	2454	188
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.50	0.50	0.50	0.13	0.70	0.70
Sat Flow, veh/h	478	2985	682	954	2844	808	458	5623	65	3238	5222	399
Grp Volume(v), veh/h	338	201	192	65	589	544	176	1110	551	220	1243	597
Grp Sat Flow(s),veh/h/ln	478	1900	1767	954	1900	1752	229	1900	1888	1619	1900	1822
Q Serve(g_s), s	18.4	4.7	4.9	3.4	21.7	21.8	27.3	25.4	25.4	6.4	18.5	18.6
Cycle Q Clear(g_c), s	40.2	4.7	4.9	8.2	21.7	21.8	32.6	25.4	25.4	6.4	18.5	18.6
Prop In Lane	1.00		0.39	1.00		0.46	1.00		0.03	1.00		0.22
Lane Grp Cap(c), veh/h	164	782	727	419	782	721	275	1268	630	289	1786	856
V/C Ratio(X)	2.06	0.26	0.26	0.16	0.75	0.76	0.64	0.88	0.88	0.76	0.70	0.70
Avail Cap(c_a), veh/h	164	782	727	419	782	721	275	1268	630	1027	2652	1271
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	11.9	11.9	13.8	15.2	15.2	30.8	22.6	22.6	41.3	10.4	10.4
Incr Delay (d2), s/veh	498.8	0.2	0.2	0.2	4.2	4.6	4.9	7.1	13.1	1.6	0.5	1.0
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(50%),veh/ln	26.3	1.8	1.7	0.6	6.9	6.4	2.1	9.4	10.4	2.4	4.7	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	532.5	12.1	12.1	14.0	19.3	19.7	35.7	29.7	35.7	42.9	10.9	11.4
LnGrp LOS	F	B	B	B	B	B	D	C	D	D	B	B
Approach Vol, veh/h		731			1198			1837			2060	
Approach Delay, s/veh		252.8			19.2			32.1			14.4	
Approach LOS		F			B			C			B	

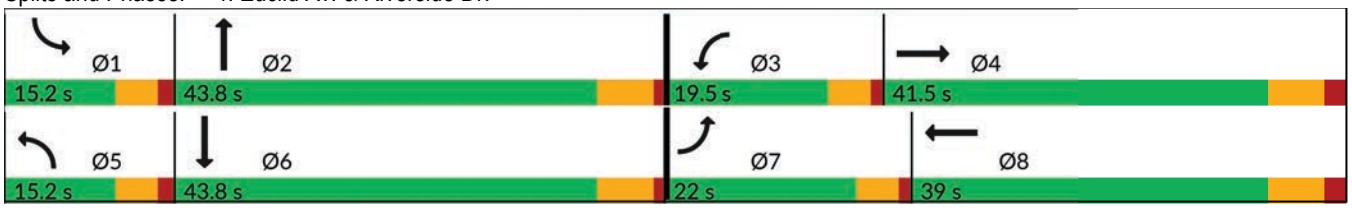
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.3	38.4		46.0		51.7		46.0				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	32.6		40.2		68.2		40.2				
Max Q Clear Time (g_c+I1), s	8.4	34.6		42.2		20.6		23.8				
Green Ext Time (p_c), s	0.4	0.0		0.0		18.8		6.7				

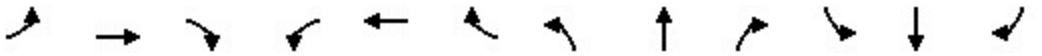
Intersection Summary												
HCM 7th Control Delay, s/veh			50.9									
HCM 7th LOS			D									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	273	351	144	896	86	1234	91	1514
Future Volume (vph)	273	351	144	896	86	1234	91	1514
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	15.2	36.0
Total Split (s)	22.0	41.5	19.5	39.0	15.2	43.8	15.2	43.8
Total Split (%)	18.3%	34.6%	16.3%	32.5%	12.7%	36.5%	12.7%	36.5%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	3.7	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	5.2	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.3	35.4	13.9	32.0	10.0	37.8	10.0	37.8
Actuated g/C Ratio	0.14	0.30	0.12	0.27	0.08	0.32	0.08	0.32
v/c Ratio	1.17	0.74	0.77	1.18	0.64	0.90	0.68	1.13
Control Delay (s/veh)	155.1	47.3	76.6	130.7	74.1	47.7	77.0	105.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	155.1	47.3	76.6	130.7	74.1	47.7	77.0	105.7
LOS	F	D	E	F	E	D	E	F
Approach Delay (s/veh)		91.7		124.2		49.2		104.3
Approach LOS		F		F		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay (s/veh): 91.7	Intersection LOS: F
Intersection Capacity Utilization 107.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	273	351	40	144	896	169	86	1234	150	91	1514	224
Future Volume (veh/h)	273	351	40	144	896	169	86	1234	150	91	1514	224
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	287	369	19	152	943	136	91	1299	117	96	1594	170
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	248	554	29	176	846	122	136	1529	138	138	1503	160
Arrive On Green	0.22	0.46	0.46	0.15	0.40	0.40	0.12	0.47	0.47	0.12	0.47	0.47
Sat Flow, veh/h	1714	1790	92	1714	3160	456	1714	4843	436	1714	4753	506
Grp Volume(v), veh/h	287	0	388	152	539	540	91	928	488	96	1159	605
Grp Sat Flow(s),veh/h/ln	1714	0	1882	1714	1805	1810	1714	1729	1821	1714	1729	1801
Q Serve(g_s), s	17.3	0.0	19.1	10.3	32.0	32.0	6.1	28.2	28.2	6.4	37.8	37.8
Cycle Q Clear(g_c), s	17.3	0.0	19.1	10.3	32.0	32.0	6.1	28.2	28.2	6.4	37.8	37.8
Prop In Lane	1.00		0.05	1.00		0.25	1.00		0.24	1.00		0.28
Lane Grp Cap(c), veh/h	248	0	583	176	483	485	136	1092	575	138	1094	570
V/C Ratio(X)	1.16	0.00	0.67	0.86	1.11	1.11	0.67	0.85	0.85	0.70	1.06	1.06
Avail Cap(c_a), veh/h	248	0	583	212	483	485	143	1094	576	143	1094	570
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	0.0	27.2	49.7	35.8	35.8	51.1	29.0	29.0	51.2	31.4	31.4
Incr Delay (d2), s/veh	106.0	0.0	3.2	22.3	76.0	76.2	10.5	6.5	11.5	13.3	44.5	55.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	0.0	7.5	5.2	21.9	22.0	2.8	9.9	11.2	3.1	19.4	21.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	152.8	0.0	30.5	72.0	111.8	111.9	61.6	35.5	40.5	64.5	75.9	86.7
LnGrp LOS	F		C	E	F	F	E	D	D	E	F	F
Approach Vol, veh/h		675			1231			1507			1860	
Approach Delay, s/veh		82.5			106.9			38.7			78.8	
Approach LOS		F			F			D			E	

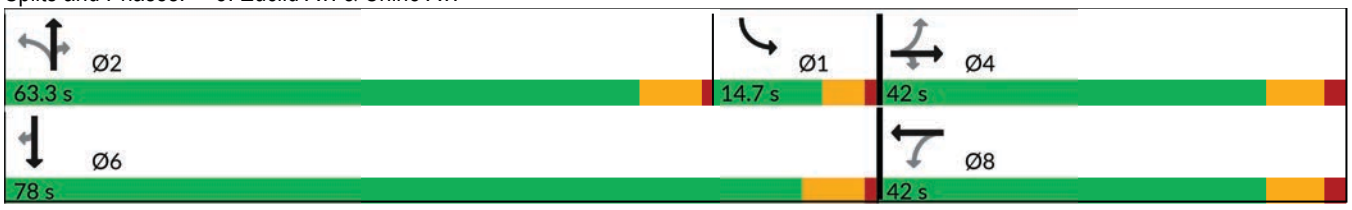
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	43.7	17.0	44.0	14.7	43.8	22.0	39.0
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	10.0	37.8	14.8	34.5	10.0	37.8	17.3	32.0
Max Q Clear Time (g_c+I1), s	8.4	30.2	12.3	21.1	8.1	39.8	19.3	34.0
Green Ext Time (p_c), s	0.0	4.6	0.0	2.4	0.0	0.0	0.0	0.0

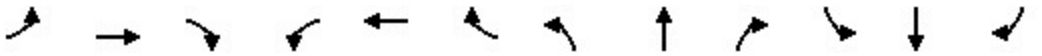
Intersection Summary	
HCM 7th Control Delay, s/veh	74.4
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	127	280	49	67	384	100	1256	103	73	1526	168
Future Volume (vph)	127	280	49	67	384	100	1256	103	73	1526	168
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	42.0	42.0	42.0	42.0	42.0	63.3	63.3	63.3	14.7	78.0	78.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	52.8%	52.8%	52.8%	12.3%	65.0%	65.0%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	34.9	34.9	34.9	34.9	34.9	57.0	57.0	57.0	10.0	68.5	68.5
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.49	0.49	0.49	0.09	0.58	0.58
v/c Ratio	1.33	0.52	0.10	0.31	0.83	1.72	0.75	0.13	0.53	0.76	0.18
Control Delay (s/veh)	236.9	39.0	1.8	37.9	52.7	414.9	28.5	4.7	66.3	21.0	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	236.9	39.0	1.8	37.9	52.7	414.9	28.5	4.7	66.3	21.0	3.6
LOS	F	D	A	D	D	F	C	A	E	C	A
Approach Delay (s/veh)		90.1			50.7		53.2			21.2	
Approach LOS		F			D		D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.72	
Intersection Signal Delay (s/veh): 43.4	Intersection LOS: D
Intersection Capacity Utilization 105.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	280	49	67	384	56	100	1256	103	73	1526	168
Future Volume (veh/h)	127	280	49	67	384	56	100	1256	103	73	1526	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	134	295	31	71	404	52	105	1322	92	77	1606	146
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	120	546	463	234	473	61	148	1694	756	131	2164	965
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.70	0.70	0.70	0.11	0.90	0.90
Sat Flow, veh/h	900	1900	1610	1014	1647	212	264	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	134	295	31	71	0	456	105	1322	92	77	1606	146
Grp Sat Flow(s),veh/h/ln	900	1900	1610	1014	0	1859	264	1805	1610	1714	1805	1610
Q Serve(g_s), s	8.1	13.9	1.4	7.0	0.0	26.7	40.5	29.1	2.2	5.2	16.3	1.3
Cycle Q Clear(g_c), s	34.8	13.9	1.4	21.0	0.0	26.7	56.8	29.1	2.2	5.2	16.3	1.3
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	546	463	234	0	534	148	1694	756	131	2164	965
V/C Ratio(X)	1.12	0.54	0.07	0.30	0.00	0.85	0.71	0.78	0.12	0.59	0.74	0.15
Avail Cap(c_a), veh/h	120	546	463	234	0	534	148	1694	756	142	2164	965
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	28.5	24.9	36.3	0.0	32.1	29.3	13.8	9.8	51.8	3.3	2.5
Incr Delay (d2), s/veh	118.7	1.1	0.1	0.7	0.0	12.7	14.7	2.4	0.1	3.1	1.4	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(50%),veh/ln	7.4	5.7	0.5	1.6	0.0	11.8	3.4	7.0	0.7	2.2	2.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	168.5	29.6	25.0	37.0	0.0	44.8	44.1	16.2	9.9	54.9	4.7	2.6
LnGrp LOS	F	C	C	D		D	D	B	A	D	A	A
Approach Vol, veh/h		460			527			1519			1829	
Approach Delay, s/veh		69.7			43.7			17.8			6.6	
Approach LOS		E			D			B			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.7	63.3		42.0		79.0		42.0				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	10.0	* 57		34.8		71.5		34.8				
Max Q Clear Time (g_c+I1), s	7.2	58.8		36.8		18.3		28.7				
Green Ext Time (p_c), s	0.0	0.0		0.0		17.4		1.5				

Intersection Summary		
HCM 7th Control Delay, s/veh	21.7	
HCM 7th LOS	C	

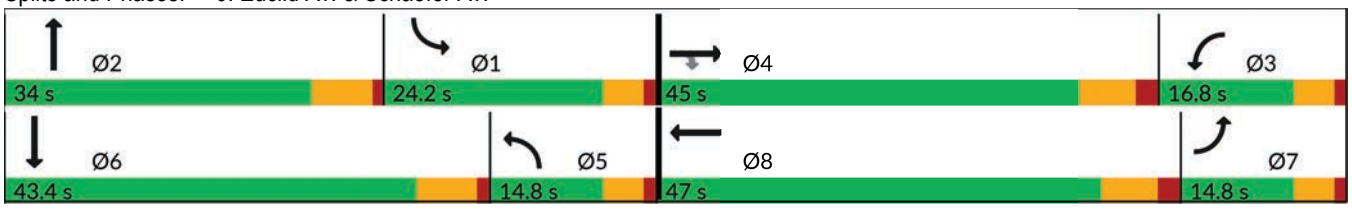
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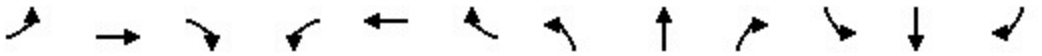
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	116	340	90	116	254	117	1043	276	1433
Future Volume (vph)	116	340	90	116	254	117	1043	276	1433
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	14.7	37.5
Total Split (s)	14.8	45.0	45.0	16.8	47.0	14.8	34.0	24.2	43.4
Total Split (%)	12.3%	37.5%	37.5%	14.0%	39.2%	12.3%	28.3%	20.2%	36.2%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	3.7	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	4.7	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	10.1	28.0	28.0	22.0	40.0	10.1	27.5	19.5	36.9
Actuated g/C Ratio	0.08	0.23	0.23	0.18	0.33	0.08	0.23	0.16	0.31
v/c Ratio	0.85	0.81	0.19	0.39	0.99	0.86	1.06	1.05	0.93
Control Delay (s/veh)	99.0	57.1	0.8	50.1	69.6	99.7	84.2	116.3	51.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	99.0	57.1	0.8	50.1	69.6	99.7	84.2	116.3	51.0
LOS	F	E	A	D	E	F	F	F	D
Approach Delay (s/veh)		56.7			66.3		85.5		60.9
Approach LOS		E			E		F		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay (s/veh): 69.0	Intersection LOS: E
Intersection Capacity Utilization 102.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	340	90	116	254	326	117	1043	258	276	1433	109
Future Volume (veh/h)	116	340	90	116	254	326	117	1043	258	276	1433	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	122	358	58	122	267	324	123	1098	254	291	1508	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	144	397	336	358	260	316	158	1025	237	279	1630	66
Arrive On Green	0.13	0.31	0.31	0.31	0.50	0.50	0.14	0.34	0.34	0.24	0.45	0.45
Sat Flow, veh/h	1714	1900	1610	1714	781	948	1714	4474	1034	1714	5440	220
Grp Volume(v), veh/h	122	358	58	122	0	591	123	933	419	291	1053	516
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	0	1729	1714	1900	1708	1714	1900	1860
Q Serve(g_s), s	8.4	21.6	3.1	6.6	0.0	40.0	8.3	27.5	27.5	19.5	31.3	31.3
Cycle Q Clear(g_c), s	8.4	21.6	3.1	6.6	0.0	40.0	8.3	27.5	27.5	19.5	31.3	31.3
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.61	1.00		0.12
Lane Grp Cap(c), veh/h	144	397	336	358	0	576	158	871	392	279	1139	557
V/C Ratio(X)	0.85	0.90	0.17	0.34	0.00	1.03	0.78	1.07	1.07	1.04	0.92	0.93
Avail Cap(c_a), veh/h	144	602	510	358	0	576	158	871	392	279	1169	572
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	40.0	33.7	34.9	0.0	30.0	50.6	39.4	39.4	45.4	31.8	31.8
Incr Delay (d2), s/veh	33.1	10.7	0.2	0.2	0.0	44.1	20.1	51.3	65.8	66.1	12.1	20.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	9.9	1.2	2.6	0.0	20.1	4.2	16.7	16.6	12.2	13.0	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	84.8	50.8	33.8	35.1	0.0	74.1	70.6	90.7	105.2	111.4	43.9	52.6
LnGrp LOS	F	D	C	D		F	E	F	F	F	D	D
Approach Vol, veh/h		538			713			1475			1860	
Approach Delay, s/veh		56.7			67.4			93.1			56.9	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	34.0	29.7	32.1	15.7	42.5	14.8	47.0
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	19.5	27.5	12.1	38.0	10.1	36.9	10.1	40.0
Max Q Clear Time (g_c+I1), s	21.5	29.5	8.6	23.6	10.3	33.3	10.4	42.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	2.6	0.0	0.0

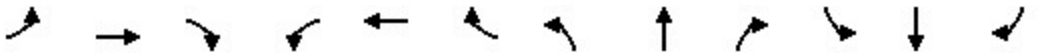
Intersection Summary	
HCM 7th Control Delay, s/veh	70.1
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	382	576	86	63	1288	508	83	926	295	867	410
Future Volume (vph)	382	576	86	63	1288	508	83	926	295	867	410
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	37.4	37.4
Total Split (s)	21.9	61.1	61.1	15.4	54.6	54.6	14.7	35.1	18.4	38.8	38.8
Total Split (%)	16.8%	47.0%	47.0%	11.8%	42.0%	42.0%	11.3%	27.0%	14.2%	29.8%	29.8%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	5.4	5.4
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.2	57.2	57.2	10.4	47.4	47.4	10.0	28.0	14.3	32.4	32.4
Actuated g/C Ratio	0.13	0.44	0.44	0.08	0.36	0.36	0.08	0.22	0.11	0.25	0.25
v/c Ratio	0.94	0.36	0.12	0.49	0.98	0.74	0.66	0.85	0.88	0.96	0.75
Control Delay (s/veh)	86.9	25.9	3.1	69.8	60.6	27.9	82.4	56.4	82.0	70.0	29.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	86.9	25.9	3.1	69.8	60.6	27.9	82.4	56.4	82.0	70.0	29.4
LOS	F	C	A	E	E	C	F	E	F	E	C
Approach Delay (s/veh)		46.3			51.9			58.4		61.7	
Approach LOS		D			D			E		E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay (s/veh): 54.9	Intersection LOS: D
Intersection Capacity Utilization 99.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	382	576	86	63	1288	508	83	926	63	295	867	410
Future Volume (veh/h)	382	576	86	63	1288	508	83	926	63	295	867	410
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1700	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	402	606	91	66	1356	535	87	975	34	311	913	221
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	430	1627	689	120	1388	580	127	1111	39	390	951	397
Arrive On Green	0.20	0.64	0.64	0.11	0.55	0.55	0.11	0.30	0.30	0.18	0.38	0.38
Sat Flow, veh/h	3238	3800	1609	1714	3800	1588	1714	5475	191	3238	3800	1588
Grp Volume(v), veh/h	402	606	91	66	1356	535	87	676	333	311	913	221
Grp Sat Flow(s),veh/h/ln	1619	1900	1609	1714	1900	1588	1714	1900	1866	1619	1900	1588
Q Serve(g_s), s	15.8	9.7	2.0	4.7	44.9	26.5	6.3	21.9	21.9	11.9	30.4	10.1
Cycle Q Clear(g_c), s	15.8	9.7	2.0	4.7	44.9	26.5	6.3	21.9	21.9	11.9	30.4	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	430	1627	689	120	1388	580	127	771	378	390	951	397
V/C Ratio(X)	0.93	0.37	0.13	0.55	0.98	0.92	0.69	0.88	0.88	0.80	0.96	0.56
Avail Cap(c_a), veh/h	430	1627	689	142	1392	581	132	840	412	390	951	397
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	15.0	6.9	56.0	28.7	12.2	56.1	43.5	43.5	51.5	39.8	17.4
Incr Delay (d2), s/veh	27.2	0.1	0.1	3.9	18.7	20.0	10.7	9.9	18.1	10.2	20.1	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	3.6	1.0	2.1	19.0	8.9	2.9	9.8	10.5	4.9	14.4	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.5	15.1	7.0	59.9	47.4	32.2	66.8	53.4	61.6	61.7	59.9	19.1
LnGrp LOS	E	B	A	E	D	C	E	D	E	E	E	B
Approach Vol, veh/h		1099			1957			1096			1445	
Approach Delay, s/veh		37.6			43.7			56.9			54.1	
Approach LOS		D			D			E			D	

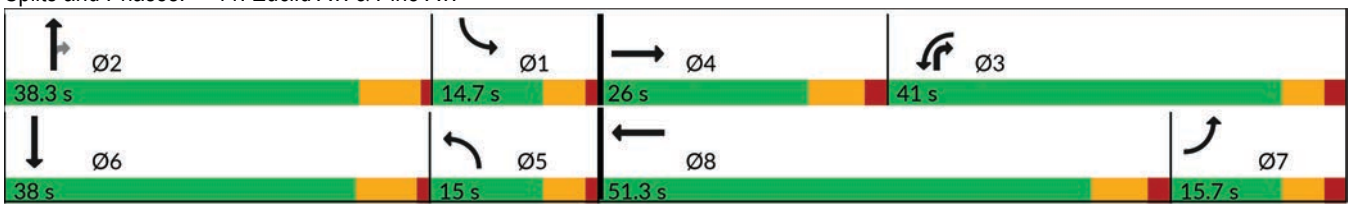
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	32.8	13.8	62.6	14.3	38.8	21.9	54.5
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	13.7	28.6	10.7	53.9	10.0	32.4	17.2	47.4
Max Q Clear Time (g_c+I1), s	13.9	23.9	6.7	11.7	8.3	32.4	17.8	46.9
Green Ext Time (p_c), s	0.0	2.3	0.0	4.3	0.0	0.0	0.0	0.4

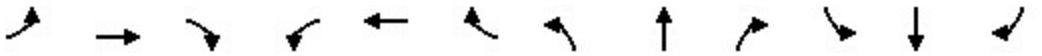
Intersection Summary	
HCM 7th Control Delay, s/veh	47.8
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	31	440	847	563	88	537	568	58	745
Future Volume (vph)	31	440	847	563	88	537	568	58	745
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	15.7	26.0	41.0	51.3	15.0	38.3	41.0	14.7	38.0
Total Split (%)	13.1%	21.7%	34.2%	42.8%	12.5%	31.9%	34.2%	12.3%	31.7%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.0	19.0	34.1	49.6	10.2	26.5	67.0	15.4	28.4
Actuated g/C Ratio	0.09	0.16	0.29	0.43	0.09	0.23	0.58	0.13	0.25
v/c Ratio	0.22	0.90	0.94	0.78	0.62	0.65	0.60	0.27	0.89
Control Delay (s/veh)	55.2	64.8	57.9	39.2	70.7	46.1	14.8	49.6	54.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.2	64.8	57.9	39.2	70.7	46.1	14.8	49.6	54.2
LOS	E	E	E	D	E	D	B	D	D
Approach Delay (s/veh)		64.2		50.1		33.0			53.9
Approach LOS		E		D		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay (s/veh): 47.8	Intersection LOS: D
Intersection Capacity Utilization 92.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	440	89	847	563	40	88	537	568	58	745	36
Future Volume (veh/h)	31	440	89	847	563	40	88	537	568	58	745	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	33	463	0	892	593	41	93	565	366	61	784	34
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	134	567		948	639	44	152	689	763	256	872	38
Arrive On Green	0.12	0.22	0.00	0.44	0.55	0.55	0.13	0.27	0.27	0.22	0.36	0.36
Sat Flow, veh/h	1714	3800	0	3238	1757	121	1714	3800	1610	1714	3611	157
Grp Volume(v), veh/h	33	463	0	892	0	634	93	565	366	61	412	406
Grp Sat Flow(s),veh/h/ln	1714	1900	0	1619	0	1878	1714	1900	1610	1714	1900	1868
Q Serve(g_s), s	1.8	12.2	0.0	27.6	0.0	32.7	5.4	14.6	0.0	3.1	21.6	21.6
Cycle Q Clear(g_c), s	1.8	12.2	0.0	27.6	0.0	32.7	5.4	14.6	0.0	3.1	21.6	21.6
Prop In Lane	1.00		0.00	1.00		0.06	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	134	567		948	0	683	152	689	763	256	459	451
V/C Ratio(X)	0.25	0.82		0.94	0.00	0.93	0.61	0.82	0.48	0.24	0.90	0.90
Avail Cap(c_a), veh/h	163	687		1088	0	792	168	1151	959	256	570	560
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	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	43.5	39.4	0.0	28.6	0.0	22.6	43.8	36.6	16.2	35.9	32.3	32.3
Incr Delay (d2), s/veh	0.3	7.2	0.0	13.4	0.0	16.4	3.2	0.9	0.2	0.2	13.2	13.5
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(50%),veh/ln	0.8	5.6	0.0	9.9	0.0	12.9	2.2	5.8	4.7	1.2	9.4	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.9	46.6	0.0	42.0	0.0	39.0	47.0	37.6	16.4	36.1	45.5	45.7
LnGrp LOS	D	D		D		D	D	D	B	D	D	D
Approach Vol, veh/h		496			1526			1024			879	
Approach Delay, s/veh		46.4			40.8			30.8			45.0	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.4	25.5	36.5	22.7	14.0	31.9	13.9	45.2
Change Period (Y+Rc), s	4.7	6.5	5.7	7.0	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.0	31.8	35.3	19.0	10.3	31.5	10.0	44.3
Max Q Clear Time (g_c+I1), s	5.1	16.6	29.6	14.2	7.4	23.6	3.8	34.7
Green Ext Time (p_c), s	0.0	2.4	1.1	1.5	0.0	1.8	0.0	3.5

Intersection Summary	
HCM 7th Control Delay, s/veh	39.8
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	243	35	136	610	45	40	8	29	59	40	20
Future Vol, veh/h	15	243	35	136	610	45	40	8	29	59	40	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	256	37	143	642	47	42	8	31	62	42	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	689	0	0	293	0	0	1255	1282	274	1244	1276	666
Stage 1	-	-	-	-	-	-	306	306	-	952	952	-
Stage 2	-	-	-	-	-	-	949	976	-	292	324	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	914	-	-	1281	-	-	150	167	769	153	168	463
Stage 1	-	-	-	-	-	-	708	665	-	314	341	-
Stage 2	-	-	-	-	-	-	315	332	-	721	653	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	914	-	-	1281	-	-	107	146	769	124	147	463
Mov Cap-2 Maneuver	-	-	-	-	-	-	201	258	-	251	269	-
Stage 1	-	-	-	-	-	-	696	654	-	279	302	-
Stage 2	-	-	-	-	-	-	230	295	-	671	642	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.46	1.4	22.38	28.05
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	287	914	-	-	1281	-	-	279
HCM Lane V/C Ratio	0.282	0.017	-	-	0.112	-	-	0.449
HCM Ctrl Dly (s/v)	22.4	9	-	-	8.2	-	-	28
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1.1	0.1	-	-	0.4	-	-	2.2

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	896	58	112	1138	18	16	2	24	7	7	6
Future Vol, veh/h	11	896	58	112	1138	18	16	2	24	7	7	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	943	61	118	1198	19	17	2	25	7	7	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1217	0	0	1004	0	0	1835	2449	502	1939	2471	608
Stage 1	-	-	-	-	-	-	997	997	-	1443	1443	-
Stage 2	-	-	-	-	-	-	838	1453	-	496	1027	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	580	-	-	698	-	-	48	31	520	40	31	443
Stage 1	-	-	-	-	-	-	266	325	-	141	199	-
Stage 2	-	-	-	-	-	-	331	197	-	530	314	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	580	-	-	698	-	-	37	26	520	31	25	443
Mov Cap-2 Maneuver	-	-	-	-	-	-	172	131	-	107	120	-
Stage 1	-	-	-	-	-	-	260	318	-	117	166	-
Stage 2	-	-	-	-	-	-	259	164	-	491	308	-

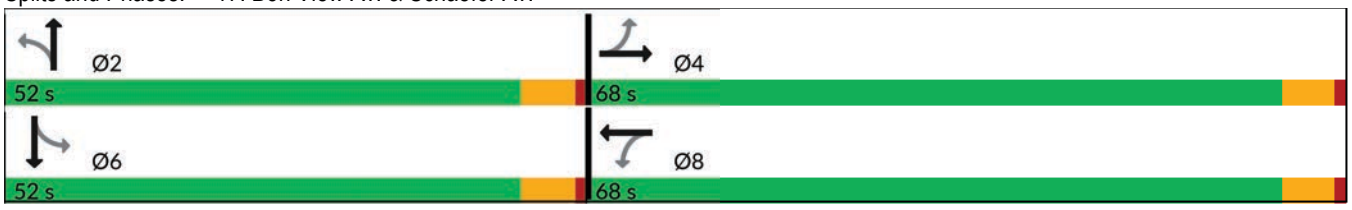
Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.13	0.99	20.79	33.83
HCM LOS			C	D

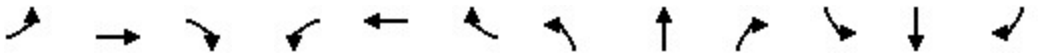
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	272	580	-	-	698	-	-	146
HCM Lane V/C Ratio	0.163	0.02	-	-	0.169	-	-	0.144
HCM Ctrl Dly (s/v)	20.8	11.3	-	-	11.2	-	-	33.8
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0.6	-	-	0.5

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	39	403	30	317	83	711	67	439
Future Volume (vph)	39	403	30	317	83	711	67	439
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	68.0	68.0	68.0	68.0	52.0	52.0	52.0	52.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		30.6		30.6		46.6		46.6
Actuated g/C Ratio		0.34		0.34		0.52		0.52
v/c Ratio		0.85		0.72		1.02		0.77
Control Delay (s/veh)		40.7		31.6		60.9		26.9
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		40.7		31.6		60.9		26.9
LOS		D		C		E		C
Approach Delay (s/veh)		40.7		31.6		60.9		26.9
Approach LOS		D		C		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay (s/veh): 43.0	Intersection LOS: D
Intersection Capacity Utilization 102.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 17: Bon View Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	39	403	47	30	317	61	83	711	54	67	439	75
Future Volume (veh/h)	39	403	47	30	317	61	83	711	54	67	439	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	424	49	32	334	64	87	748	57	71	462	79
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	79	498	55	73	463	85	118	794	59	112	626	102
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.79	0.79	0.79	0.79	0.79	0.79
Sat Flow, veh/h	89	1547	172	74	1440	265	127	1499	111	113	1182	192
Grp Volume(v), veh/h	514	0	0	430	0	0	892	0	0	612	0	0
Grp Sat Flow(s),veh/h/ln	1809	0	0	1778	0	0	1737	0	0	1487	0	0
Q Serve(g_s), s	4.8	0.0	0.0	0.0	0.0	0.0	24.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	19.7	0.0	0.0	14.8	0.0	0.0	35.1	0.0	0.0	10.4	0.0	0.0
Prop In Lane	0.08		0.10	0.07		0.15	0.10		0.06	0.12		0.13
Lane Grp Cap(c), veh/h	632	0	0	621	0	0	971	0	0	839	0	0
V/C Ratio(X)	0.81	0.00	0.00	0.69	0.00	0.00	0.92	0.00	0.00	0.73	0.00	0.00
Avail Cap(c_a), veh/h	1463	0	0	1442	0	0	1077	0	0	937	0	0
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.6	0.0	0.0	17.4	0.0	0.0	7.0	0.0	0.0	4.8	0.0	0.0
Incr Delay (d2), s/veh	2.6	0.0	0.0	1.4	0.0	0.0	11.6	0.0	0.0	2.6	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(50%),veh/ln	6.0	0.0	0.0	4.7	0.0	0.0	6.4	0.0	0.0	2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.3	0.0	0.0	18.8	0.0	0.0	18.7	0.0	0.0	7.4	0.0	0.0
LnGrp LOS	C			B			B			A		
Approach Vol, veh/h		514			430			892			612	
Approach Delay, s/veh		21.3			18.8			18.7			7.4	
Approach LOS		C			B			B			A	

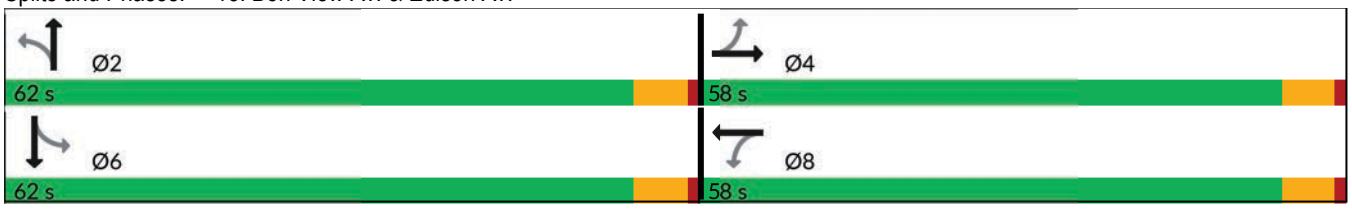
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		47.1		30.9		47.1		30.9				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		46.2		62.2		46.2		62.2				
Max Q Clear Time (g_c+I1), s		37.1		21.7		12.4		16.8				
Green Ext Time (p_c), s		4.2		3.4		4.7		2.8				

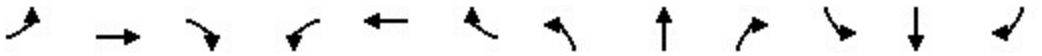
Intersection Summary												
HCM 7th Control Delay, s/veh			16.4									
HCM 7th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	44	164	80	468	72	344	49	452
Future Volume (vph)	44	164	80	468	72	344	49	452
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	58.0	58.0	58.0	58.0	62.0	62.0	62.0	62.0
Total Split (%)	48.3%	48.3%	48.3%	48.3%	51.7%	51.7%	51.7%	51.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		37.5		37.5		38.4		38.4
Actuated g/C Ratio		0.42		0.42		0.43		0.43
v/c Ratio		0.42		0.83		0.76		0.82
Control Delay (s/veh)		20.7		35.3		31.0		32.8
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		20.7		35.3		31.0		32.8
LOS		C		D		C		C
Approach Delay (s/veh)		20.7		35.3		31.0		32.8
Approach LOS		C		D		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.7	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 31.4	Intersection LOS: C
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: Bon View Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	44	164	56	80	468	27	72	344	50	49	452	85
Future Volume (veh/h)	44	164	56	80	468	27	72	344	50	49	452	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	173	59	84	493	28	76	362	53	52	476	89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	134	458	141	139	609	33	136	517	71	102	588	106
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	163	1137	350	178	1514	82	167	1265	173	93	1439	258
Grp Volume(v), veh/h	278	0	0	605	0	0	491	0	0	617	0	0
Grp Sat Flow(s),veh/h/ln	1650	0	0	1774	0	0	1605	0	0	1791	0	0
Q Serve(g_s), s	0.0	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
Cycle Q Clear(g_c), s	6.6	0.0	0.0	18.8	0.0	0.0	15.4	0.0	0.0	18.7	0.0	0.0
Prop In Lane	0.17		0.21	0.14		0.05	0.15		0.11	0.08		0.14
Lane Grp Cap(c), veh/h	732	0	0	781	0	0	723	0	0	795	0	0
V/C Ratio(X)	0.38	0.00	0.00	0.77	0.00	0.00	0.68	0.00	0.00	0.78	0.00	0.00
Avail Cap(c_a), veh/h	1428	0	0	1558	0	0	1522	0	0	1668	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.9	0.0	0.0	16.4	0.0	0.0	14.9	0.0	0.0	16.2	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.7	0.0	0.0	1.1	0.0	0.0	1.7	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(50%),veh/ln	2.2	0.0	0.0	6.1	0.0	0.0	4.7	0.0	0.0	6.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.2	0.0	0.0	18.1	0.0	0.0	16.0	0.0	0.0	17.8	0.0	0.0
LnGrp LOS	B			B			B			B		
Approach Vol, veh/h		278			605			491			617	
Approach Delay, s/veh		13.2			18.1			16.0			17.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.9		30.5		30.9		30.5				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		56.2		52.2		56.2		52.2				
Max Q Clear Time (g_c+I1), s		17.4		8.6		20.7		20.8				
Green Ext Time (p_c), s		3.5		1.7		4.4		3.9				

Intersection Summary	
HCM 7th Control Delay, s/veh	16.8
HCM 7th LOS	B

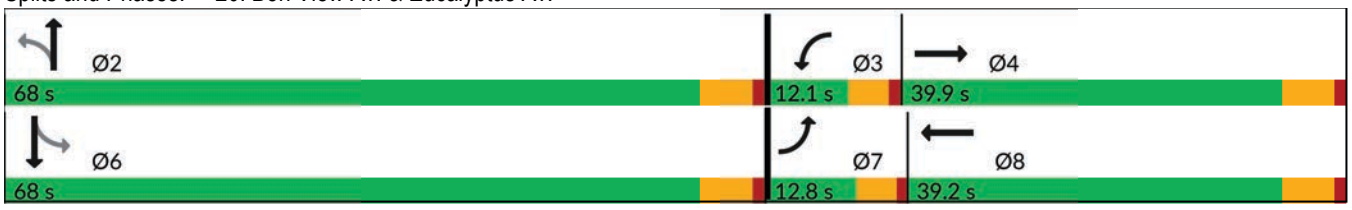
Notes

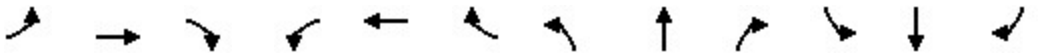
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	104	717	66	841	38	30	288	172
Future Volume (vph)	104	717	66	841	38	30	288	172
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	23.8	23.8	23.8	23.8
Total Split (s)	12.8	39.9	12.1	39.2	68.0	68.0	68.0	68.0
Total Split (%)	10.7%	33.3%	10.1%	32.7%	56.7%	56.7%	56.7%	56.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8		5.8		5.8
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.2	36.5	7.3	33.4		62.2		62.2
Actuated g/C Ratio	0.07	0.30	0.06	0.28		0.52		0.52
v/c Ratio	0.94	0.77	0.66	1.08		0.15		1.04
Control Delay (s/veh)	124.7	43.9	84.8	93.7		12.2		70.2
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	124.7	43.9	84.8	93.7		12.2		70.2
LOS	F	D	F	F		B		E
Approach Delay (s/veh)		53.2		93.2		12.2		70.2
Approach LOS		D		F		B		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay (s/veh): 71.7	Intersection LOS: E
Intersection Capacity Utilization 100.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 20: Bon View Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	717	81	66	841	180	38	30	26	288	172	331
Future Volume (veh/h)	104	717	81	66	841	180	38	30	26	288	172	331
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	109	755	85	69	885	110	40	32	27	303	181	295
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	120	994	112	87	920	114	271	216	167	351	184	300
Arrive On Green	0.11	0.46	0.46	0.08	0.43	0.43	0.76	0.76	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1714	3271	368	1714	3231	402	450	426	329	609	364	593
Grp Volume(v), veh/h	109	417	423	69	494	501	99	0	0	779	0	0
Grp Sat Flow(s),veh/h/ln	1714	1805	1834	1714	1805	1828	1205	0	0	1565	0	0
Q Serve(g_s), s	7.4	22.5	22.5	4.6	31.2	31.2	0.0	0.0	0.0	53.3	0.0	0.0
Cycle Q Clear(g_c), s	7.4	22.5	22.5	4.6	31.2	31.2	1.7	0.0	0.0	55.0	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.22	0.40		0.27	0.39		0.38
Lane Grp Cap(c), veh/h	120	549	557	87	514	520	654	0	0	836	0	0
V/C Ratio(X)	0.91	0.76	0.76	0.79	0.96	0.96	0.15	0.00	0.00	0.93	0.00	0.00
Avail Cap(c_a), veh/h	120	549	557	110	515	522	686	0	0	874	0	0
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.0	28.3	28.3	53.5	32.9	32.9	7.1	0.0	0.0	13.4	0.0	0.0
Incr Delay (d2), s/veh	54.5	6.1	6.0	25.9	30.2	29.9	0.1	0.0	0.0	16.0	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(50%),veh/ln	4.8	8.6	8.7	2.5	15.4	15.6	0.6	0.0	0.0	11.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	106.5	34.4	34.3	79.4	63.1	62.9	7.2	0.0	0.0	29.3	0.0	0.0
LnGrp LOS	F	C	C	E	E	E	A			C		
Approach Vol, veh/h		949			1064			99			779	
Approach Delay, s/veh		42.6			64.0			7.2			29.3	
Approach LOS		D			E			A			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		65.1	10.5	41.4		65.1	12.8	39.1				
Change Period (Y+Rc), s		5.8	4.6	5.8		5.8	4.6	5.8				
Max Green Setting (Gmax), s		62.2	7.5	34.1		62.2	8.2	33.4				
Max Q Clear Time (g_c+I1), s		3.7	6.6	24.5		57.0	9.4	33.2				
Green Ext Time (p_c), s		0.7	0.0	3.2		2.4	0.0	0.1				

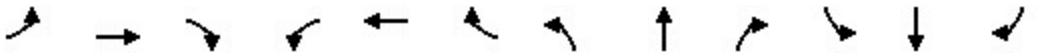
Intersection Summary	
HCM 7th Control Delay, s/veh	45.7
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	682	3	284	1090	346	571
Future Volume (vph)	682	3	284	1090	346	571
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	33.8	31.8	15.0	25.8
Total Split (s)	33.8	33.8	33.8	38.2	18.0	56.2
Total Split (%)	37.6%	37.6%	37.6%	42.4%	20.0%	62.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.8	5.8	5.0	5.8
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	23.0	23.0	23.0	32.4	17.0	54.4
Actuated g/C Ratio	0.26	0.26	0.26	0.36	0.19	0.60
v/c Ratio	0.82	0.82	0.49	1.31	1.13	0.28
Control Delay (s/veh)	46.9	47.2	7.6	172.7	122.4	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.9	47.2	7.6	172.8	122.4	11.4
LOS	D	D	A	F	F	B
Approach Delay (s/veh)		35.5		172.8		53.3
Approach LOS		D		F		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.31	
Intersection Signal Delay (s/veh): 103.4	Intersection LOS: F
Intersection Capacity Utilization 100.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	682	3	284	0	0	0	0	1090	521	346	571	0
Future Volume (veh/h)	682	3	284	0	0	0	0	1090	521	346	571	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
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	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	720	0	152				0	1147	285	364	601	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	812	0	361				0	1250	308	248	2295	0
Arrive On Green	0.34	0.00	0.34				0.00	0.65	0.65	0.29	1.00	0.00
Sat Flow, veh/h	3619	0	1610				0	2964	706	1714	3705	0
Grp Volume(v), veh/h	720	0	152				0	718	714	364	601	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1805	1770	1714	1805	0
Q Serve(g_s), s	16.9	0.0	6.6				0.0	30.7	31.9	13.0	0.0	0.0
Cycle Q Clear(g_c), s	16.9	0.0	6.6				0.0	30.7	31.9	13.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.40	1.00		0.00
Lane Grp Cap(c), veh/h	812	0	361				0	786	771	248	2295	0
V/C Ratio(X)	0.89	0.00	0.42				0.00	0.91	0.93	1.47	0.26	0.00
Avail Cap(c_a), veh/h	1086	0	483				0	786	771	248	2295	0
HCM Platoon Ratio	1.50	1.50	1.50				1.00	1.50	1.50	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.45	0.45	0.00
Uniform Delay (d), s/veh	28.8	0.0	25.3				0.0	14.1	14.3	32.0	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.3				0.0	16.7	18.8	221.3	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(50%),veh/ln	6.5	0.0	2.3				0.0	9.8	10.2	19.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.7	0.0	25.6				0.0	30.9	33.1	253.3	0.1	0.0
LnGrp LOS	C		C					C	C	F	A	
Approach Vol, veh/h		872						1432			965	
Approach Delay, s/veh		33.1						32.0			95.6	
Approach LOS		C						C			F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	18.0	45.0		27.0		63.0
Change Period (Y+Rc), s	5.0	5.8		6.8		5.8
Max Green Setting (Gmax), s	13.0	32.4		27.0		50.4
Max Q Clear Time (g_c+I1), s	15.0	33.9		18.9		2.0
Green Ext Time (p_c), s	0.0	0.0		1.3		3.2

Intersection Summary	
HCM 7th Control Delay, s/veh	51.1
HCM 7th LOS	D

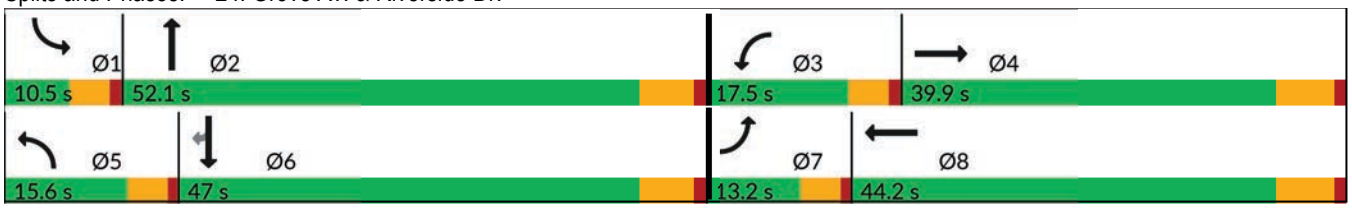
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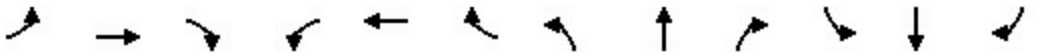
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	110	472	175	981	132	1164	69	512	132
Future Volume (vph)	110	472	175	981	132	1164	69	512	132
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	13.2	39.9	17.5	44.2	15.6	52.1	10.5	47.0	47.0
Total Split (%)	11.0%	33.3%	14.6%	36.8%	13.0%	43.4%	8.8%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.6	33.7	12.9	38.0	10.9	46.3	5.9	41.3	41.3
Actuated g/C Ratio	0.07	0.28	0.11	0.32	0.09	0.39	0.05	0.34	0.34
v/c Ratio	0.95	1.09	1.01	1.10	0.90	1.06	0.87	0.83	0.21
Control Delay (s/veh)	125.1	105.2	121.6	97.0	103.6	78.6	123.9	48.2	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	125.1	105.2	121.6	97.0	103.6	78.6	123.9	48.2	4.0
LOS	F	F	F	F	F	E	F	D	A
Approach Delay (s/veh)		108.5		100.2		80.8		47.4	
Approach LOS		F		F		F		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay (s/veh): 85.6	Intersection LOS: F
Intersection Capacity Utilization 100.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	472	70	175	981	195	132	1164	222	69	512	132
Future Volume (veh/h)	110	472	70	175	981	195	132	1164	222	69	512	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	116	497	37	184	1033	110	139	1225	118	73	539	76
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	124	493	37	185	1046	111	158	1273	122	85	646	547
Arrive On Green	0.11	0.42	0.42	0.16	0.48	0.48	0.14	0.57	0.57	0.07	0.51	0.51
Sat Flow, veh/h	1714	1745	130	1714	3287	350	1714	3328	320	1714	1900	1610
Grp Volume(v), veh/h	116	0	534	184	567	576	139	663	680	73	539	76
Grp Sat Flow(s),veh/h/ln	1714	0	1875	1714	1805	1832	1714	1805	1842	1714	1900	1610
Q Serve(g_s), s	8.0	0.0	33.7	12.8	37.0	37.1	9.5	41.6	42.0	5.0	28.9	3.0
Cycle Q Clear(g_c), s	8.0	0.0	33.7	12.8	37.0	37.1	9.5	41.6	42.0	5.0	28.9	3.0
Prop In Lane	1.00		0.07	1.00		0.19	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	124	0	529	185	575	583	158	690	705	85	646	547
V/C Ratio(X)	0.94	0.00	1.01	0.99	0.99	0.99	0.88	0.96	0.96	0.86	0.83	0.14
Avail Cap(c_a), veh/h	124	0	529	185	575	583	158	700	715	85	656	556
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	0.0	34.4	50.0	30.9	30.9	50.8	24.6	24.7	54.9	26.4	20.0
Incr Delay (d2), s/veh	61.5	0.0	41.3	63.9	34.0	34.0	38.1	24.4	25.0	53.1	9.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	18.4	8.2	17.9	18.2	5.5	17.7	18.3	3.3	11.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	114.5	0.0	75.8	113.9	64.9	65.0	88.9	49.0	49.7	108.0	35.5	20.2
LnGrp LOS	F		F	F	E	E	F	D	D	F	D	C
Approach Vol, veh/h		650			1327			1482			688	
Approach Delay, s/veh		82.7			71.7			53.1			41.5	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	51.5	17.5	39.9	15.6	46.4	13.2	44.2
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	5.9	46.3	12.9	33.7	11.0	41.2	8.6	38.0
Max Q Clear Time (g_c+I1), s	7.0	44.0	14.8	35.7	11.5	30.9	10.0	39.1
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	2.5	0.0	0.0

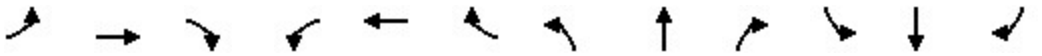
Intersection Summary	
HCM 7th Control Delay, s/veh	61.8
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	78	753	8	1041	133	1047	30	724
Future Volume (vph)	78	753	8	1041	133	1047	30	724
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	36.4	36.4	36.0	36.0	15.4	64.4	9.6	58.6
Total Split (%)	33.0%	33.0%	32.6%	32.6%	13.9%	58.3%	8.7%	53.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	30.7	30.7	30.7	30.7	10.6	58.8	5.0	49.1
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.10	0.55	0.05	0.46
v/c Ratio	1.22	0.79	0.11	1.11	0.82	1.09	0.40	0.90
Control Delay (s/veh)	222.0	41.4	34.9	98.3	83.5	80.2	65.9	41.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	222.0	41.4	34.9	98.3	83.5	80.2	65.9	41.1
LOS	F	D	C	F	F	F	E	D
Approach Delay (s/veh)		57.2		97.9		80.6		42.1
Approach LOS		E		F		F		D

Intersection Summary	
Cycle Length: 110.4	
Actuated Cycle Length: 106.6	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay (s/veh): 72.9	Intersection LOS: E
Intersection Capacity Utilization 119.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 25: Grove Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	753	59	8	1041	99	133	1047	31	30	724	20
Future Volume (veh/h)	78	753	59	8	1041	99	133	1047	31	30	724	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	82	793	62	8	1096	57	140	1102	17	32	762	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	981	77	117	1009	52	166	1008	16	49	883	12
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.14	0.81	0.81	0.04	0.71	0.71
Sat Flow, veh/h	469	3479	272	621	3578	186	1714	1866	29	1714	1871	25
Grp Volume(v), veh/h	82	433	422	8	582	571	140	0	1119	32	0	772
Grp Sat Flow(s),veh/h/ln	469	1900	1851	621	1900	1864	1714	0	1895	1714	0	1895
Q Serve(g_s), s	0.0	21.7	21.7	1.2	30.6	30.6	8.6	0.0	58.6	2.0	0.0	33.2
Cycle Q Clear(g_c), s	30.6	21.7	21.7	22.9	30.6	30.6	8.6	0.0	58.6	2.0	0.0	33.2
Prop In Lane	1.00		0.15	1.00		0.10	1.00		0.02	1.00		0.01
Lane Grp Cap(c), veh/h	66	536	522	117	536	526	166	0	1023	49	0	895
V/C Ratio(X)	1.24	0.81	0.81	0.07	1.09	1.09	0.85	0.00	1.09	0.65	0.00	0.86
Avail Cap(c_a), veh/h	66	536	522	117	536	526	171	0	1023	79	0	922
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.6	28.7	28.7	38.8	31.3	31.3	45.6	0.0	10.3	51.4	0.0	13.2
Incr Delay (d2), s/veh	186.8	9.0	9.2	0.2	64.2	64.8	29.8	0.0	57.2	13.8	0.0	8.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	9.0	8.8	0.2	20.1	19.8	4.8	0.0	21.8	1.0	0.0	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	233.4	37.7	37.9	39.0	95.5	96.1	75.4	0.0	67.5	65.2	0.0	21.5
LnGrp LOS	F	D	D	D	F	F	E		F	E		C
Approach Vol, veh/h		937			1161			1259			804	
Approach Delay, s/veh		54.9			95.4			68.3			23.3	
Approach LOS		D			F			E			C	

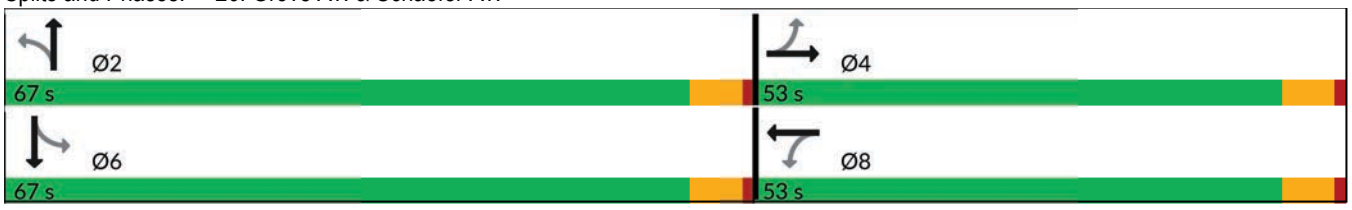
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	64.4		36.4	15.1	57.0		36.4				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	5.0	58.6		30.6	10.8	52.8		30.2				
Max Q Clear Time (g_c+I1), s	4.0	60.6		32.6	10.6	35.2		32.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.7		0.0				

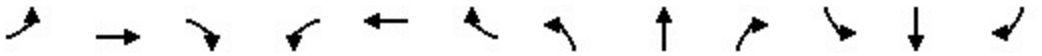
Intersection Summary	
HCM 7th Control Delay, s/veh	64.2
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	63	461	182	363	28	838	98	705
Future Volume (vph)	63	461	182	363	28	838	98	705
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	53.0	53.0	53.0	53.0	67.0	67.0	67.0	67.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	55.8%	55.8%	55.8%	55.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	47.2	47.2	47.2	47.2	61.2	61.2	61.2	61.2
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.51	0.51	0.51	0.51
v/c Ratio	0.30	0.80	1.54	0.63	0.23	0.95	1.63	0.82
Control Delay (s/veh)	29.9	41.3	306.3	33.4	22.5	47.3	372.4	33.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.9	41.3	306.3	33.4	22.5	47.3	372.4	33.0
LOS	C	D	F	C	C	D	F	C
Approach Delay (s/veh)		40.1		113.4		46.6		72.3
Approach LOS		D		F		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.63	
Intersection Signal Delay (s/veh): 66.5	Intersection LOS: E
Intersection Capacity Utilization 113.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 26: Grove Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	461	96	182	363	77	28	838	29	98	705	42
Future Volume (veh/h)	63	461	96	182	363	77	28	838	29	98	705	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	66	485	54	192	382	44	29	882	20	103	742	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	269	661	74	189	658	76	186	944	21	100	935	29
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	977	1679	187	880	1673	193	713	1850	42	628	1833	57
Grp Volume(v), veh/h	66	0	539	192	0	426	29	0	902	103	0	765
Grp Sat Flow(s),veh/h/ln	977	0	1866	880	0	1865	713	0	1892	628	0	1890
Q Serve(g_s), s	6.8	0.0	29.6	17.6	0.0	21.5	4.2	0.0	53.5	7.7	0.0	40.0
Cycle Q Clear(g_c), s	28.4	0.0	29.6	47.2	0.0	21.5	44.2	0.0	53.5	61.2	0.0	40.0
Prop In Lane	1.00		0.10	1.00		0.10	1.00		0.02	1.00		0.03
Lane Grp Cap(c), veh/h	269	0	734	189	0	734	186	0	965	100	0	964
V/C Ratio(X)	0.25	0.00	0.73	1.01	0.00	0.58	0.16	0.00	0.93	1.03	0.00	0.79
Avail Cap(c_a), veh/h	269	0	734	189	0	734	186	0	965	100	0	964
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.8	0.0	31.0	54.0	0.0	28.6	42.4	0.0	27.5	58.5	0.0	24.2
Incr Delay (d2), s/veh	0.5	0.0	3.8	69.1	0.0	1.2	0.4	0.0	15.6	98.3	0.0	4.6
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(50%),veh/ln	1.6	0.0	13.4	9.3	0.0	9.4	0.7	0.0	26.2	5.7	0.0	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.2	0.0	34.9	123.1	0.0	29.8	42.8	0.0	43.1	156.8	0.0	28.8
LnGrp LOS	D		C	F		C	D		D	F		C
Approach Vol, veh/h		605			618			931			868	
Approach Delay, s/veh		35.5			58.8			43.1			44.0	
Approach LOS		D			E			D			D	

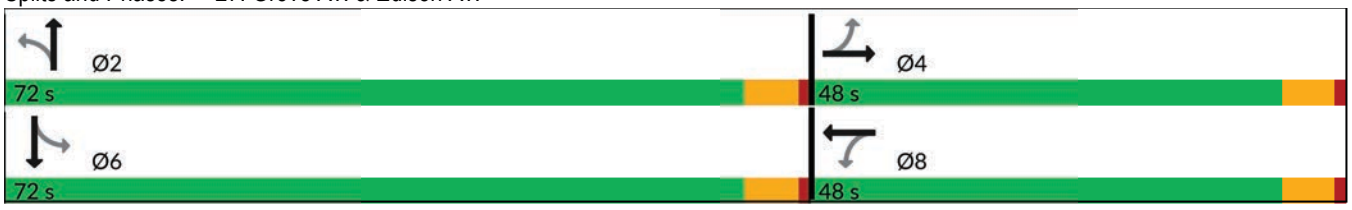
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		67.0		53.0		67.0		53.0				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		61.2		47.2		61.2		47.2				
Max Q Clear Time (g_c+I1), s		55.5		31.6		63.2		49.2				
Green Ext Time (p_c), s		2.9		3.1		0.0		0.0				

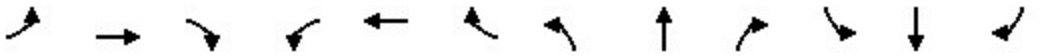
Intersection Summary	
HCM 7th Control Delay, s/veh	45.0
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	84	144	14	451	16	341	84	789
Future Volume (vph)	84	144	14	451	16	341	84	789
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	48.0	48.0	48.0	48.0	72.0	72.0	72.0	72.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	60.0%	60.0%	60.0%	60.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	42.2	42.2	42.2	42.2		66.2		66.2
Actuated g/C Ratio	0.35	0.35	0.35	0.35		0.55		0.55
v/c Ratio	1.40	0.28	0.04	0.96		0.39		1.08
Control Delay (s/veh)	283.5	27.9	26.1	65.1		16.7		80.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	283.5	27.9	26.1	65.1		16.7		80.4
LOS	F	C	C	E		B		F
Approach Delay (s/veh)		110.9		64.2		16.7		80.4
Approach LOS		F		E		B		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.40	
Intersection Signal Delay (s/veh): 69.1	Intersection LOS: E
Intersection Capacity Utilization 132.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 27: Grove Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	144	29	14	451	146	16	341	3	84	789	113
Future Volume (veh/h)	84	144	29	14	451	146	16	341	3	84	789	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	88	152	31	15	475	154	17	359	3	88	831	119
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	539	110	422	483	157	50	917	7	101	788	111
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.83	0.83	0.83	0.83	0.83	0.83
Sat Flow, veh/h	810	1531	312	1220	1374	446	34	1663	14	125	1429	201
Grp Volume(v), veh/h	88	0	183	15	0	629	379	0	0	1038	0	0
Grp Sat Flow(s),veh/h/ln	810	0	1844	1220	0	1820	1710	0	0	1755	0	0
Q Serve(g_s), s	1.5	0.0	6.6	0.8	0.0	40.7	0.0	0.0	0.0	56.0	0.0	0.0
Cycle Q Clear(g_c), s	42.2	0.0	6.6	7.4	0.0	40.7	5.9	0.0	0.0	66.2	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.24	0.04		0.01	0.08		0.11
Lane Grp Cap(c), veh/h	70	0	648	422	0	640	975	0	0	1001	0	0
V/C Ratio(X)	1.25	0.00	0.28	0.04	0.00	0.98	0.39	0.00	0.00	1.04	0.00	0.00
Avail Cap(c_a), veh/h	70	0	648	422	0	640	975	0	0	1001	0	0
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.3	0.0	19.9	22.0	0.0	28.0	5.1	0.0	0.0	11.1	0.0	0.0
Incr Delay (d2), s/veh	190.7	0.0	0.2	0.0	0.0	31.2	0.3	0.0	0.0	38.6	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(50%),veh/ln	5.7	0.0	2.6	0.2	0.0	19.5	1.9	0.0	0.0	16.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	240.0	0.0	20.2	22.0	0.0	59.1	5.4	0.0	0.0	49.7	0.0	0.0
LnGrp LOS	F		C	C		E	A			F		
Approach Vol, veh/h		271			644			379			1038	
Approach Delay, s/veh		91.6			58.3			5.4			49.7	
Approach LOS		F			E			A			D	

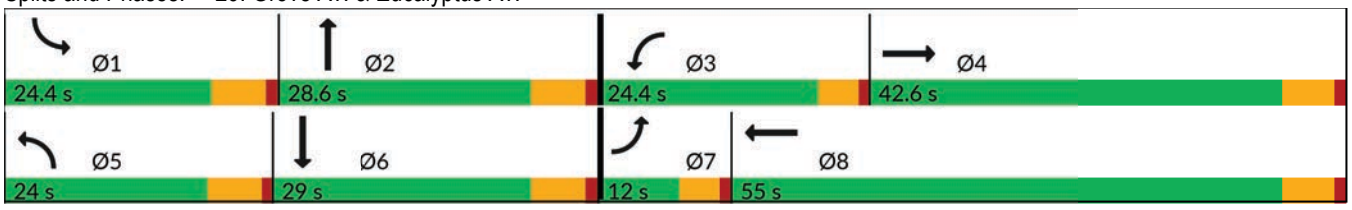
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		72.0		48.0		72.0		48.0				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		66.2		42.2		66.2		42.2				
Max Q Clear Time (g_c+I1), s		7.9		44.2		68.2		42.7				
Green Ext Time (p_c), s		2.4		0.0		0.0		0.0				

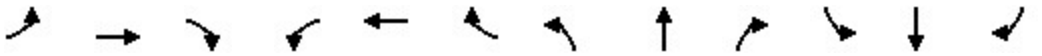
Intersection Summary		
HCM 7th Control Delay, s/veh	49.7	
HCM 7th LOS	D	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	75	484	153	955	127	138	394	291
Future Volume (vph)	75	484	153	955	127	138	394	291
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	23.8	23.8	23.8	23.8
Total Split (s)	12.0	42.6	24.4	55.0	24.0	28.6	24.4	29.0
Total Split (%)	10.0%	35.5%	20.3%	45.8%	20.0%	23.8%	20.3%	24.2%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.4	39.6	15.6	47.9	14.0	20.1	17.9	24.0
Actuated g/C Ratio	0.06	0.34	0.14	0.42	0.12	0.17	0.16	0.21
v/c Ratio	0.72	0.50	0.70	0.94	0.65	0.84	0.85	0.64
Control Delay (s/veh)	89.3	32.0	64.3	45.5	63.8	62.5	65.7	36.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	89.3	32.0	64.3	45.5	63.8	62.5	65.7	36.1
LOS	F	C	E	D	E	E	E	D
Approach Delay (s/veh)		38.6		47.4		62.9		49.4
Approach LOS		D		D		E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.4	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay (s/veh): 48.0	Intersection LOS: D
Intersection Capacity Utilization 88.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 29: Grove Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	484	94	153	955	362	127	138	129	394	291	197
Future Volume (veh/h)	75	484	94	153	955	362	127	138	129	394	291	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	79	509	99	161	1005	223	134	145	136	415	306	165
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	99	1011	196	192	1144	253	163	163	153	479	544	286
Arrive On Green	0.09	0.50	0.50	0.17	0.58	0.58	0.14	0.27	0.27	0.23	0.36	0.36
Sat Flow, veh/h	1714	3016	584	1714	2938	650	1714	902	846	3141	2286	1203
Grp Volume(v), veh/h	79	304	304	161	616	612	134	0	281	415	240	231
Grp Sat Flow(s),veh/h/ln	1714	1805	1795	1714	1805	1783	1714	0	1748	1570	1805	1683
Q Serve(g_s), s	4.5	11.2	11.3	9.1	29.2	29.5	7.6	0.0	15.5	12.8	10.7	11.1
Cycle Q Clear(g_c), s	4.5	11.2	11.3	9.1	29.2	29.5	7.6	0.0	15.5	12.8	10.7	11.1
Prop In Lane	1.00		0.33	1.00		0.36	1.00		0.48	1.00		0.71
Lane Grp Cap(c), veh/h	99	605	602	192	703	694	163	0	316	479	430	401
V/C Ratio(X)	0.79	0.50	0.51	0.84	0.88	0.88	0.82	0.00	0.89	0.87	0.56	0.58
Avail Cap(c_a), veh/h	126	662	658	338	885	874	311	0	397	582	430	401
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	19.4	19.4	40.9	18.8	18.9	42.2	0.0	35.6	37.7	28.0	28.2
Incr Delay (d2), s/veh	23.1	0.6	0.7	9.3	8.3	8.7	9.7	0.0	18.1	11.2	1.6	2.0
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(50%),veh/ln	2.5	4.0	4.0	4.0	10.0	10.0	3.4	0.0	7.2	5.1	4.2	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.3	20.0	20.1	50.2	27.2	27.6	51.9	0.0	53.7	49.0	29.6	30.2
LnGrp LOS	E	C	C	D	C	C	D		D	D	C	C
Approach Vol, veh/h		687			1389			415			886	
Approach Delay, s/veh		25.6			30.0			53.1			38.8	
Approach LOS		C			C			D			D	

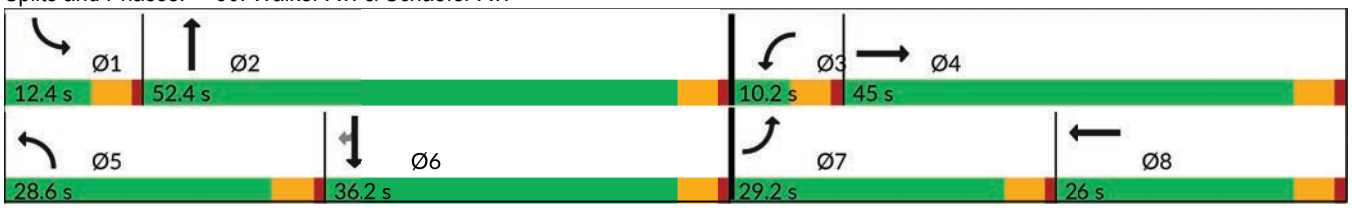
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.1	24.0	15.8	39.5	15.4	29.7	10.4	44.9
Change Period (Y+Rc), s	5.8	5.8	4.6	5.8	5.8	5.8	4.6	5.8
Max Green Setting (Gmax), s	18.6	22.8	19.8	36.8	18.2	23.2	7.4	49.2
Max Q Clear Time (g_c+I1), s	14.8	17.5	11.1	13.3	9.6	13.1	6.5	31.5
Green Ext Time (p_c), s	0.6	0.7	0.2	3.4	0.2	1.8	0.0	7.6

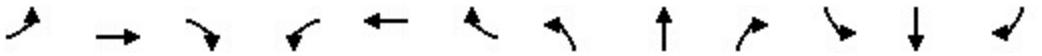
Intersection Summary	
HCM 7th Control Delay, s/veh	34.3
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	334	365	65	170	325	633	97	349	164
Future Volume (vph)	334	365	65	170	325	633	97	349	164
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	22.6	9.6	22.6	9.6	22.6	22.6
Total Split (s)	29.2	45.0	10.2	26.0	28.6	52.4	12.4	36.2	36.2
Total Split (%)	24.3%	37.5%	8.5%	21.7%	23.8%	43.7%	10.3%	30.2%	30.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	24.4	40.4	5.6	21.7	23.7	46.7	7.8	30.7	30.7
Actuated g/C Ratio	0.21	0.34	0.05	0.18	0.20	0.39	0.07	0.26	0.26
v/c Ratio	0.95	1.02	0.80	0.68	0.95	0.97	0.86	0.75	0.31
Control Delay (s/veh)	83.6	79.1	110.8	54.9	83.9	62.9	108.3	51.2	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	83.6	79.1	110.8	54.9	83.9	62.9	108.3	51.2	5.9
LOS	F	E	F	D	F	E	F	D	A
Approach Delay (s/veh)		80.7		67.5		69.7		48.1	
Approach LOS		F		E		E		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.9	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay (s/veh): 68.5	Intersection LOS: E
Intersection Capacity Utilization 95.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 30: Walker Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	334	365	243	65	170	52	325	633	49	97	349	164
Future Volume (veh/h)	334	365	243	65	170	52	325	633	49	97	349	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	352	384	130	68	179	29	342	666	31	102	367	99
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	383	422	143	88	235	38	373	715	33	128	497	422
Arrive On Green	0.21	0.31	0.31	0.05	0.15	0.15	0.21	0.40	0.40	0.07	0.26	0.26
Sat Flow, veh/h	1810	1358	460	1810	1595	258	1810	1799	84	1810	1900	1610
Grp Volume(v), veh/h	352	0	514	68	0	208	342	0	697	102	367	99
Grp Sat Flow(s),veh/h/ln	1810	0	1817	1810	0	1853	1810	0	1883	1810	1900	1610
Q Serve(g_s), s	20.2	0.0	28.9	3.9	0.0	11.5	19.7	0.0	37.7	5.9	18.8	5.1
Cycle Q Clear(g_c), s	20.2	0.0	28.9	3.9	0.0	11.5	19.7	0.0	37.7	5.9	18.8	5.1
Prop In Lane	1.00		0.25	1.00		0.14	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	383	0	564	88	0	273	373	0	748	128	497	422
V/C Ratio(X)	0.92	0.00	0.91	0.78	0.00	0.76	0.92	0.00	0.93	0.80	0.74	0.23
Avail Cap(c_a), veh/h	419	0	691	95	0	373	409	0	847	133	565	479
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	0.0	35.2	50.0	0.0	43.5	41.3	0.0	30.7	48.6	35.9	30.9
Incr Delay (d2), s/veh	24.0	0.0	14.4	30.1	0.0	6.1	24.1	0.0	15.7	27.2	4.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	0.0	14.3	2.5	0.0	5.5	10.7	0.0	18.5	3.5	8.7	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.0	0.0	49.6	80.1	0.0	49.7	65.4	0.0	46.4	75.8	40.3	31.1
LnGrp LOS	E		D	F		D	E		D	E	D	C
Approach Vol, veh/h		866			276			1039			568	
Approach Delay, s/veh		55.9			57.2			52.6			45.1	
Approach LOS		E			E			D			D	

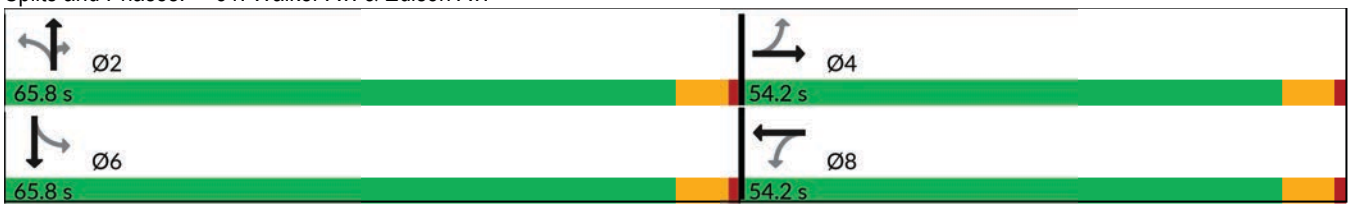
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	46.8	9.8	37.6	26.5	32.4	27.1	20.2
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	7.8	47.8	5.6	40.4	24.0	31.6	24.6	21.4
Max Q Clear Time (g_c+I1), s	7.9	39.7	5.9	30.9	21.7	20.8	22.2	13.5
Green Ext Time (p_c), s	0.0	2.6	0.0	2.1	0.3	1.6	0.3	0.6

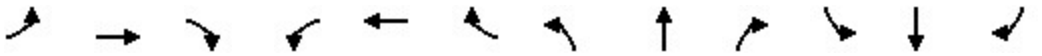
Intersection Summary	
HCM 7th Control Delay, s/veh	52.6
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	29	175	421	400	51	389	229	216	656
Future Volume (vph)	29	175	421	400	51	389	229	216	656
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases		4		8		2			6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	54.2	54.2	54.2	54.2	65.8	65.8	65.8	65.8	65.8
Total Split (%)	45.2%	45.2%	45.2%	45.2%	54.8%	54.8%	54.8%	54.8%	54.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	46.9	46.9	46.9	46.9	56.8	56.8	56.8	56.8	56.8
Actuated g/C Ratio	0.41	0.41	0.41	0.41	0.49	0.49	0.49	0.49	0.49
v/c Ratio	0.12	0.13	0.96	0.42	0.87	0.44	0.27	0.62	0.95
Control Delay (s/veh)	24.2	22.2	67.7	23.1	115.7	20.8	2.8	30.2	48.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	24.2	22.2	67.7	23.1	115.7	20.8	2.8	30.2	48.3
LOS	C	C	E	C	F	C	A	C	D
Approach Delay (s/veh)		22.5		42.1		21.9			44.5
Approach LOS		C		D		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 36.9	Intersection LOS: D
Intersection Capacity Utilization 105.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	175	4	421	400	167	51	389	229	216	656	166
Future Volume (veh/h)	29	175	4	421	400	167	51	389	229	216	656	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	31	184	4	443	421	176	54	409	241	227	691	175
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	307	1457	32	499	1004	415	118	950	788	376	731	185
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.75	0.75	0.75	0.75	0.75	0.75
Sat Flow, veh/h	790	3613	78	1150	2489	1030	615	1900	1577	752	1462	370
Grp Volume(v), veh/h	31	92	96	443	304	293	54	409	241	227	0	866
Grp Sat Flow(s),veh/h/ln	790	1805	1886	1150	1805	1714	615	1900	1577	752	0	1833
Q Serve(g_s), s	2.7	2.6	2.6	45.8	10.7	10.9	10.4	9.5	5.9	24.4	0.0	48.7
Cycle Q Clear(g_c), s	13.6	2.6	2.6	48.4	10.7	10.9	59.1	9.5	5.9	34.0	0.0	48.7
Prop In Lane	1.00		0.04	1.00		0.60	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	307	728	761	499	728	691	118	950	788	376	0	916
V/C Ratio(X)	0.10	0.13	0.13	0.89	0.42	0.42	0.46	0.43	0.31	0.60	0.00	0.95
Avail Cap(c_a), veh/h	307	728	761	499	728	691	118	950	788	376	0	916
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.9	14.7	14.7	25.2	16.3	16.3	39.0	8.7	8.2	15.0	0.0	13.6
Incr Delay (d2), s/veh	0.1	0.1	0.1	17.5	0.4	0.4	2.8	0.3	0.2	2.7	0.0	17.9
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(50%),veh/ln	0.4	1.1	1.1	12.2	3.8	3.7	1.5	3.0	1.7	2.9	0.0	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.0	14.7	14.7	42.7	16.6	16.7	41.7	9.0	8.5	17.7	0.0	31.5
LnGrp LOS	C	B	B	D	B	B	D	A	A	B		C
Approach Vol, veh/h		219			1040			704			1093	
Approach Delay, s/veh		15.5			27.8			11.3			28.6	
Approach LOS		B			C			B			C	

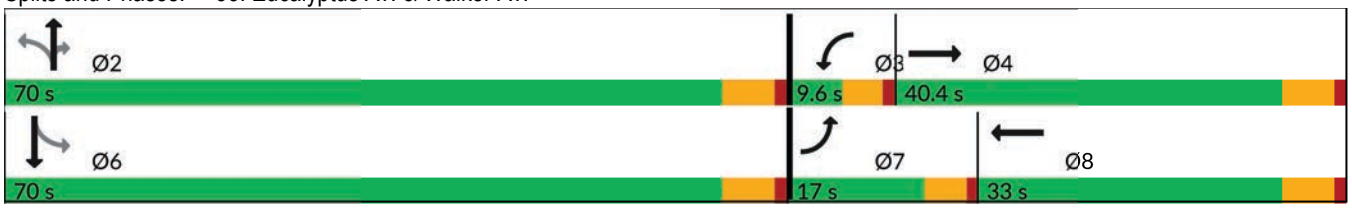
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		65.8		54.2		65.8		54.2				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		60.0		48.4		60.0		48.4				
Max Q Clear Time (g_c+I1), s		61.1		15.6		50.7		50.4				
Green Ext Time (p_c), s		0.0		1.2		4.7		0.0				

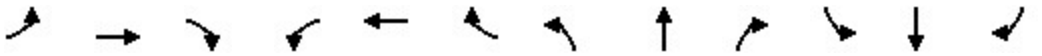
Intersection Summary												
HCM 7th Control Delay, s/veh			23.4									
HCM 7th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	201	291	20	381	194	218	13	82	278
Future Volume (vph)	201	291	20	381	194	218	13	82	278
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	7	4	3	8		2			6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	17.0	40.4	9.6	33.0	70.0	70.0	70.0	70.0	70.0
Total Split (%)	14.2%	33.7%	8.0%	27.5%	58.3%	58.3%	58.3%	58.3%	58.3%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.4	34.4	5.0	21.0	64.3	64.3	64.3	64.3	64.3
Actuated g/C Ratio	0.11	0.30	0.04	0.18	0.56	0.56	0.56	0.56	0.56
v/c Ratio	1.08	0.36	0.27	0.76	1.00	0.21	0.01	0.14	0.73
Control Delay (s/veh)	135.5	30.5	63.1	49.8	92.3	13.6	0.0	13.5	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	135.5	30.5	63.1	49.8	92.3	13.6	0.0	13.5	21.5
LOS	F	C	E	D	F	B	A	B	C
Approach Delay (s/veh)		67.7		50.3		49.1			20.6
Approach LOS		E		D		D			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay (s/veh): 44.2	Intersection LOS: D
Intersection Capacity Utilization 95.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 33: Eucalyptus Av. & Walker Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	291	77	20	381	97	194	218	13	82	278	423
Future Volume (veh/h)	201	291	77	20	381	97	194	218	13	82	278	423
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	212	306	81	21	401	60	204	229	14	86	293	234
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	253	831	216	43	557	83	340	866	734	548	446	356
Arrive On Green	0.21	0.44	0.44	0.04	0.27	0.27	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1810	2832	737	1810	3142	466	843	1900	1610	1094	978	781
Grp Volume(v), veh/h	212	193	194	21	229	232	204	229	14	86	0	527
Grp Sat Flow(s),veh/h/ln	1810	1805	1764	1810	1805	1804	843	1900	1610	1094	0	1759
Q Serve(g_s), s	8.0	5.1	5.3	0.8	8.2	8.4	15.6	3.3	0.2	2.5	0.0	12.3
Cycle Q Clear(g_c), s	8.0	5.1	5.3	0.8	8.2	8.4	27.9	3.3	0.2	5.8	0.0	12.3
Prop In Lane	1.00		0.42	1.00		0.26	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	253	530	518	43	320	320	340	866	734	548	0	802
V/C Ratio(X)	0.84	0.36	0.37	0.49	0.72	0.73	0.60	0.26	0.02	0.16	0.00	0.66
Avail Cap(c_a), veh/h	314	875	855	127	688	687	714	1709	1448	1034	0	1583
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.4	15.5	15.6	34.0	24.6	24.6	16.1	6.7	6.2	7.8	0.0	8.1
Incr Delay (d2), s/veh	14.8	0.4	0.4	8.2	3.0	3.1	1.7	0.2	0.0	0.1	0.0	0.9
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(50%),veh/ln	4.0	1.8	1.9	0.4	3.3	3.3	2.1	1.1	0.1	0.4	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.2	16.0	16.0	42.2	27.5	27.7	17.8	6.8	6.2	7.9	0.0	9.0
LnGrp LOS	D	B	B	D	C	C	B	A	A	A		A
Approach Vol, veh/h		599			482			447			613	
Approach Delay, s/veh		25.3			28.3			11.8			8.9	
Approach LOS		C			C			B			A	

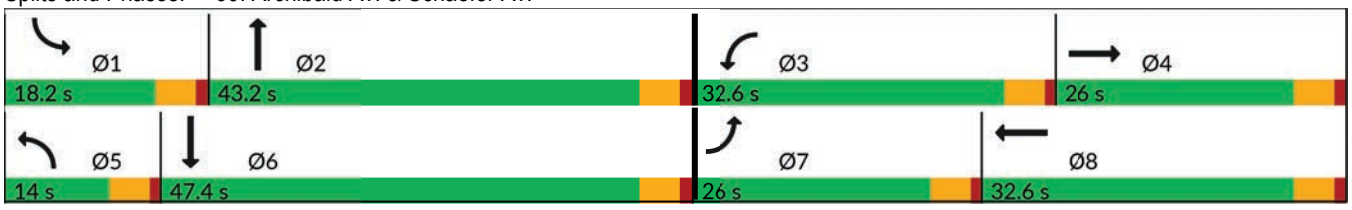
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		38.3	6.3	26.7		38.3	14.6	18.5				
Change Period (Y+Rc), s		5.8	4.6	5.8		5.8	4.6	5.8				
Max Green Setting (Gmax), s		64.2	5.0	34.6		64.2	12.4	27.2				
Max Q Clear Time (g_c+I1), s		29.9	2.8	7.3		14.3	10.0	10.4				
Green Ext Time (p_c), s		2.7	0.0	2.2		3.7	0.1	2.3				

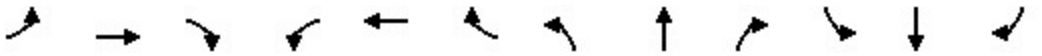
Intersection Summary												
HCM 7th Control Delay, s/veh			18.4									
HCM 7th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	231	73	77	50	75	977	92	915
Future Volume (vph)	231	73	77	50	75	977	92	915
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	26.0	26.0	32.6	32.6	14.0	43.2	18.2	47.4
Total Split (%)	21.7%	21.7%	27.2%	27.2%	11.7%	36.0%	15.2%	39.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.4	16.7	12.2	12.2	8.9	32.8	9.8	33.9
Actuated g/C Ratio	0.21	0.19	0.14	0.14	0.10	0.37	0.11	0.38
v/c Ratio	0.69	0.28	0.35	0.55	0.46	0.57	0.52	0.80
Control Delay (s/veh)	49.1	35.2	43.5	28.4	55.6	26.1	54.7	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.1	35.2	43.5	28.4	55.6	26.1	54.7	31.8
LOS	D	D	D	C	E	C	D	C
Approach Delay (s/veh)		45.2		33.3		28.1		33.7
Approach LOS		D		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay (s/veh): 32.8	Intersection LOS: C
Intersection Capacity Utilization 71.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	73	19	77	50	108	75	977	45	92	915	110
Future Volume (veh/h)	231	73	19	77	50	108	75	977	45	92	915	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	243	77	20	81	53	101	79	1028	47	97	963	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	292	333	86	105	70	134	100	1808	83	123	1198	144
Arrive On Green	0.26	0.34	0.34	0.09	0.18	0.18	0.09	0.53	0.53	0.11	0.55	0.55
Sat Flow, veh/h	1714	1454	378	1714	585	1115	1714	5077	232	1714	3244	391
Grp Volume(v), veh/h	243	0	97	81	0	154	79	700	375	97	536	543
Grp Sat Flow(s),veh/h/ln	1714	0	1832	1714	0	1699	1714	1729	1850	1714	1805	1830
Q Serve(g_s), s	8.7	0.0	2.5	3.0	0.0	5.6	2.9	8.8	8.8	3.6	15.5	15.6
Cycle Q Clear(g_c), s	8.7	0.0	2.5	3.0	0.0	5.6	2.9	8.8	8.8	3.6	15.5	15.6
Prop In Lane	1.00		0.21	1.00		0.66	1.00		0.13	1.00		0.21
Lane Grp Cap(c), veh/h	292	0	419	105	0	204	100	1231	659	123	667	676
V/C Ratio(X)	0.83	0.00	0.23	0.77	0.00	0.76	0.79	0.57	0.57	0.79	0.80	0.80
Avail Cap(c_a), veh/h	563	0	602	737	0	730	247	2048	1096	358	1186	1202
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	17.3	29.2	0.0	25.8	29.3	11.8	11.8	28.6	12.6	12.6
Incr Delay (d2), s/veh	6.2	0.0	0.3	11.4	0.0	5.6	12.8	0.4	0.8	4.2	2.3	2.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.9	1.4	0.0	2.3	1.4	2.3	2.6	1.4	4.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.6	0.0	17.6	40.6	0.0	31.5	42.2	12.2	12.6	32.8	14.9	14.9
LnGrp LOS	C		B	D		C	D	B	B	C	B	B
Approach Vol, veh/h		340			235			1154			1176	
Approach Delay, s/veh		26.2			34.6			14.4			16.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	27.8	8.6	19.5	8.4	28.7	15.7	12.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	13.6	38.6	28.0	21.4	9.4	42.8	21.4	28.0
Max Q Clear Time (g_c+I1), s	5.6	10.8	5.0	4.5	4.9	17.6	10.7	7.6
Green Ext Time (p_c), s	0.1	6.7	0.2	0.3	0.0	6.5	0.5	0.7

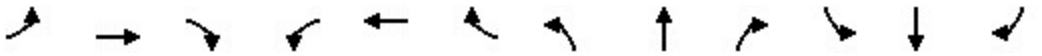
Intersection Summary	
HCM 7th Control Delay, s/veh	18.2
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	871	136	425	953	197	155	760	398	189	742	143
Future Volume (vph)	85	871	136	425	953	197	155	760	398	189	742	143
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	10.2	39.2		18.0	47.0	47.0	14.0	43.2		19.6	48.8	48.8
Total Split (%)	8.5%	32.7%		15.0%	39.2%	39.2%	11.7%	36.0%		16.3%	40.7%	40.7%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	5.6	27.6	104.2	13.6	38.1	38.1	9.6	29.5	104.2	14.8	34.7	34.7
Actuated g/C Ratio	0.05	0.26	1.00	0.13	0.37	0.37	0.09	0.28	1.00	0.14	0.33	0.33
v/c Ratio	0.53	0.67	0.09	1.09	0.76	0.29	1.04	0.78	0.26	0.82	0.65	0.24
Control Delay (s/veh)	63.9	37.0	0.1	115.9	34.9	5.3	133.1	41.0	0.4	73.0	32.8	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.9	37.0	0.1	115.9	34.9	5.3	133.1	41.0	0.4	73.0	32.8	6.3
LOS	E	D	A	F	C	A	F	D	A	E	C	A
Approach Delay (s/veh)		34.5			53.0			39.5			36.3	
Approach LOS		C			D			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay (s/veh): 42.0	Intersection LOS: D
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 40: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	871	136	425	953	197	155	760	398	189	742	143
Future Volume (veh/h)	85	871	136	425	953	197	155	760	398	189	742	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	89	917	0	447	1003	195	163	800	0	199	781	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	157	1237		471	1223	539	181	978		231	1083	483
Arrive On Green	0.07	0.36	0.00	0.23	0.51	0.51	0.16	0.41	0.00	0.20	0.45	0.45
Sat Flow, veh/h	3141	5187	1610	3141	3610	1590	1714	3610	1610	1714	3610	1610
Grp Volume(v), veh/h	89	917	0	447	1003	195	163	800	0	199	781	93
Grp Sat Flow(s),veh/h/ln	1570	1729	1610	1570	1805	1590	1714	1805	1610	1714	1805	1610
Q Serve(g_s), s	2.4	13.8	0.0	12.5	20.9	6.6	8.3	17.6	0.0	10.0	15.7	3.1
Cycle Q Clear(g_c), s	2.4	13.8	0.0	12.5	20.9	6.6	8.3	17.6	0.0	10.0	15.7	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	1237		471	1223	539	181	978		231	1083	483
V/C Ratio(X)	0.57	0.74		0.95	0.82	0.36	0.90	0.82		0.86	0.72	0.19
Avail Cap(c_a), veh/h	197	2010		471	1715	755	181	1561		288	1787	797
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	26.3	0.0	34.2	19.7	16.1	37.1	24.5	0.0	34.8	21.5	18.0
Incr Delay (d2), s/veh	1.2	0.9	0.0	28.4	2.3	0.4	39.9	1.9	0.0	16.7	0.9	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(50%),veh/ln	0.9	4.7	0.0	5.9	6.3	2.1	5.1	5.8	0.0	4.7	5.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.6	27.2	0.0	62.7	21.9	16.6	77.0	26.5	0.0	51.6	22.4	18.2
LnGrp LOS	D	C		E	C	B	E	C		D	C	B
Approach Vol, veh/h		1006			1645			963			1073	
Approach Delay, s/veh		28.4			32.4			35.0			27.5	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	28.8	18.0	25.9	14.0	31.4	9.0	34.8
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	15.0	38.6	13.4	34.6	9.4	44.2	5.6	42.4
Max Q Clear Time (g_c+I1), s	12.0	19.6	14.5	15.8	10.3	17.7	4.4	22.9
Green Ext Time (p_c), s	0.1	4.6	0.0	5.5	0.0	5.2	0.0	7.0

Intersection Summary	
HCM 7th Control Delay, s/veh	30.9
HCM 7th LOS	C

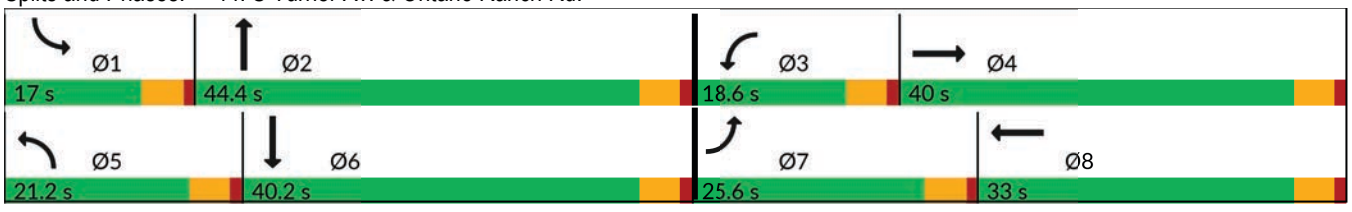
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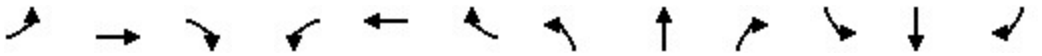
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	275	1586	169	1553	204	377	156	259
Future Volume (vph)	275	1586	169	1553	204	377	156	259
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	9.6	23.8
Total Split (s)	25.6	40.0	18.6	33.0	21.2	44.4	17.0	40.2
Total Split (%)	21.3%	33.3%	15.5%	27.5%	17.7%	37.0%	14.2%	33.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.0	35.7	13.7	28.4	16.3	39.8	12.4	35.9
Actuated g/C Ratio	0.18	0.30	0.11	0.24	0.14	0.33	0.10	0.30
v/c Ratio	0.97	0.86	0.91	1.04	0.93	0.98	0.93	0.81
Control Delay (s/veh)	93.9	43.9	97.8	75.5	94.6	71.5	105.8	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	93.9	43.9	97.8	75.5	94.6	71.5	105.8	49.4
LOS	F	D	F	E	F	E	F	D
Approach Delay (s/veh)		50.5		77.5		77.6		64.6
Approach LOS		D		E		E		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay (s/veh): 65.6	Intersection LOS: E
Intersection Capacity Utilization 98.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	1586	234	169	1553	201	204	377	192	156	259	166
Future Volume (veh/h)	275	1586	234	169	1553	201	204	377	192	156	259	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	289	1669	239	178	1635	205	215	397	176	164	273	157
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	301	1923	275	201	1566	196	238	409	181	178	334	192
Arrive On Green	0.26	0.44	0.44	0.18	0.36	0.36	0.21	0.49	0.49	0.16	0.44	0.44
Sat Flow, veh/h	1714	6500	931	1714	6600	827	1714	1240	550	1714	1132	651
Grp Volume(v), veh/h	289	1464	444	178	1412	428	215	0	573	164	0	430
Grp Sat Flow(s),veh/h/ln	1714	1900	1731	1714	1900	1727	1714	0	1789	1714	0	1783
Q Serve(g_s), s	19.9	27.8	27.8	12.1	28.4	28.4	14.6	0.0	37.3	11.3	0.0	25.2
Cycle Q Clear(g_c), s	19.9	27.8	27.8	12.1	28.4	28.4	14.6	0.0	37.3	11.3	0.0	25.2
Prop In Lane	1.00		0.54	1.00		0.48	1.00		0.31	1.00		0.37
Lane Grp Cap(c), veh/h	301	1686	512	201	1353	410	238	0	590	178	0	525
V/C Ratio(X)	0.96	0.87	0.87	0.89	1.04	1.04	0.90	0.00	0.97	0.92	0.00	0.82
Avail Cap(c_a), veh/h	301	1686	512	201	1353	410	238	0	595	178	0	530
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.7	31.2	31.2	48.6	38.5	38.5	46.6	0.0	29.7	50.1	0.0	30.6
Incr Delay (d2), s/veh	40.9	5.1	14.7	33.7	36.7	56.4	33.2	0.0	29.5	45.3	0.0	9.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	11.2	11.6	6.6	15.8	16.7	7.8	0.0	17.5	6.7	0.0	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	84.6	36.3	45.9	82.3	75.3	94.9	79.8	0.0	59.2	95.4	0.0	40.3
LnGrp LOS	F	D	D	F	F	F	E		E	F		D
Approach Vol, veh/h		2197			2018			788			594	
Approach Delay, s/veh		44.6			80.0			64.8			55.5	
Approach LOS		D			F			E			E	

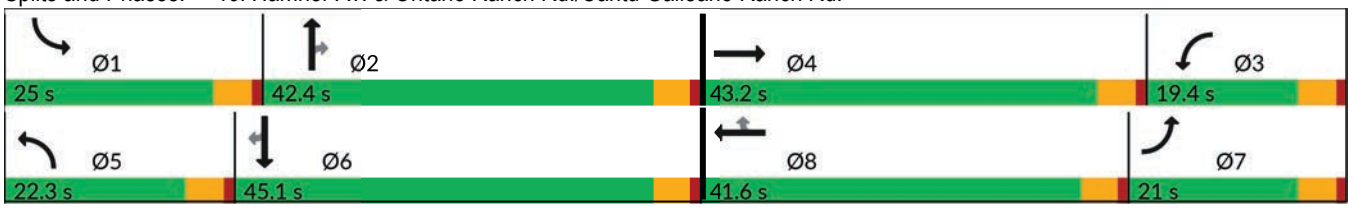
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	44.1	18.6	40.0	21.2	39.9	25.6	33.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	12.4	39.8	14.0	35.4	16.6	35.6	21.0	28.4
Max Q Clear Time (g_c+I1), s	13.3	39.3	14.1	29.8	16.6	27.2	21.9	30.4
Green Ext Time (p_c), s	0.0	0.2	0.0	4.5	0.0	1.6	0.0	0.0

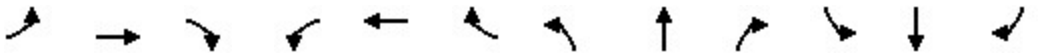
Intersection Summary	
HCM 7th Control Delay, s/veh	61.4
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	541	1837	284	964	301	273	1657	622	706	423	263
Future Volume (vph)	541	1837	284	964	301	273	1657	622	706	423	263
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6
Total Split (s)	21.0	43.2	19.4	41.6	41.6	22.3	42.4	42.4	25.0	45.1	45.1
Total Split (%)	16.2%	33.2%	14.9%	32.0%	32.0%	17.2%	32.6%	32.6%	19.2%	34.7%	34.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.3	38.6	14.1	31.4	31.4	15.0	37.8	37.8	20.4	43.2	43.2
Actuated g/C Ratio	0.16	0.30	0.11	0.24	0.24	0.12	0.29	0.29	0.16	0.33	0.33
v/c Ratio	1.04	0.90	0.82	0.71	0.52	0.74	1.01	1.00	1.41	0.23	0.39
Control Delay (s/veh)	100.1	49.5	75.3	47.5	10.1	67.3	70.2	65.9	236.1	32.0	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.1	49.5	75.3	47.5	10.1	67.3	70.2	65.9	236.1	32.0	7.1
LOS	F	D	E	D	B	E	E	E	F	C	A
Approach Delay (s/veh)		60.3		45.3			68.9			130.8	
Approach LOS		E		D			E			F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 129.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.41	
Intersection Signal Delay (s/veh): 72.4	Intersection LOS: E
Intersection Capacity Utilization 108.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 46: Hamner Av. & Ontario Ranch Rd./Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	541	1837	154	284	964	301	273	1657	622	706	423	263
Future Volume (veh/h)	541	1837	154	284	964	301	273	1657	622	706	423	263
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1768	1976	1976	1768	1976	1976	1768	1976	1976	1768	1976	1976
Adj Flow Rate, veh/h	569	1934	83	299	1015	238	287	1744	329	743	445	277
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	599	2183	94	346	1274	360	337	1776	502	545	2142	597
Arrive On Green	0.36	0.58	0.58	0.21	0.43	0.43	0.20	0.60	0.60	0.32	0.72	0.72
Sat Flow, veh/h	3368	7523	323	3368	5928	1675	3368	5928	1675	3368	5928	1653
Grp Volume(v), veh/h	569	1524	493	299	1015	238	287	1744	329	743	445	277
Grp Sat Flow(s),veh/h/ln	1684	1976	1918	1684	1976	1675	1684	1976	1675	1684	1976	1653
Q Serve(g_s), s	20.7	28.0	28.0	10.8	18.7	10.0	10.4	36.1	12.3	20.4	3.1	5.4
Cycle Q Clear(g_c), s	20.7	28.0	28.0	10.8	18.7	10.0	10.4	36.1	12.3	20.4	3.1	5.4
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	599	1720	556	346	1274	360	337	1776	502	545	2142	597
V/C Ratio(X)	0.95	0.89	0.89	0.87	0.80	0.66	0.85	0.98	0.66	1.36	0.21	0.46
Avail Cap(c_a), veh/h	599	1814	587	395	1739	491	473	1776	502	545	2142	597
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	24.7	24.7	49.3	33.6	15.9	49.6	24.9	11.8	42.7	11.6	4.6
Incr Delay (d2), s/veh	24.7	5.5	14.7	14.9	1.9	2.1	7.7	17.2	3.1	175.5	0.0	0.6
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(50%),veh/ln	8.4	8.3	9.4	4.7	6.8	4.6	4.2	12.0	4.6	19.8	1.2	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.8	30.2	39.3	64.1	35.5	18.0	57.2	42.1	14.9	218.2	11.6	5.1
LnGrp LOS	E	C	D	E	D	B	E	D	B	F	B	A
Approach Vol, veh/h		2586			1552			2360			1465	
Approach Delay, s/veh		39.5			38.3			40.1			115.1	
Approach LOS		D			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	42.4	17.5	41.2	17.2	50.2	27.0	31.7
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	20.4	37.8	14.8	38.6	17.7	40.5	16.4	37.0
Max Q Clear Time (g_c+I1), s	22.4	38.1	12.8	30.0	12.4	7.4	22.7	20.7
Green Ext Time (p_c), s	0.0	0.0	0.1	6.6	0.3	3.8	0.0	6.4

Intersection Summary	
HCM 7th Control Delay, s/veh	53.4
HCM 7th LOS	D

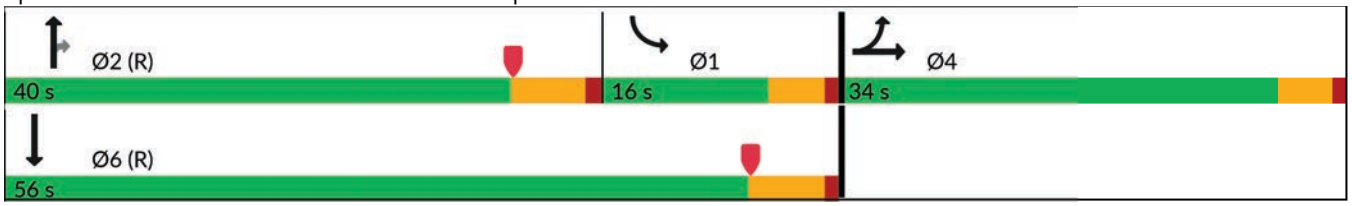
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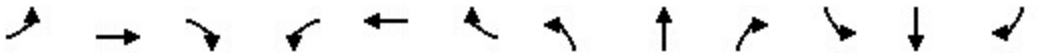
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	363	1	1389	841	394	1853
Future Volume (vph)	363	1	1389	841	394	1853
Turn Type	Split	NA	NA	Perm	Prot	NA
Protected Phases	4	4	2		1	6
Permitted Phases				2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	9.6	29.0	29.0	14.7	27.0
Total Split (s)	34.0	34.0	40.0	40.0	16.0	56.0
Total Split (%)	37.8%	37.8%	44.4%	44.4%	17.8%	62.2%
Yellow Time (s)	3.6	3.6	5.0	5.0	3.7	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.0	6.0	4.7	6.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	29.4	29.4	34.0	34.0	11.3	50.0
Actuated g/C Ratio	0.33	0.33	0.38	0.38	0.13	0.56
v/c Ratio	0.65	1.17	1.07	0.80	1.06	0.97
Control Delay (s/veh)	32.7	127.6	75.1	9.6	71.5	24.6
Queue Delay	0.1	0.1	0.0	0.0	0.0	42.0
Total Delay (s/veh)	32.8	127.7	75.1	9.6	71.5	66.6
LOS	C	F	E	A	E	E
Approach Delay (s/veh)		92.8	50.4			67.4
Approach LOS		F	D			E

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 70 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay (s/veh): 64.6	Intersection LOS: E
Intersection Capacity Utilization 155.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Euclid Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	363	1	525	0	0	0	0	1389	841	394	1853	0
Future Volume (veh/h)	363	1	525	0	0	0	0	1389	841	394	1853	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99				1.00		0.98	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	1800	1900	1900				0	1900	1900	1700	1900	0
Adj Flow Rate, veh/h	382	1	494				0	1462	726	415	1951	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	560	1	518				0	1364	599	1342	3147	0
Arrive On Green	0.33	0.33	0.33				0.00	0.38	0.38	0.43	0.87	0.00
Sat Flow, veh/h	1714	3	1586				0	3705	1586	3141	3705	0
Grp Volume(v), veh/h	382	0	495				0	1462	726	415	1951	0
Grp Sat Flow(s),veh/h/ln	1714	0	1589				0	1805	1586	1570	1805	0
Q Serve(g_s), s	17.4	0.0	27.4				0.0	34.0	34.0	7.8	13.6	0.0
Cycle Q Clear(g_c), s	17.4	0.0	27.4				0.0	34.0	34.0	7.8	13.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	560	0	519				0	1364	599	1342	3147	0
V/C Ratio(X)	0.68	0.00	0.95				0.00	1.07	1.21	0.31	0.62	0.00
Avail Cap(c_a), veh/h	560	0	519				0	1364	599	1342	3147	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	1.00				0.00	0.09	0.09	0.09	0.09	0.00
Uniform Delay (d), s/veh	26.3	0.0	29.6				0.0	28.0	28.0	17.0	1.6	0.0
Incr Delay (d2), s/veh	3.4	0.0	28.2				0.0	34.1	96.9	0.0	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
%ile BackOfQ(50%),veh/ln	7.4	0.0	14.1				0.0	19.6	27.7	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.6	0.0	57.8				0.0	62.1	124.9	17.0	1.7	0.0
LnGrp LOS	C		E					F	F	B	A	
Approach Vol, veh/h		877						2188			2366	
Approach Delay, s/veh		45.5						82.9			4.4	
Approach LOS		D						F			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	44.6	40.0		34.0		84.6
Change Period (Y+Rc), s	6.0	* 6		4.6		6.0
Max Green Setting (Gmax), s	11.3	* 34		29.4		50.0
Max Q Clear Time (g_c+I1), s	9.8	36.0		29.4		15.6
Green Ext Time (p_c), s	0.2	0.0		0.0		26.1

Intersection Summary	
HCM 7th Control Delay, s/veh	42.7
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

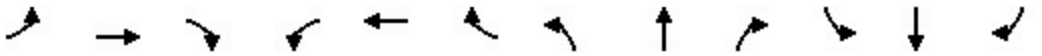
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	313	714	61	495	146	1499	382	1673
Future Volume (vph)	313	714	61	495	146	1499	382	1673
Turn Type	Perm	NA	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		8		2	1	6
Permitted Phases	4		8		2			
Detector Phase	4	4	8	8	2	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.8	26.8	26.8	26.8	36.8	36.8	35.6	36.8
Total Split (s)	45.0	45.0	45.0	45.0	39.4	39.4	35.6	75.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	32.8%	32.8%	29.7%	62.5%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.6	5.8
Lead/Lag					Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	39.3	39.3	39.3	39.3	36.2	36.2	18.5	59.3
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.33	0.33	0.17	0.54
v/c Ratio	2.37	0.79	0.83	0.62	1.29	0.96	0.77	0.75
Control Delay (s/veh)	657.7	37.8	102.3	29.7	216.4	51.6	54.3	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	657.7	37.8	102.3	29.7	216.4	51.6	54.3	21.0
LOS	F	D	F	C	F	D	D	C
Approach Delay (s/veh)		192.8		35.1		65.8		26.5
Approach LOS		F		D		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.37	
Intersection Signal Delay (s/veh): 72.8	Intersection LOS: E
Intersection Capacity Utilization 106.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 3: Euclid Av. & Walnut St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	714	223	61	495	250	146	1499	53	382	1673	273
Future Volume (veh/h)	313	714	223	61	495	250	146	1499	53	382	1673	273
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1700	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	329	752	213	64	521	158	154	1578	29	402	1761	260
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	257	1038	294	167	1024	309	250	1686	31	466	2348	344
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.48	0.48	0.48	0.22	0.77	0.77
Sat Flow, veh/h	732	2767	784	560	2730	824	372	5244	96	3141	4567	670
Grp Volume(v), veh/h	329	491	474	64	344	335	154	1041	566	402	1330	691
Grp Sat Flow(s),veh/h/ln	732	1805	1746	560	1805	1749	186	1729	1882	1570	1729	1779
Q Serve(g_s), s	26.9	21.0	21.0	10.6	12.2	12.3	31.5	29.7	29.7	12.9	21.8	22.3
Cycle Q Clear(g_c), s	39.2	21.0	21.0	31.6	12.2	12.3	33.6	29.7	29.7	12.9	21.8	22.3
Prop In Lane	1.00		0.45	1.00		0.47	1.00		0.05	1.00		0.38
Lane Grp Cap(c), veh/h	257	677	655	167	677	656	250	1112	605	466	1777	914
V/C Ratio(X)	1.28	0.72	0.72	0.38	0.51	0.51	0.62	0.94	0.94	0.86	0.75	0.76
Avail Cap(c_a), veh/h	257	677	655	167	677	656	250	1112	605	932	2289	1178
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	18.9	18.9	30.5	17.0	17.0	32.4	26.0	26.0	39.6	8.3	8.4
Incr Delay (d2), s/veh	152.2	3.9	4.0	1.4	0.6	0.7	4.5	14.3	22.2	1.9	1.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	6.9	6.7	1.3	4.2	4.1	2.0	11.4	13.7	4.5	4.3	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	184.8	22.7	22.9	32.0	17.6	17.6	36.9	40.3	48.2	41.5	9.3	10.5
LnGrp LOS	F	C	C	C	B	B	D	D	D	D	A	B
Approach Vol, veh/h		1294			743			1761			2423	
Approach Delay, s/veh		64.0			18.9			42.6			15.0	
Approach LOS		E			B			D			B	

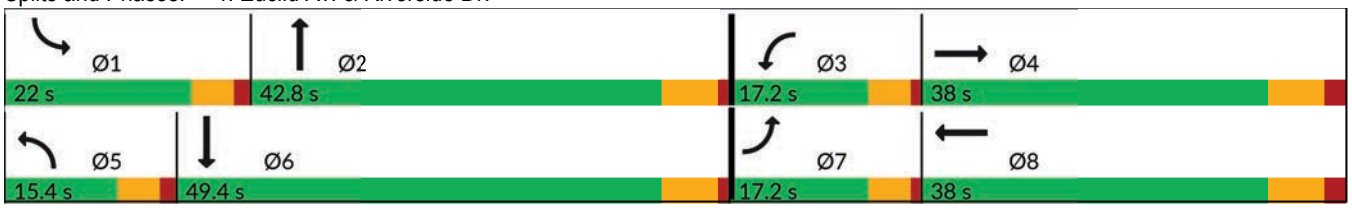
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	20.1	39.4		45.0		59.5		45.0				
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s	31.0	33.6		39.2		69.2		39.2				
Max Q Clear Time (g_c+I1), s	14.9	35.6		41.2		24.3		33.6				
Green Ext Time (p_c), s	0.7	0.0		0.0		21.7		2.1				

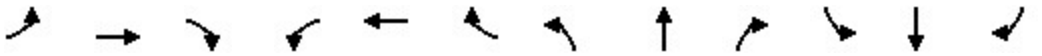
Intersection Summary												
HCM 7th Control Delay, s/veh			33.4									
HCM 7th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	152	452	142	560	89	1333	232	1290
Future Volume (vph)	152	452	142	560	89	1333	232	1290
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	12.0	12.0	12.0	12.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.7	33.0	16.7	37.0	15.2	33.0	15.2	36.0
Total Split (s)	17.2	38.0	17.2	38.0	15.4	42.8	22.0	49.4
Total Split (%)	14.3%	31.7%	14.3%	31.7%	12.8%	35.7%	18.3%	41.2%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.0	3.7	5.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.5	1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	4.7	7.0	5.2	6.0	5.2	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.4	31.0	12.4	31.0	10.2	36.8	16.8	43.4
Actuated g/C Ratio	0.10	0.26	0.10	0.26	0.09	0.31	0.14	0.36
v/c Ratio	0.90	1.11	0.84	0.77	0.65	1.06	1.02	0.95
Control Delay (s/veh)	100.4	115.1	89.7	46.5	74.4	78.7	114.5	47.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.4	115.1	89.7	46.5	74.4	78.7	114.5	47.4
LOS	F	F	F	D	E	E	F	D
Approach Delay (s/veh)		111.7		54.0		78.4		55.6
Approach LOS		F		D		E		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay (s/veh): 70.3	Intersection LOS: E
Intersection Capacity Utilization 101.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 4: Euclid Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	452	59	142	560	113	89	1333	243	232	1290	373
Future Volume (veh/h)	152	452	59	142	560	113	89	1333	243	232	1290	373
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	160	476	40	149	589	80	94	1403	168	244	1358	301
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	179	448	38	173	815	110	137	1441	173	241	1560	345
Arrive On Green	0.16	0.39	0.39	0.15	0.38	0.38	0.12	0.46	0.46	0.21	0.55	0.55
Sat Flow, veh/h	1714	1726	145	1714	3187	432	1714	4682	561	1714	4235	937
Grp Volume(v), veh/h	160	0	516	149	333	336	94	1036	535	244	1108	551
Grp Sat Flow(s),veh/h/ln	1714	0	1872	1714	1805	1813	1714	1729	1785	1714	1729	1715
Q Serve(g_s), s	10.9	0.0	31.0	10.1	18.8	18.9	6.3	35.0	35.0	16.8	33.0	33.1
Cycle Q Clear(g_c), s	10.9	0.0	31.0	10.1	18.8	18.9	6.3	35.0	35.0	16.8	33.0	33.1
Prop In Lane	1.00		0.08	1.00		0.24	1.00		0.31	1.00		0.55
Lane Grp Cap(c), veh/h	179	0	485	173	461	463	137	1064	549	241	1274	632
V/C Ratio(X)	0.89	0.00	1.06	0.86	0.72	0.72	0.69	0.97	0.97	1.01	0.87	0.87
Avail Cap(c_a), veh/h	179	0	485	179	468	470	146	1064	549	241	1274	632
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	0.0	36.5	49.9	33.2	33.3	51.2	31.7	31.7	47.2	24.3	24.3
Incr Delay (d2), s/veh	37.7	0.0	58.7	30.1	5.8	5.9	11.7	21.3	31.7	61.4	6.8	12.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	19.8	5.5	7.7	7.8	3.0	14.3	16.4	10.5	11.4	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	87.4	0.0	95.3	80.0	39.0	39.2	62.8	53.0	63.4	108.5	31.0	37.0
LnGrp LOS	F		F	F	D	D	E	D	E	F	C	D
Approach Vol, veh/h		676			818			1665			1903	
Approach Delay, s/veh		93.4			46.6			56.9			42.7	
Approach LOS		F			D			E			D	

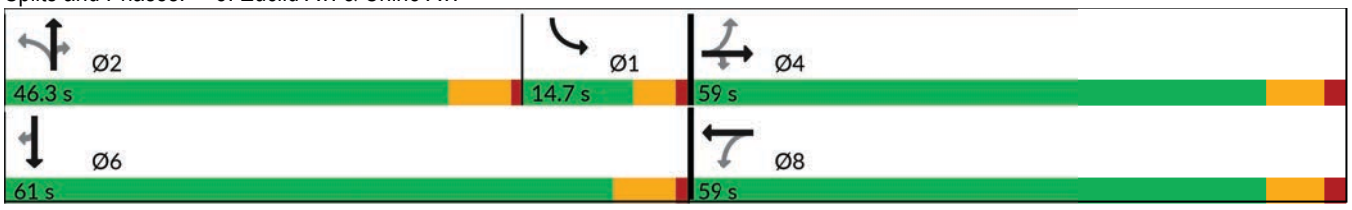
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	42.8	16.8	38.0	14.8	50.0	17.2	37.6
Change Period (Y+Rc), s	5.2	6.0	4.7	7.0	5.2	6.0	4.7	7.0
Max Green Setting (Gmax), s	16.8	36.8	12.5	31.0	10.2	43.4	12.5	31.0
Max Q Clear Time (g_c+I1), s	18.8	37.0	12.1	33.0	8.3	35.1	12.9	20.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.8	0.0	3.6

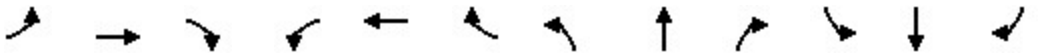
Intersection Summary	
HCM 7th Control Delay, s/veh	54.8
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	168	678	50	106	156	45	1465	247	92	1356	82
Future Volume (vph)	168	678	50	106	156	45	1465	247	92	1356	82
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		2		1	6	
Permitted Phases	4		4	8		2		2			6
Detector Phase	4	4	4	8	8	2	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	35.2	35.2	28.5	28.5	28.5	14.7	34.5	34.5
Total Split (s)	59.0	59.0	59.0	59.0	59.0	46.3	46.3	46.3	14.7	61.0	61.0
Total Split (%)	49.2%	49.2%	49.2%	49.2%	49.2%	38.6%	38.6%	38.6%	12.3%	50.8%	50.8%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.5	5.5	5.5	3.7	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	7.2	7.2	7.2	6.5	6.5	6.5	4.7	6.5	6.5
Lead/Lag						Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	Min	None	Min	Min
Act Effct Green (s)	51.8	51.8	51.8	51.8	51.8	39.8	39.8	39.8	10.0	54.5	54.5
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.43	0.33	0.33	0.33	0.08	0.45	0.45
v/c Ratio	0.40	0.87	0.07	1.35	0.31	0.78	1.29	0.43	0.68	0.87	0.12
Control Delay (s/veh)	27.0	44.1	1.1	248.9	21.1	106.8	170.7	21.7	77.7	36.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.0	44.1	1.1	248.9	21.1	106.8	170.7	21.7	77.7	36.7	8.7
LOS	C	D	A	F	C	F	F	C	E	D	A
Approach Delay (s/veh)		38.5			92.8		148.1			37.7	
Approach LOS		D			F		F			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay (s/veh): 84.9	Intersection LOS: F
Intersection Capacity Utilization 114.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Euclid Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	678	50	106	156	76	45	1465	247	92	1356	82
Future Volume (veh/h)	168	678	50	106	156	76	45	1465	247	92	1356	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	177	714	40	112	164	74	47	1542	207	97	1427	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	463	811	687	139	529	239	69	1183	528	136	1663	723
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.49	0.49	0.49	0.12	0.69	0.69
Sat Flow, veh/h	1099	1900	1610	683	1240	559	341	3610	1610	1714	3610	1570
Grp Volume(v), veh/h	177	714	40	112	0	238	47	1542	207	97	1427	60
Grp Sat Flow(s),veh/h/ln	1099	1900	1610	683	0	1799	341	1805	1610	1714	1805	1570
Q Serve(g_s), s	11.6	37.7	1.1	14.1	0.0	7.2	3.3	39.8	9.8	6.6	36.5	1.5
Cycle Q Clear(g_c), s	18.8	37.7	1.1	51.8	0.0	7.2	39.8	39.8	9.8	6.6	36.5	1.5
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	463	811	687	139	0	768	69	1183	528	136	1663	723
V/C Ratio(X)	0.38	0.88	0.06	0.81	0.00	0.31	0.68	1.30	0.39	0.71	0.86	0.08
Avail Cap(c_a), veh/h	463	811	687	139	0	768	69	1183	528	141	1663	723
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	19.3	12.7	42.7	0.0	13.8	50.4	30.9	23.2	52.2	15.8	10.4
Incr Delay (d2), s/veh	0.5	11.1	0.0	28.4	0.0	0.2	24.5	142.7	0.5	12.8	4.7	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(50%),veh/ln	2.4	14.2	0.4	4.3	0.0	2.6	1.8	36.4	3.3	3.1	8.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.6	30.4	12.8	71.2	0.0	14.1	74.9	173.5	23.7	64.9	20.5	10.4
LnGrp LOS	B	C	B	E		B	E	F	C	E	C	B
Approach Vol, veh/h		931			350			1796			1584	
Approach Delay, s/veh		27.4			32.3			153.7			22.8	
Approach LOS		C			C			F			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.1	46.3		59.0		62.4		59.0				
Change Period (Y+Rc), s	6.5	* 6.5		7.2		6.5		7.2				
Max Green Setting (Gmax), s	10.0	* 40		51.8		54.5		51.8				
Max Q Clear Time (g_c+I1), s	8.6	41.8		39.7		38.5		53.8				
Green Ext Time (p_c), s	0.0	0.0		4.4		8.5		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	74.9	
HCM 7th LOS	E	

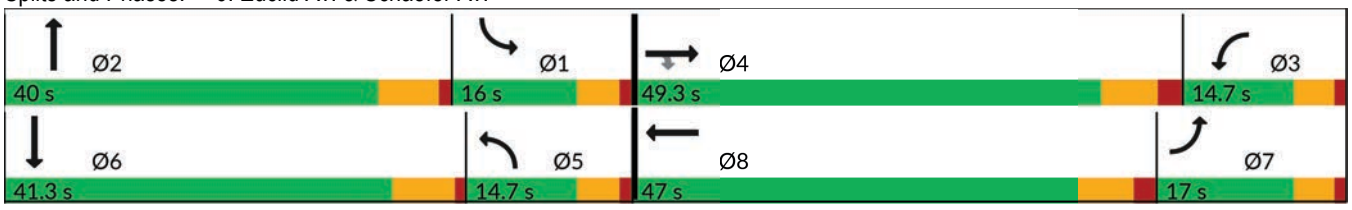
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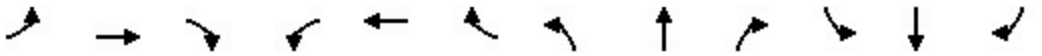
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	218	608	141	109	176	89	1420	207	1237
Future Volume (vph)	218	608	141	109	176	89	1420	207	1237
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	45.0	45.0	14.7	47.0	14.7	29.5	14.7	37.5
Total Split (s)	17.0	49.3	49.3	14.7	47.0	14.7	40.0	16.0	41.3
Total Split (%)	14.2%	41.1%	41.1%	12.3%	39.2%	12.3%	33.3%	13.3%	34.4%
Yellow Time (s)	3.7	5.0	5.0	3.7	5.0	3.7	5.5	3.7	5.5
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.7	7.0	4.7	6.5	4.7	6.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	24.4	41.4	41.4	10.0	27.0	10.6	33.5	11.3	34.2
Actuated g/C Ratio	0.20	0.35	0.35	0.08	0.23	0.09	0.28	0.09	0.29
v/c Ratio	0.65	0.97	0.23	0.80	0.79	0.62	1.07	1.35	0.88
Control Delay (s/veh)	55.3	67.4	8.5	90.9	51.6	71.5	83.9	231.5	47.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.3	67.4	8.5	90.9	51.6	71.5	83.9	231.5	47.7
LOS	E	E	A	F	D	E	F	F	D
Approach Delay (s/veh)		56.1			61.6		83.3		71.9
Approach LOS		E			E		F		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay (s/veh): 71.8	Intersection LOS: E
Intersection Capacity Utilization 103.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 6: Euclid Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	608	141	109	176	146	89	1420	191	207	1237	125
Future Volume (veh/h)	218	608	141	109	176	146	89	1420	191	207	1237	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	229	640	87	115	185	142	94	1495	198	218	1302	89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	382	661	559	141	207	159	173	1387	183	163	1455	99
Arrive On Green	0.33	0.52	0.52	0.12	0.31	0.31	0.15	0.42	0.42	0.14	0.41	0.41
Sat Flow, veh/h	1714	1900	1609	1714	996	765	1714	4916	650	1714	5263	360
Grp Volume(v), veh/h	229	640	87	115	0	327	94	1155	538	218	940	451
Grp Sat Flow(s),veh/h/ln	1714	1900	1609	1714	0	1761	1714	1900	1766	1714	1900	1823
Q Serve(g_s), s	13.2	38.7	3.3	7.8	0.0	21.1	6.0	33.5	33.5	11.3	27.3	27.3
Cycle Q Clear(g_c), s	13.2	38.7	3.3	7.8	0.0	21.1	6.0	33.5	33.5	11.3	27.3	27.3
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.37	1.00		0.20
Lane Grp Cap(c), veh/h	382	661	559	141	0	365	173	1072	498	163	1051	504
V/C Ratio(X)	0.60	0.97	0.16	0.82	0.00	0.90	0.54	1.08	1.08	1.34	0.89	0.89
Avail Cap(c_a), veh/h	382	677	573	144	0	593	173	1072	498	163	1113	534
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	27.8	19.3	51.2	0.0	39.7	47.9	34.3	34.3	50.9	33.2	33.2
Incr Delay (d2), s/veh	1.9	26.6	0.1	26.7	0.0	8.8	2.0	51.0	63.5	187.0	9.2	16.9
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(50%),veh/ln	5.1	18.4	1.2	4.2	0.0	8.8	2.5	19.7	20.0	12.9	11.3	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.0	54.4	19.4	77.9	0.0	48.4	49.9	85.2	97.8	237.9	42.4	50.1
LnGrp LOS	D	D	B	E		D	D	F	F	F	D	D
Approach Vol, veh/h		956			442			1787			1609	
Approach Delay, s/veh		47.0			56.1			87.2			71.0	
Approach LOS		D			E			F			E	

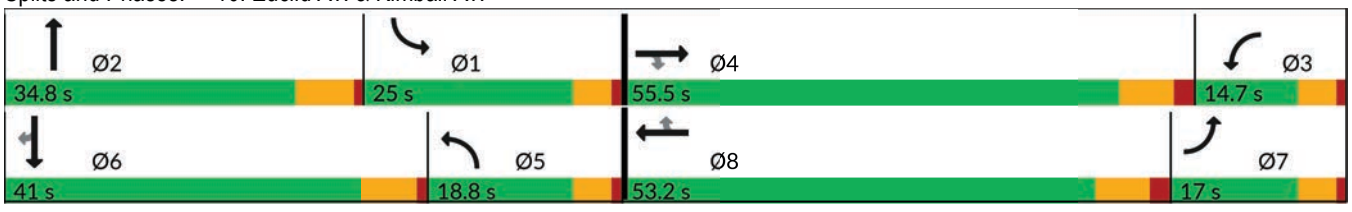
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	40.0	14.5	48.3	16.7	39.3	31.1	31.6
Change Period (Y+Rc), s	4.7	6.5	4.7	7.0	4.7	6.5	4.7	7.0
Max Green Setting (Gmax), s	11.3	33.5	10.0	42.3	10.0	34.8	12.3	40.0
Max Q Clear Time (g_c+I1), s	13.3	35.5	9.8	40.7	8.0	29.3	15.2	23.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	3.5	0.0	1.3

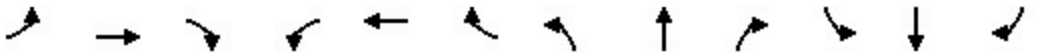
Intersection Summary	
HCM 7th Control Delay, s/veh	70.9
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	352	1135	81	65	735	245	171	954	614	853	287
Future Volume (vph)	352	1135	81	65	735	245	171	954	614	853	287
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.7	47.2	47.2	14.7	53.2	53.2	14.7	32.5	14.7	37.4	37.4
Total Split (s)	17.0	55.5	55.5	14.7	53.2	53.2	18.8	34.8	25.0	41.0	41.0
Total Split (%)	13.1%	42.7%	42.7%	11.3%	40.9%	40.9%	14.5%	26.8%	19.2%	31.5%	31.5%
Yellow Time (s)	3.7	5.2	5.2	3.7	5.2	5.2	3.7	5.5	3.7	5.4	5.4
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	7.2	7.2	4.7	7.2	7.2	4.7	6.5	4.7	6.4	6.4
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.4	45.4	45.4	10.1	34.4	34.4	15.1	27.1	20.5	32.7	32.7
Actuated g/C Ratio	0.14	0.37	0.37	0.08	0.28	0.28	0.12	0.22	0.17	0.27	0.27
v/c Ratio	0.81	0.85	0.13	0.49	0.73	0.40	0.86	0.88	1.20	0.89	0.52
Control Delay (s/veh)	66.5	43.3	3.0	69.5	43.9	5.4	89.9	55.4	150.5	55.8	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.5	43.3	3.0	69.5	43.9	5.4	89.9	55.4	150.5	55.8	15.1
LOS	E	D	A	E	D	A	F	E	F	E	B
Approach Delay (s/veh)		46.5			36.4			60.3		82.3	
Approach LOS		D			D			E		F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 122.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay (s/veh): 58.8	Intersection LOS: E
Intersection Capacity Utilization 98.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 10: Euclid Av. & Kimball Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	1135	81	65	735	245	171	954	88	614	853	287
Future Volume (veh/h)	352	1135	81	65	735	245	171	954	88	614	853	287
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
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	1700	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	371	1195	85	68	774	258	180	1004	51	646	898	302
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	616	1332	557	128	893	378	205	1153	59	546	1003	418
Arrive On Green	0.29	0.53	0.53	0.11	0.35	0.35	0.18	0.32	0.32	0.25	0.40	0.40
Sat Flow, veh/h	3238	3800	1590	1714	3800	1610	1714	5378	273	3238	3800	1585
Grp Volume(v), veh/h	371	1195	85	68	774	258	180	709	346	646	898	302
Grp Sat Flow(s),veh/h/ln	1619	1900	1590	1714	1900	1610	1714	1900	1851	1619	1900	1585
Q Serve(g_s), s	11.9	34.0	3.3	4.5	22.9	16.4	12.3	21.2	21.2	20.3	26.6	19.4
Cycle Q Clear(g_c), s	11.9	34.0	3.3	4.5	22.9	16.4	12.3	21.2	21.2	20.3	26.6	19.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	616	1332	557	128	893	378	205	815	397	546	1003	418
V/C Ratio(X)	0.60	0.90	0.15	0.53	0.87	0.68	0.88	0.87	0.87	1.18	0.89	0.72
Avail Cap(c_a), veh/h	616	1525	638	142	1452	615	205	893	435	546	1092	455
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	26.6	19.3	51.5	37.2	35.2	48.5	39.2	39.3	45.0	34.8	32.6
Incr Delay (d2), s/veh	1.2	6.8	0.1	3.4	1.8	0.8	30.8	8.7	16.3	100.0	9.2	5.1
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(50%),veh/ln	4.3	12.8	1.2	2.0	9.1	5.6	6.5	9.2	9.8	14.5	11.2	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.3	33.4	19.5	54.9	39.0	36.0	79.3	47.9	55.6	144.9	44.0	37.7
LnGrp LOS	D	C	B	D	D	D	E	D	E	F	D	D
Approach Vol, veh/h		1651			1100			1235			1846	
Approach Delay, s/veh		34.2			39.3			54.6			78.3	
Approach LOS		C			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	32.3	13.7	49.4	19.1	38.2	27.6	35.5
Change Period (Y+Rc), s	4.7	6.5	4.7	7.2	4.7	6.4	4.7	7.2
Max Green Setting (Gmax), s	20.3	28.3	10.0	48.3	14.1	34.6	12.3	46.0
Max Q Clear Time (g_c+I1), s	22.3	23.2	6.5	36.0	14.3	28.6	13.9	24.9
Green Ext Time (p_c), s	0.0	2.6	0.0	6.2	0.0	3.2	0.0	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	53.5
HCM 7th LOS	D

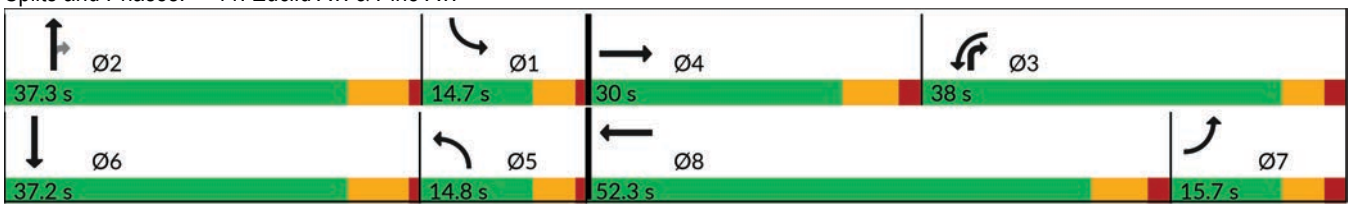
Notes

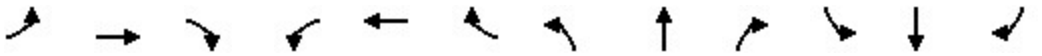
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	40	633	454	357	54	709	859	120	667
Future Volume (vph)	40	633	454	357	54	709	859	120	667
Turn Type	Prot	NA	Prot	NA	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	15.7	17.0	15.7	51.0	14.7	34.5	15.7	14.7	30.5
Total Split (s)	15.7	30.0	38.0	52.3	14.8	37.3	38.0	14.7	37.2
Total Split (%)	13.1%	25.0%	31.7%	43.6%	12.3%	31.1%	31.7%	12.3%	31.0%
Yellow Time (s)	3.7	5.0	3.7	5.0	3.7	5.5	3.7	3.7	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	7.0	5.7	7.0	4.7	6.5	5.7	4.7	6.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.0	23.0	32.3	47.9	10.1	26.4	59.5	10.0	29.4
Actuated g/C Ratio	0.12	0.20	0.28	0.41	0.09	0.23	0.51	0.09	0.25
v/c Ratio	0.20	1.11	0.53	0.56	0.38	0.86	1.05	0.85	0.77
Control Delay (s/veh)	49.4	109.4	38.4	32.3	59.3	53.9	66.9	96.7	46.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.4	109.4	38.4	32.3	59.3	53.9	66.9	96.7	46.7
LOS	D	F	D	C	E	D	E	F	D
Approach Delay (s/veh)		106.3		35.5		61.0			54.0
Approach LOS		F		D		E			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.7	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay (s/veh): 62.9	Intersection LOS: E
Intersection Capacity Utilization 97.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Euclid Av. & Pine Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	633	117	454	357	52	54	709	859	120	667	33
Future Volume (veh/h)	40	633	117	454	357	52	54	709	859	120	667	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	42	666	0	478	376	50	57	746	437	126	702	35
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	211	796		556	441	59	198	898	652	182	813	41
Arrive On Green	0.18	0.33	0.00	0.26	0.40	0.40	0.17	0.35	0.35	0.16	0.34	0.34
Sat Flow, veh/h	1714	3705	0	3238	1639	218	1714	3800	1589	1714	3585	179
Grp Volume(v), veh/h	42	666	0	478	0	426	57	746	437	126	372	365
Grp Sat Flow(s),veh/h/ln	1714	1805	0	1619	0	1857	1714	1900	1589	1714	1900	1863
Q Serve(g_s), s	1.9	15.4	0.0	12.7	0.0	18.8	2.6	16.2	0.5	6.3	16.5	16.5
Cycle Q Clear(g_c), s	1.9	15.4	0.0	12.7	0.0	18.8	2.6	16.2	0.5	6.3	16.5	16.5
Prop In Lane	1.00		0.00	1.00		0.12	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	211	796		556	0	500	198	898	652	182	431	423
V/C Ratio(X)	0.20	0.84		0.86	0.00	0.85	0.29	0.83	0.67	0.69	0.86	0.86
Avail Cap(c_a), veh/h	211	922		1161	0	934	198	1299	820	190	648	635
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	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	32.9	28.6	0.0	32.4	0.0	25.2	34.0	27.4	17.3	36.5	28.4	28.4
Incr Delay (d2), s/veh	0.2	6.6	0.0	1.6	0.0	5.9	0.3	2.1	0.8	7.9	5.3	5.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.1	0.0	4.3	0.0	7.0	1.0	6.0	5.4	2.7	6.5	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.1	35.2	0.0	33.9	0.0	31.1	34.3	29.5	18.1	44.4	33.7	33.8
LnGrp LOS	C	D		C		C	C	C	B	D	C	C
Approach Vol, veh/h		708			904			1240			863	
Approach Delay, s/veh		35.1			32.6			25.7			35.3	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	27.8	21.2	26.9	15.1	26.9	16.8	31.2
Change Period (Y+Rc), s	4.7	6.5	5.7	7.0	4.7	6.5	5.7	7.0
Max Green Setting (Gmax), s	10.0	30.8	32.3	23.0	10.1	30.7	10.0	45.3
Max Q Clear Time (g_c+I1), s	8.3	18.2	14.7	17.4	4.6	18.5	3.9	20.8
Green Ext Time (p_c), s	0.0	3.1	0.8	2.5	0.0	1.9	0.0	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	31.4
HCM 7th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	851	43	38	364	61	36	42	140	44	9	15
Future Vol, veh/h	20	851	43	38	364	61	36	42	140	44	9	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	21	896	45	40	383	64	38	44	147	46	9	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	447	0	0	941	0	0	1428	1488	918	1455	1478	415
Stage 1	-	-	-	-	-	-	961	961	-	495	495	-
Stage 2	-	-	-	-	-	-	468	527	-	960	983	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1124	-	-	737	-	-	114	125	332	109	127	642
Stage 1	-	-	-	-	-	-	311	337	-	560	549	-
Stage 2	-	-	-	-	-	-	579	531	-	311	329	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1124	-	-	737	-	-	99	116	332	48	118	642
Mov Cap-2 Maneuver	-	-	-	-	-	-	261	278	-	101	252	-
Stage 1	-	-	-	-	-	-	305	331	-	530	519	-
Stage 2	-	-	-	-	-	-	525	502	-	147	323	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.18	0.83	44.75	56.8
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	307	1124	-	-	737	-	-	137
HCM Lane V/C Ratio	0.748	0.019	-	-	0.054	-	-	0.522
HCM Ctrl Dly (s/v)	44.8	8.3	-	-	10.2	-	-	56.8
HCM Lane LOS	E	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	5.6	0.1	-	-	0.2	-	-	2.5

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	1157	21	42	964	12	64	8	94	22	2	13
Future Vol, veh/h	8	1157	21	42	964	12	64	8	94	22	2	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	1218	22	44	1015	13	67	8	99	23	2	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1027	0	0	1240	0	0	1843	2362	620	1739	2366	514
Stage 1	-	-	-	-	-	-	1246	1246	-	1109	1109	-
Stage 2	-	-	-	-	-	-	597	1116	-	630	1257	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	684	-	-	569	-	-	~ 48	36	436	57	36	511
Stage 1	-	-	-	-	-	-	187	248	-	227	287	-
Stage 2	-	-	-	-	-	-	461	286	-	441	245	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	684	-	-	569	-	-	~ 42	33	436	38	32	511
Mov Cap-2 Maneuver	-	-	-	-	-	-	162	168	-	162	152	-
Stage 1	-	-	-	-	-	-	185	245	-	209	265	-
Stage 2	-	-	-	-	-	-	411	263	-	325	242	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.07	0.49	46.37	24.32
HCM LOS			E	C

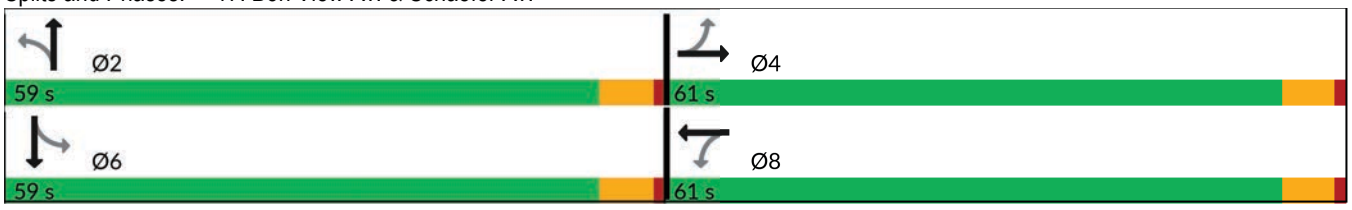
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	252	684	-	-	569	-	-	162	389
HCM Lane V/C Ratio	0.694	0.012	-	-	0.078	-	-	0.143	0.041
HCM Ctrl Dly (s/v)	46.4	10.3	-	-	11.9	-	-	30.9	14.7
HCM Lane LOS	E	B	-	-	B	-	-	D	B
HCM 95th %tile Q(veh)	4.6	0	-	-	0.3	-	-	0.5	0.1

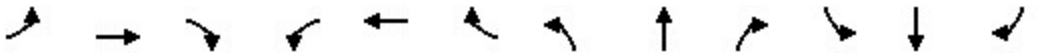
Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	83	614	68	430	52	559	53	652
Future Volume (vph)	83	614	68	430	52	559	53	652
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	61.0	61.0	61.0	61.0	59.0	59.0	59.0	59.0
Total Split (%)	50.8%	50.8%	50.8%	50.8%	49.2%	49.2%	49.2%	49.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		55.2		55.2		53.2		53.2
Actuated g/C Ratio		0.46		0.46		0.44		0.44
v/c Ratio		1.14		0.93		1.01		1.14
Control Delay (s/veh)		109.7		52.5		70.5		110.9
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		109.7		52.5		70.5		110.9
LOS		F		D		E		F
Approach Delay (s/veh)		109.7		52.5		70.5		110.9
Approach LOS		F		D		E		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 88.9	Intersection LOS: F
Intersection Capacity Utilization 120.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 17: Bon View Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	614	93	68	430	100	52	559	63	53	652	111
Future Volume (veh/h)	83	614	93	68	430	100	52	559	63	53	652	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
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	1976	1976	1976	1976	1976	1976	1976	1976	1976	1976	1976	1976
Adj Flow Rate, veh/h	87	646	51	72	453	52	55	588	34	56	686	59
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	91	554	43	87	486	53	67	570	32	64	584	49
Arrive On Green	0.69	0.69	0.69	0.69	0.69	0.69	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	125	1204	92	115	1058	116	77	1286	72	72	1317	110
Grp Volume(v), veh/h	784	0	0	577	0	0	677	0	0	801	0	0
Grp Sat Flow(s),veh/h/ln	1421	0	0	1289	0	0	1436	0	0	1500	0	0
Q Serve(g_s), s	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	55.2	0.0	0.0	48.2	0.0	0.0	53.2	0.0	0.0	53.2	0.0	0.0
Prop In Lane	0.11		0.07	0.12		0.09	0.08		0.05	0.07		0.07
Lane Grp Cap(c), veh/h	687	0	0	627	0	0	669	0	0	697	0	0
V/C Ratio(X)	1.14	0.00	0.00	0.92	0.00	0.00	1.01	0.00	0.00	1.15	0.00	0.00
Avail Cap(c_a), veh/h	687	0	0	627	0	0	669	0	0	697	0	0
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.3	0.0	0.0	15.2	0.0	0.0	19.1	0.0	0.0	19.5	0.0	0.0
Incr Delay (d2), s/veh	80.2	0.0	0.0	19.1	0.0	0.0	37.9	0.0	0.0	83.2	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(50%),veh/ln	27.3	0.0	0.0	9.1	0.0	0.0	16.1	0.0	0.0	26.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	99.5	0.0	0.0	34.3	0.0	0.0	57.0	0.0	0.0	102.7	0.0	0.0
LnGrp LOS	F			C			F			F		
Approach Vol, veh/h		784			577			677			801	
Approach Delay, s/veh		99.5			34.3			57.0			102.7	
Approach LOS		F			C			E			F	

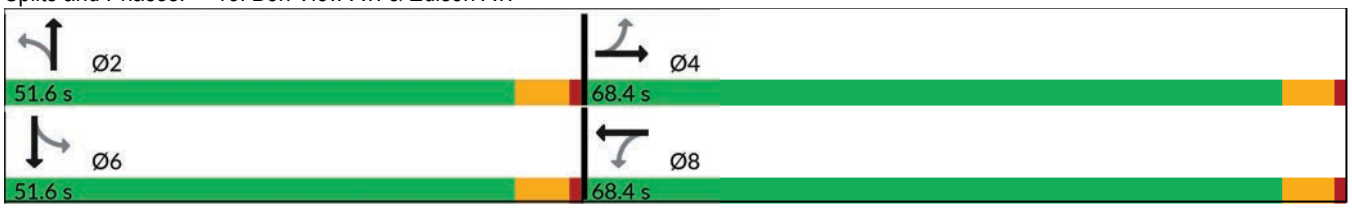
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		61.0		59.0		61.0				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		53.2		55.2		53.2		55.2				
Max Q Clear Time (g_c+I1), s		55.2		57.2		55.2		50.2				
Green Ext Time (p_c), s		0.0		0.0		0.0		1.7				

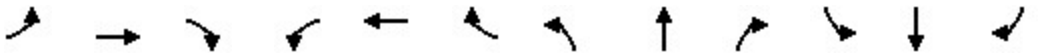
Intersection Summary	
HCM 7th Control Delay, s/veh	77.0
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	85	687	66	293	62	473	32	313
Future Volume (vph)	85	687	66	293	62	473	32	313
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	68.4	68.4	68.4	68.4	51.6	51.6	51.6	51.6
Total Split (%)	57.0%	57.0%	57.0%	57.0%	43.0%	43.0%	43.0%	43.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.8		5.8		5.8		5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)		62.6		62.6		45.8		45.8
Actuated g/C Ratio		0.52		0.52		0.38		0.38
v/c Ratio		1.03		0.62		1.06		0.64
Control Delay (s/veh)		67.9		24.6		88.8		35.8
Queue Delay		0.0		0.0		0.0		0.0
Total Delay (s/veh)		67.9		24.6		88.8		35.8
LOS		E		C		F		D
Approach Delay (s/veh)		67.9		24.6		88.8		35.8
Approach LOS		E		C		F		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay (s/veh): 60.5	Intersection LOS: E
Intersection Capacity Utilization 112.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 18: Bon View Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	687	98	66	293	62	62	473	102	32	313	37
Future Volume (veh/h)	85	687	98	66	293	62	62	473	102	32	313	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	89	723	103	69	308	65	65	498	107	34	329	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	102	691	96	96	416	82	82	494	103	61	499	57
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	132	1324	185	118	798	158	128	1294	270	74	1306	148
Grp Volume(v), veh/h	915	0	0	442	0	0	670	0	0	402	0	0
Grp Sat Flow(s),veh/h/ln	1641	0	0	1074	0	0	1692	0	0	1529	0	0
Q Serve(g_s), s	30.2	0.0	0.0	0.0	0.0	0.0	23.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	62.6	0.0	0.0	32.4	0.0	0.0	45.8	0.0	0.0	22.7	0.0	0.0
Prop In Lane	0.10		0.11	0.16		0.15	0.10		0.16	0.08		0.10
Lane Grp Cap(c), veh/h	889	0	0	595	0	0	679	0	0	616	0	0
V/C Ratio(X)	1.03	0.00	0.00	0.74	0.00	0.00	0.99	0.00	0.00	0.65	0.00	0.00
Avail Cap(c_a), veh/h	889	0	0	595	0	0	679	0	0	616	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.2	0.0	0.0	19.4	0.0	0.0	37.8	0.0	0.0	29.4	0.0	0.0
Incr Delay (d2), s/veh	37.9	0.0	0.0	5.0	0.0	0.0	31.3	0.0	0.0	2.5	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(50%),veh/ln	33.2	0.0	0.0	8.6	0.0	0.0	24.8	0.0	0.0	9.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.1	0.0	0.0	24.4	0.0	0.0	69.1	0.0	0.0	31.8	0.0	0.0
LnGrp LOS	F			C			E			C		
Approach Vol, veh/h		915			442			670			402	
Approach Delay, s/veh		68.1			24.4			69.1			31.8	
Approach LOS		E			C			E			C	

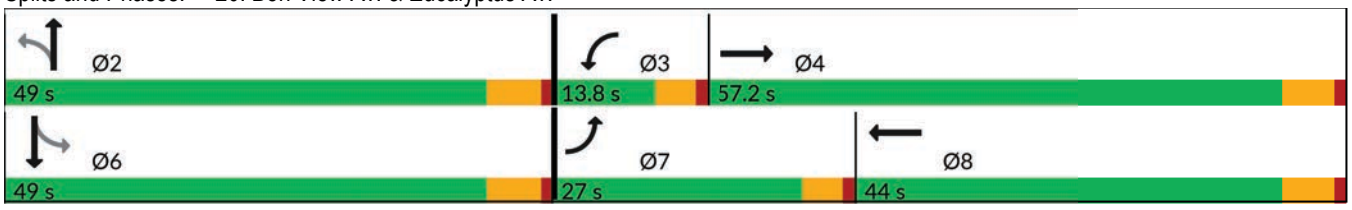
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.6		68.4		51.6		68.4				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		45.8		62.6		45.8		62.6				
Max Q Clear Time (g_c+I1), s		47.8		64.6		24.7		34.4				
Green Ext Time (p_c), s		0.0		0.0		2.3		3.0				

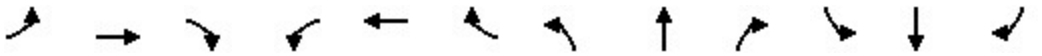
Intersection Summary												
HCM 7th Control Delay, s/veh			54.4									
HCM 7th LOS			D									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	294	885	52	763	92	174	182	39
Future Volume (vph)	294	885	52	763	92	174	182	39
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	23.8	23.8	23.8	23.8
Total Split (s)	27.0	57.2	13.8	44.0	49.0	49.0	49.0	49.0
Total Split (%)	22.5%	47.7%	11.5%	36.7%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8		5.8		5.8
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	22.5	54.4	8.1	37.8		40.1		40.1
Actuated g/C Ratio	0.19	0.47	0.07	0.32		0.34		0.34
v/c Ratio	0.94	0.60	0.46	0.96		0.69		0.96
Control Delay (s/veh)	84.2	26.4	66.0	55.9		39.6		73.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	84.2	26.4	66.0	55.9		39.6		73.4
LOS	F	C	E	E		D		E
Approach Delay (s/veh)		40.0		56.4		39.6		73.4
Approach LOS		D		E		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 49.7	Intersection LOS: D
Intersection Capacity Utilization 97.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 20: Bon View Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	885	68	52	763	286	92	174	73	182	39	123
Future Volume (veh/h)	294	885	68	52	763	286	92	174	73	182	39	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	309	932	51	55	803	248	97	183	77	192	41	97
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	336	1683	92	70	891	275	164	286	112	257	51	105
Arrive On Green	0.29	0.73	0.73	0.06	0.49	0.49	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1714	3480	190	1714	2716	838	375	900	351	635	161	331
Grp Volume(v), veh/h	309	483	500	55	534	517	357	0	0	330	0	0
Grp Sat Flow(s),veh/h/ln	1714	1805	1866	1714	1805	1749	1626	0	0	1127	0	0
Q Serve(g_s), s	17.9	12.6	12.6	3.3	27.7	27.7	0.0	0.0	0.0	11.9	0.0	0.0
Cycle Q Clear(g_c), s	17.9	12.6	12.6	3.3	27.7	27.7	17.2	0.0	0.0	29.1	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.48	0.27		0.22	0.58		0.29
Lane Grp Cap(c), veh/h	336	873	902	70	592	574	562	0	0	414	0	0
V/C Ratio(X)	0.92	0.55	0.55	0.79	0.90	0.90	0.64	0.00	0.00	0.80	0.00	0.00
Avail Cap(c_a), veh/h	374	903	933	153	671	650	728	0	0	549	0	0
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.5	9.0	9.0	47.8	24.6	24.6	22.6	0.0	0.0	26.9	0.0	0.0
Incr Delay (d2), s/veh	25.9	0.7	0.7	17.6	14.2	14.7	1.2	0.0	0.0	6.0	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(50%),veh/ln	8.6	3.4	3.6	1.7	11.1	10.8	5.4	0.0	0.0	6.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.4	9.7	9.7	65.4	38.8	39.2	23.8	0.0	0.0	32.9	0.0	0.0
LnGrp LOS	E	A	A	E	D	D	C			C		
Approach Vol, veh/h		1292			1106			357			330	
Approach Delay, s/veh		22.1			40.3			23.8			32.9	
Approach LOS		C			D			C			C	

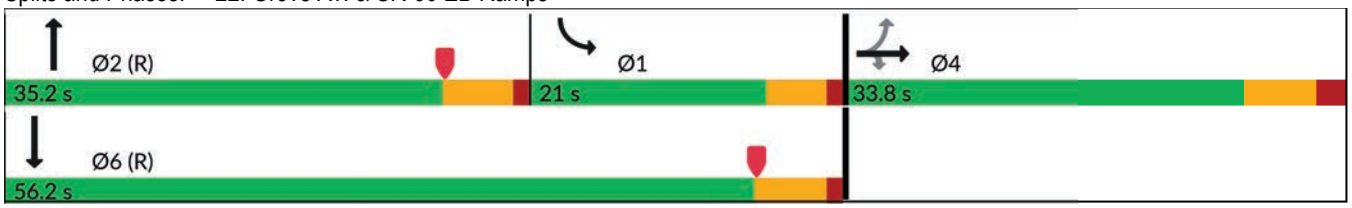
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		38.5	8.8	55.5		38.5	24.7	39.5				
Change Period (Y+Rc), s		5.8	4.6	5.8		5.8	4.6	5.8				
Max Green Setting (Gmax), s		43.2	9.2	51.4		43.2	22.4	38.2				
Max Q Clear Time (g_c+I1), s		19.2	5.3	14.6		31.1	19.9	29.7				
Green Ext Time (p_c), s		2.0	0.0	6.3		1.6	0.2	4.0				

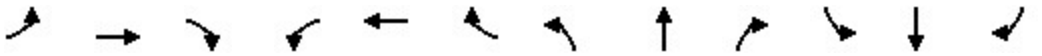
Intersection Summary	
HCM 7th Control Delay, s/veh	30.0
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	463	1	345	820	411	1114
Future Volume (vph)	463	1	345	820	411	1114
Turn Type	Perm	NA	Perm	NA	Prot	NA
Protected Phases		4		2	1	6
Permitted Phases	4		4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.8	33.8	33.8	31.8	15.0	25.8
Total Split (s)	33.8	33.8	33.8	35.2	21.0	56.2
Total Split (%)	37.6%	37.6%	37.6%	39.1%	23.3%	62.4%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.0	4.8
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.8	5.8	5.0	5.8
Lead/Lag				Lead	Lag	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	20.0	20.0	20.0	36.4	16.0	57.4
Actuated g/C Ratio	0.22	0.22	0.22	0.40	0.18	0.64
v/c Ratio	0.64	0.64	0.84	0.96	1.42	0.48
Control Delay (s/veh)	38.4	38.5	39.8	40.7	222.6	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	38.4	38.5	39.8	40.7	222.6	5.9
LOS	D	D	D	D	F	A
Approach Delay (s/veh)		39.1		40.7		64.3
Approach LOS		D		D		E

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay (s/veh): 49.9	Intersection LOS: D
Intersection Capacity Utilization 108.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: Grove Av. & SR-60 EB Ramps





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	463	1	345	0	0	0	0	820	600	411	1114	0
Future Volume (veh/h)	463	1	345	0	0	0	0	820	600	411	1114	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	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	1900	1900				0	1900	1900	1800	1900	0
Adj Flow Rate, veh/h	488	0	310				0	863	316	433	1173	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	794	0	352				0	860	314	428	2435	0
Arrive On Green	0.33	0.00	0.33				0.00	0.49	0.49	0.37	0.96	0.00
Sat Flow, veh/h	3619	0	1606				0	2633	961	1714	3800	0
Grp Volume(v), veh/h	488	0	310				0	622	557	433	1173	0
Grp Sat Flow(s),veh/h/ln	1810	0	1606				0	1900	1694	1714	1900	0
Q Serve(g_s), s	10.2	0.0	16.4				0.0	29.4	29.4	22.5	2.0	0.0
Cycle Q Clear(g_c), s	10.2	0.0	16.4				0.0	29.4	29.4	22.5	2.0	0.0
Prop In Lane	1.00		1.00				0.00		0.57	1.00		0.00
Lane Grp Cap(c), veh/h	794	0	352				0	621	553	428	2435	0
V/C Ratio(X)	0.61	0.00	0.88				0.00	1.00	1.01	1.01	0.48	0.00
Avail Cap(c_a), veh/h	1086	0	482				0	621	553	428	2435	0
HCM Platoon Ratio	1.50	1.50	1.50				1.00	1.50	1.50	1.50	1.50	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.16	0.16	0.00
Uniform Delay (d), s/veh	27.0	0.0	29.1				0.0	23.0	23.0	28.2	0.7	0.0
Incr Delay (d2), s/veh	0.3	0.0	10.8				0.0	36.6	40.0	20.4	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(50%),veh/ln	3.8	0.0	6.1				0.0	15.3	14.2	9.5	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.3	0.0	39.9				0.0	59.6	62.9	48.5	0.8	0.0
LnGrp LOS	C		D					F	F	F	A	
Approach Vol, veh/h		798						1179			1606	
Approach Delay, s/veh		32.2						61.2			13.7	
Approach LOS		C						E			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	28.3	35.2		26.5		63.5
Change Period (Y+Rc), s	5.8	* 5.8		6.8		5.8
Max Green Setting (Gmax), s	16.0	* 29		27.0		50.4
Max Q Clear Time (g_c+I1), s	24.5	31.4		18.4		4.0
Green Ext Time (p_c), s	0.0	0.0		1.1		7.9

Intersection Summary		
HCM 7th Control Delay, s/veh		33.4
HCM 7th LOS		C

Notes

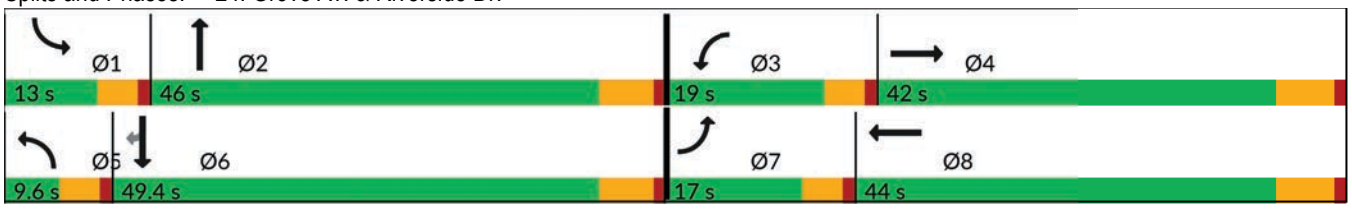
User approved volume balancing among the lanes for turning movement.

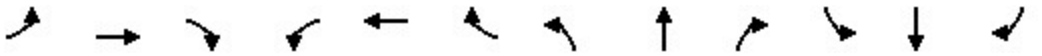
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	155	544	210	766	32	997	128	700	149
Future Volume (vph)	155	544	210	766	32	997	128	700	149
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	9.6	23.8	9.6	23.8	23.8
Total Split (s)	17.0	42.0	19.0	44.0	9.6	46.0	13.0	49.4	49.4
Total Split (%)	14.2%	35.0%	15.8%	36.7%	8.0%	38.3%	10.8%	41.2%	41.2%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.4	35.8	14.4	37.8	5.0	40.2	8.4	47.4	47.4
Actuated g/C Ratio	0.10	0.30	0.12	0.32	0.04	0.34	0.07	0.40	0.40
v/c Ratio	0.93	1.16	1.08	0.98	0.48	0.99	1.13	0.98	0.22
Control Delay (s/veh)	104.6	129.6	134.8	59.6	78.3	61.8	173.0	65.7	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	104.6	129.6	134.8	59.6	78.3	61.8	173.0	65.7	9.4
LOS	F	F	F	E	E	E	F	E	A
Approach Delay (s/veh)		124.6		71.7		62.2		71.2	
Approach LOS		F		E		E		E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay (s/veh): 78.5	Intersection LOS: E
Intersection Capacity Utilization 104.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 24: Grove Av. & Riverside Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	544	74	210	766	332	32	997	182	128	700	149
Future Volume (veh/h)	155	544	74	210	766	332	32	997	182	128	700	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	163	573	41	221	806	181	34	1049	97	135	737	94
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	180	529	38	208	956	215	49	1117	103	122	700	594
Arrive On Green	0.16	0.45	0.45	0.18	0.48	0.48	0.04	0.49	0.49	0.11	0.55	0.55
Sat Flow, veh/h	1714	1750	125	1714	2995	673	1714	3426	317	1714	1900	1610
Grp Volume(v), veh/h	163	0	614	221	511	476	34	581	565	135	737	94
Grp Sat Flow(s),veh/h/ln	1714	0	1875	1714	1900	1767	1714	1900	1843	1714	1900	1610
Q Serve(g_s), s	11.1	0.0	35.8	14.4	27.9	27.9	2.3	34.2	34.3	8.4	43.6	3.4
Cycle Q Clear(g_c), s	11.1	0.0	35.8	14.4	27.9	27.9	2.3	34.2	34.3	8.4	43.6	3.4
Prop In Lane	1.00		0.07	1.00		0.38	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	180	0	567	208	607	564	49	620	601	122	700	594
V/C Ratio(X)	0.91	0.00	1.08	1.06	0.84	0.84	0.70	0.94	0.94	1.11	1.05	0.16
Avail Cap(c_a), veh/h	180	0	567	208	607	564	72	645	626	122	700	594
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	0.0	32.4	48.4	28.3	28.3	56.2	29.1	29.1	52.9	26.5	17.5
Incr Delay (d2), s/veh	41.2	0.0	62.2	79.1	10.5	11.2	6.5	21.2	21.8	114.3	48.6	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(50%),veh/ln	6.4	0.0	22.6	10.1	11.6	10.9	1.1	16.0	15.6	7.2	24.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	90.6	0.0	94.5	127.5	38.7	39.4	62.7	50.3	51.0	167.2	75.1	17.6
LnGrp LOS	F		F	F	D	D	E	D	D	F	F	B
Approach Vol, veh/h		777			1208			1180			966	
Approach Delay, s/veh		93.7			55.3			51.0			82.3	
Approach LOS		F			E			D			F	

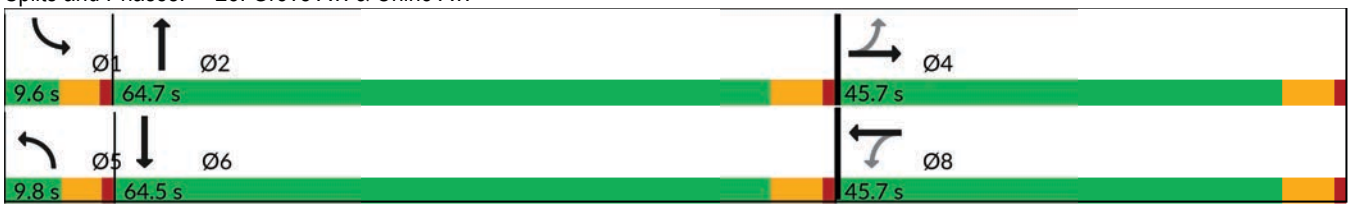
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	44.4	19.0	42.0	8.0	49.4	17.0	44.0
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	8.4	40.2	14.4	35.8	5.0	43.6	12.4	37.8
Max Q Clear Time (g_c+I1), s	10.4	36.3	16.4	37.8	4.3	45.6	13.1	29.9
Green Ext Time (p_c), s	0.0	2.3	0.0	0.0	0.0	0.0	0.0	3.5

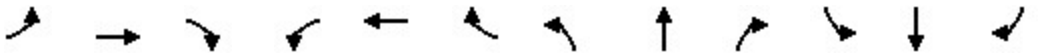
Intersection Summary	
HCM 7th Control Delay, s/veh	67.6
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	120	943	39	651	45	887	26	776
Future Volume (vph)	120	943	39	651	45	887	26	776
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	9.6	23.8	9.6	23.8
Total Split (s)	45.7	45.7	45.7	45.7	9.8	64.7	9.6	64.5
Total Split (%)	38.1%	38.1%	38.1%	38.1%	8.2%	53.9%	8.0%	53.8%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	4.6	5.8	4.6	5.8
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	39.9	39.9	39.9	39.9	5.2	59.8	5.0	57.7
Actuated g/C Ratio	0.34	0.34	0.34	0.34	0.04	0.51	0.04	0.49
v/c Ratio	0.94	1.03	0.67	0.61	0.62	1.06	0.37	0.90
Control Delay (s/veh)	103.6	70.2	86.6	34.7	89.4	74.1	70.3	41.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	103.6	70.2	86.6	34.7	89.4	74.1	70.3	41.3
LOS	F	E	F	C	F	E	E	D
Approach Delay (s/veh)		73.3		37.4		74.8		42.2
Approach LOS		E		D		E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay (s/veh): 60.2	Intersection LOS: E
Intersection Capacity Utilization 107.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 25: Grove Av. & Chino Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	943	236	39	651	57	45	887	76	26	776	19
Future Volume (veh/h)	120	943	236	39	651	57	45	887	76	26	776	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	126	993	127	41	685	34	47	934	48	27	817	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	203	1087	139	87	1184	59	59	894	46	43	911	17
Arrive On Green	0.51	0.51	0.51	0.52	0.51	0.51	0.05	0.75	0.75	0.04	0.73	0.73
Sat Flow, veh/h	705	3214	411	484	3500	174	1714	1789	92	1714	1860	34
Grp Volume(v), veh/h	126	557	563	41	353	366	47	0	982	27	0	832
Grp Sat Flow(s),veh/h/ln	705	1805	1820	484	1805	1869	1714	0	1881	1714	0	1894
Q Serve(g_s), s	20.1	33.4	33.5	6.4	16.1	16.1	3.2	0.0	58.9	1.8	0.0	40.3
Cycle Q Clear(g_c), s	36.2	33.4	33.5	39.9	16.1	16.1	3.2	0.0	58.9	1.8	0.0	40.3
Prop In Lane	1.00		0.23	1.00		0.09	1.00		0.05	1.00		0.02
Lane Grp Cap(c), veh/h	203	611	616	87	611	632	59	0	939	43	0	927
V/C Ratio(X)	0.62	0.91	0.91	0.47	0.58	0.58	0.79	0.00	1.05	0.63	0.00	0.90
Avail Cap(c_a), veh/h	203	611	616	87	611	632	76	0	939	73	0	943
HCM Platoon Ratio	1.50	1.50	1.50	1.53	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.8	27.4	27.5	46.3	23.2	23.2	55.5	0.0	14.8	56.2	0.0	13.3
Incr Delay (d2), s/veh	5.6	18.2	18.2	3.9	1.4	1.3	34.4	0.0	41.9	14.4	0.0	11.1
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(50%),veh/ln	3.3	14.0	14.1	1.2	5.7	5.9	1.9	0.0	21.7	0.9	0.0	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.4	45.6	45.7	50.2	24.5	24.5	89.9	0.0	56.7	70.7	0.0	24.5
LnGrp LOS	D	D	D	D	C	C	F		F	E		C
Approach Vol, veh/h		1246			760			1029			859	
Approach Delay, s/veh		45.2			25.9			58.2			25.9	
Approach LOS		D			C			E			C	

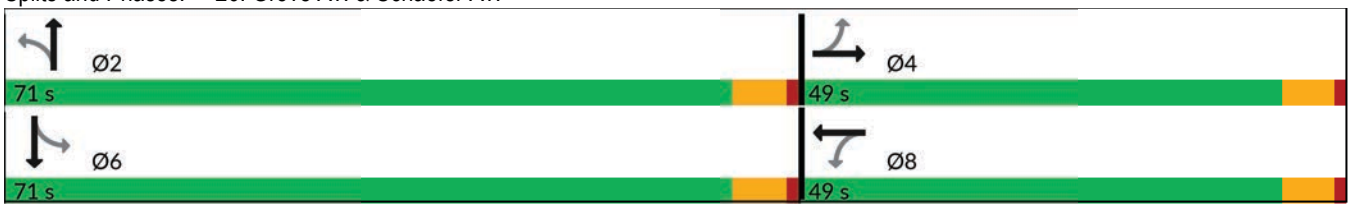
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	64.7		45.7	8.7	63.6		45.7				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		5.8				
Max Green Setting (Gmax), s	5.0	58.9		39.9	5.2	58.7		39.9				
Max Q Clear Time (g_c+I1), s	3.8	60.9		38.2	5.2	42.3		41.9				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	5.1		0.0				

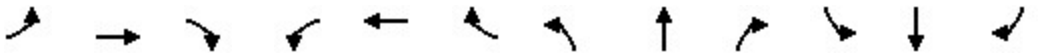
Intersection Summary			
HCM 7th Control Delay, s/veh		40.6	
HCM 7th LOS		D	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	100	762	95	501	136	832	143	706
Future Volume (vph)	100	762	95	501	136	832	143	706
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	49.0	49.0	49.0	49.0	71.0	71.0	71.0	71.0
Total Split (%)	40.8%	40.8%	40.8%	40.8%	59.2%	59.2%	59.2%	59.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	43.2	43.2	43.2	43.2	65.2	65.2	65.2	65.2
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.54	0.54	0.54	0.54
v/c Ratio	1.67	1.22	1.59	0.92	0.86	0.85	1.48	0.77
Control Delay (s/veh)	388.2	145.5	356.5	56.6	67.3	32.8	287.4	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	388.2	145.5	356.5	56.6	67.3	32.8	287.4	27.5
LOS	F	F	F	E	E	C	F	C
Approach Delay (s/veh)		172.8		98.3		37.7		69.4
Approach LOS		F		F		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.67	
Intersection Signal Delay (s/veh): 93.0	Intersection LOS: F
Intersection Capacity Utilization 121.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 26: Grove Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	762	26	95	501	87	136	832	0	143	706	40
Future Volume (veh/h)	100	762	26	95	501	87	136	832	0	143	706	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	105	802	16	100	527	50	143	876	0	151	743	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	674	13	61	621	59	302	1025	0	224	991	28
Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.54	0.81	0.81	0.00	0.81	0.81	0.54
Sat Flow, veh/h	850	1856	37	679	1709	162	714	1900	0	643	1839	52
Grp Volume(v), veh/h	105	0	818	100	0	577	143	876	0	151	0	764
Grp Sat Flow(s),veh/h/ln	850	0	1893	679	0	1871	714	1900	0	643	0	1891
Q Serve(g_s), s	12.1	0.0	43.2	0.0	0.0	31.1	16.8	34.0	0.0	26.7	0.0	23.9
Cycle Q Clear(g_c), s	43.2	0.0	43.2	43.2	0.0	31.1	40.7	34.0	0.0	60.7	0.0	23.9
Prop In Lane	1.00		0.02	1.00		0.09	1.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	147	0	688	61	0	680	302	1025	0	224	0	1019
V/C Ratio(X)	0.71	0.00	1.19	1.65	0.00	0.85	0.47	0.86	0.00	0.68	0.00	0.75
Avail Cap(c_a), veh/h	147	0	688	61	0	680	309	1042	0	229	0	1036
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.7	0.0	27.1	48.7	0.0	24.3	17.5	8.5	0.0	27.3	0.0	7.8
Incr Delay (d2), s/veh	15.0	0.0	99.3	355.5	0.0	9.9	1.2	7.0	0.0	7.4	0.0	3.0
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(50%),veh/ln	3.5	0.0	33.6	7.7	0.0	12.3	2.3	7.2	0.0	4.0	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.7	0.0	126.4	404.1	0.0	34.2	18.7	15.5	0.0	34.7	0.0	10.8
LnGrp LOS	E		F	F		C	B	B		C		B
Approach Vol, veh/h		923			677			1019			915	
Approach Delay, s/veh		118.7			88.9			16.0			14.8	
Approach LOS		F			F			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.9		49.0		69.9		49.0				
Change Period (Y+Rc), s		5.8		5.8		5.8		5.8				
Max Green Setting (Gmax), s		65.2		43.2		65.2		43.2				
Max Q Clear Time (g_c+I1), s		42.7		45.2		62.7		45.2				
Green Ext Time (p_c), s		7.6		0.0		1.4		0.0				

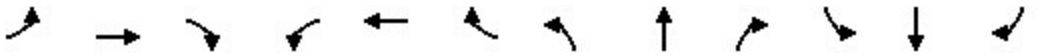
Intersection Summary	
HCM 7th Control Delay, s/veh	56.5
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	160	673	5	320	42	765	190	290
Future Volume (vph)	160	673	5	320	42	765	190	290
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Split (s)	45.0	45.0	45.0	45.0	75.0	75.0	75.0	75.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	62.5%	62.5%	62.5%	62.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6		4.6		4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	None	None
Act Effct Green (s)	40.4	40.4	40.4	40.4		70.4		70.4
Actuated g/C Ratio	0.34	0.34	0.34	0.34		0.59		0.59
v/c Ratio	1.04	1.14	0.08	0.69		0.82		1.10
Control Delay (s/veh)	123.1	117.9	31.2	40.0		27.6		93.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	123.1	117.9	31.2	40.0		27.6		93.1
LOS	F	F	C	D		C		F
Approach Delay (s/veh)		118.9		39.9		27.6		93.1
Approach LOS		F		D		C		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 72.7	Intersection LOS: E
Intersection Capacity Utilization 133.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 27: Grove Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	673	17	5	320	89	42	765	12	190	290	76
Future Volume (veh/h)	160	673	17	5	320	89	42	765	12	190	290	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	168	708	18	5	337	94	44	805	13	200	305	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	235	658	17	64	510	142	68	958	15	237	326	82
Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.54	0.84	0.84	0.84	0.84	0.84	0.84
Sat Flow, veh/h	972	1845	47	740	1429	399	61	1705	27	345	580	147
Grp Volume(v), veh/h	168	0	726	5	0	431	862	0	0	585	0	0
Grp Sat Flow(s),veh/h/ln	972	0	1891	740	0	1828	1793	0	0	1072	0	0
Q Serve(g_s), s	19.4	0.0	40.4	0.0	0.0	19.2	0.0	0.0	0.0	34.5	0.0	0.0
Cycle Q Clear(g_c), s	39.9	0.0	40.4	40.4	0.0	19.2	27.4	0.0	0.0	56.6	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.22	0.05		0.02	0.34		0.14
Lane Grp Cap(c), veh/h	235	0	675	64	0	652	1041	0	0	645	0	0
V/C Ratio(X)	0.72	0.00	1.08	0.08	0.00	0.66	0.83	0.00	0.00	0.91	0.00	0.00
Avail Cap(c_a), veh/h	235	0	675	64	0	652	1149	0	0	714	0	0
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.4	0.0	26.3	46.5	0.0	21.4	5.9	0.0	0.0	9.4	0.0	0.0
Incr Delay (d2), s/veh	9.9	0.0	56.9	0.5	0.0	2.5	4.8	0.0	0.0	14.5	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(50%),veh/ln	4.7	0.0	24.1	0.1	0.0	6.9	5.1	0.0	0.0	5.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.2	0.0	83.3	47.1	0.0	23.9	10.7	0.0	0.0	23.9	0.0	0.0
LnGrp LOS	D		F	D		C	B			C		
Approach Vol, veh/h		894			436			862			585	
Approach Delay, s/veh		76.3			24.1			10.7			23.9	
Approach LOS		E			C			B			C	

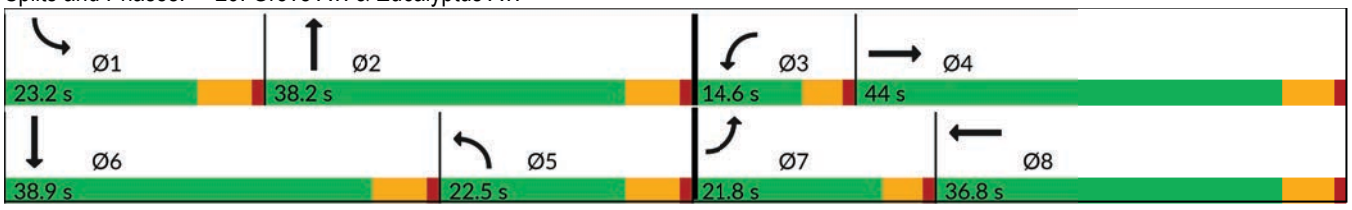
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	67.6	45.0	67.6	45.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	70.4	40.4	70.4	40.4
Max Q Clear Time (g_c+I1), s	29.4	42.4	58.6	42.4
Green Ext Time (p_c), s	7.2	0.0	3.7	0.0

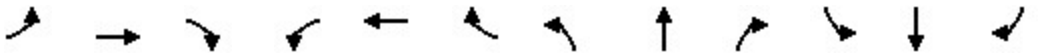
Intersection Summary	
HCM 7th Control Delay, s/veh	36.7
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	223	946	122	621	122	318	441	180
Future Volume (vph)	223	946	122	621	122	318	441	180
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	10.8	23.8	10.8	23.8
Total Split (s)	21.8	44.0	14.6	36.8	22.5	38.2	23.2	38.9
Total Split (%)	18.2%	36.7%	12.2%	30.7%	18.8%	31.8%	19.3%	32.4%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.2	38.2	10.0	31.0	36.8	32.4	17.4	13.0
Actuated g/C Ratio	0.14	0.32	0.08	0.26	0.31	0.27	0.15	0.11
v/c Ratio	0.96	1.00	0.90	1.04	0.24	1.00	1.02	0.66
Control Delay (s/veh)	99.4	66.5	107.9	80.7	33.8	83.1	98.5	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	99.4	66.5	107.9	80.7	33.8	83.1	98.5	36.6
LOS	F	E	F	F	C	F	F	D
Approach Delay (s/veh)		72.1		83.9		73.1		73.2
Approach LOS		E		F		E		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay (s/veh): 75.8	Intersection LOS: E
Intersection Capacity Utilization 98.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 29: Grove Av. & Eucalyptus Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	946	130	122	621	303	122	318	159	441	180	124
Future Volume (veh/h)	223	946	130	122	621	303	122	318	159	441	180	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1700	1900	1900
Adj Flow Rate, veh/h	235	996	74	128	654	161	128	335	167	464	189	131
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	249	1058	79	144	718	176	511	327	163	461	253	167
Arrive On Green	0.22	0.47	0.47	0.13	0.37	0.37	0.45	0.41	0.41	0.22	0.18	0.18
Sat Flow, veh/h	1714	3406	253	1714	2872	706	1714	1196	596	3141	2086	1372
Grp Volume(v), veh/h	235	528	542	128	411	404	128	0	502	464	162	158
Grp Sat Flow(s),veh/h/ln	1714	1805	1854	1714	1805	1773	1714	0	1793	1570	1805	1653
Q Serve(g_s), s	16.0	33.0	33.0	8.7	25.6	25.7	5.5	0.0	32.4	17.4	10.1	10.8
Cycle Q Clear(g_c), s	16.0	33.0	33.0	8.7	25.6	25.7	5.5	0.0	32.4	17.4	10.1	10.8
Prop In Lane	1.00		0.14	1.00		0.40	1.00		0.33	1.00		0.83
Lane Grp Cap(c), veh/h	249	561	576	144	451	443	511	0	490	461	219	201
V/C Ratio(X)	0.95	0.94	0.94	0.89	0.91	0.91	0.25	0.00	1.03	1.01	0.74	0.79
Avail Cap(c_a), veh/h	249	581	597	144	472	463	511	0	490	461	504	461
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	30.7	30.7	51.3	35.8	35.9	24.5	0.0	35.0	46.3	46.7	47.0
Incr Delay (d2), s/veh	42.3	23.4	23.0	43.2	21.2	21.8	0.3	0.0	47.3	43.8	4.8	6.6
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(50%),veh/ln	9.0	15.2	15.5	5.3	12.4	12.2	2.1	0.0	18.1	8.8	4.5	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	88.2	54.0	53.7	94.4	57.1	57.7	24.8	0.0	82.3	90.0	51.6	53.7
LnGrp LOS	F	D	D	F	E	E	C		F	F	D	D
Approach Vol, veh/h		1305			943			630			784	
Approach Delay, s/veh		60.0			62.4			70.7			74.8	
Approach LOS		E			E			E			E	

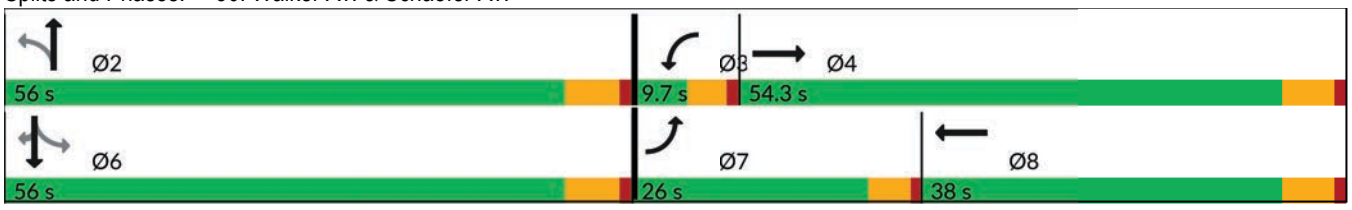
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.2	38.2	14.6	42.6	41.2	20.2	21.8	35.4
Change Period (Y+Rc), s	5.8	5.8	4.6	5.8	5.8	5.8	4.6	5.8
Max Green Setting (Gmax), s	17.4	32.4	10.0	38.2	16.7	33.1	17.2	31.0
Max Q Clear Time (g_c+I1), s	19.4	34.4	10.7	35.0	7.5	12.8	18.0	27.7
Green Ext Time (p_c), s	0.0	0.0	0.0	1.8	0.2	1.6	0.0	1.5

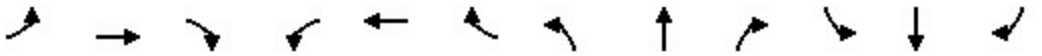
Intersection Summary	
HCM 7th Control Delay, s/veh	65.6
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	338	142	36	424	280	437	73	395	387
Future Volume (vph)	338	142	36	424	280	437	73	395	387
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4	3	8		2		6	
Permitted Phases					2		6		6
Detector Phase	7	4	3	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	26.0	54.3	9.7	38.0	56.0	56.0	56.0	56.0	56.0
Total Split (%)	21.7%	45.3%	8.1%	31.7%	46.7%	46.7%	46.7%	46.7%	46.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.4	52.4	5.1	32.2	50.2	50.2	50.2	50.2	50.2
Actuated g/C Ratio	0.18	0.44	0.04	0.27	0.42	0.42	0.42	0.42	0.42
v/c Ratio	1.11	0.81	0.50	1.14	1.05	0.62	0.35	0.52	0.45
Control Delay (s/veh)	128.4	31.0	78.5	123.1	101.5	31.5	29.3	29.0	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	128.4	31.0	78.5	123.1	101.5	31.5	29.3	29.0	3.8
LOS	F	C	E	F	F	C	C	C	A
Approach Delay (s/veh)		64.8		120.3		57.8		17.6	
Approach LOS		E		F		E		B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 60.5	Intersection LOS: E
Intersection Capacity Utilization 102.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 30: Walker Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	142	495	36	424	115	280	437	29	73	395	387
Future Volume (veh/h)	338	142	495	36	424	115	280	437	29	73	395	387
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	356	149	284	38	446	68	295	460	20	77	416	249
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	323	244	464	54	431	66	292	756	33	306	795	674
Arrive On Green	0.27	0.63	0.63	0.04	0.40	0.40	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	1810	585	1115	1810	1605	245	783	1807	79	929	1900	1610
Grp Volume(v), veh/h	356	0	433	38	0	514	295	0	480	77	416	249
Grp Sat Flow(s),veh/h/ln	1810	0	1699	1810	0	1849	783	0	1886	929	1900	1610
Q Serve(g_s), s	21.4	0.0	18.6	2.5	0.0	32.2	35.6	0.0	18.4	6.8	14.6	9.0
Cycle Q Clear(g_c), s	21.4	0.0	18.6	2.5	0.0	32.2	50.2	0.0	18.4	25.2	14.6	9.0
Prop In Lane	1.00		0.66	1.00		0.13	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	323	0	708	54	0	496	292	0	789	306	795	674
V/C Ratio(X)	1.10	0.00	0.61	0.70	0.00	1.04	1.01	0.00	0.61	0.25	0.52	0.37
Avail Cap(c_a), veh/h	323	0	708	77	0	496	292	0	789	306	795	674
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	0.0	16.6	56.8	0.0	35.9	33.3	0.0	16.4	24.0	15.7	14.7
Incr Delay (d2), s/veh	80.7	0.0	1.5	15.2	0.0	50.0	54.8	0.0	1.4	0.4	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.6	0.0	5.6	1.3	0.0	19.0	12.4	0.0	5.9	1.3	4.9	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	124.7	0.0	18.1	72.0	0.0	85.8	88.1	0.0	17.8	24.5	16.3	15.0
LnGrp LOS	F		B	E		F	F		B	C	B	B
Approach Vol, veh/h		789			552			775			742	
Approach Delay, s/veh		66.2			84.9			44.6			16.7	
Approach LOS		E			F			D			B	

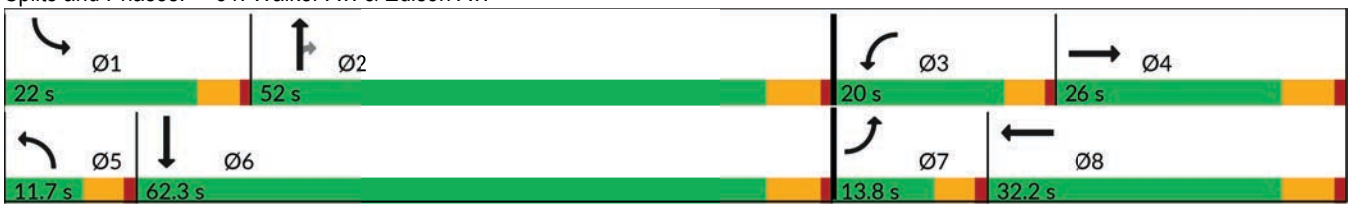
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		56.0	8.2	55.8		56.0	26.0	38.0				
Change Period (Y+Rc), s		5.8	4.6	5.8		5.8	4.6	5.8				
Max Green Setting (Gmax), s		50.2	5.1	48.5		50.2	21.4	32.2				
Max Q Clear Time (g_c+I1), s		52.2	4.5	20.6		27.2	23.4	34.2				
Green Ext Time (p_c), s		0.0	0.0	2.7		3.4	0.0	0.0				

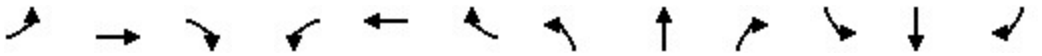
Intersection Summary	
HCM 7th Control Delay, s/veh	51.1
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	81	659	221	356	38	731	340	267	331
Future Volume (vph)	81	659	221	356	38	731	340	267	331
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	9.6	23.8	23.8	9.6	23.8
Total Split (s)	13.8	26.0	20.0	32.2	11.7	52.0	52.0	22.0	62.3
Total Split (%)	11.5%	21.7%	16.7%	26.8%	9.8%	43.3%	43.3%	18.3%	51.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.8	20.2	15.4	26.8	6.8	46.2	46.2	17.4	58.9
Actuated g/C Ratio	0.07	0.17	0.13	0.22	0.06	0.39	0.39	0.15	0.49
v/c Ratio	0.68	1.19	1.06	0.70	0.42	1.05	0.46	1.14	0.40
Control Delay (s/veh)	80.5	145.5	128.6	42.3	67.8	84.2	10.2	145.6	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.5	145.5	128.6	42.3	67.8	84.2	10.2	145.6	21.6
LOS	F	F	F	D	E	F	B	F	C
Approach Delay (s/veh)		138.6		67.1		61.0			74.9
Approach LOS		F		E		E			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay (s/veh): 83.3	Intersection LOS: F
Intersection Capacity Utilization 103.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 31: Walker Av. & Edison Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	659	28	221	356	194	38	731	340	267	331	24
Future Volume (veh/h)	81	659	28	221	356	194	38	731	340	267	331	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	85	694	18	233	375	204	40	769	358	281	348	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	106	605	16	220	534	286	53	732	620	249	874	63
Arrive On Green	0.09	0.25	0.25	0.19	0.35	0.35	0.05	0.58	0.58	0.22	0.75	0.75
Sat Flow, veh/h	1714	3595	93	1714	2270	1216	1714	1900	1610	1714	1750	126
Grp Volume(v), veh/h	85	348	364	233	297	282	40	769	358	281	0	373
Grp Sat Flow(s),veh/h/ln	1714	1805	1883	1714	1805	1681	1714	1900	1610	1714	0	1876
Q Serve(g_s), s	5.8	20.2	20.2	15.4	17.0	17.4	2.8	46.2	16.9	17.4	0.0	8.5
Cycle Q Clear(g_c), s	5.8	20.2	20.2	15.4	17.0	17.4	2.8	46.2	16.9	17.4	0.0	8.5
Prop In Lane	1.00		0.05	1.00		0.72	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	106	304	317	220	424	395	53	732	620	249	0	936
V/C Ratio(X)	0.80	1.15	1.15	1.06	0.70	0.71	0.76	1.05	0.58	1.13	0.00	0.40
Avail Cap(c_a), veh/h	131	304	317	220	424	395	101	732	620	249	0	936
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.7	44.8	44.9	48.4	35.2	35.3	56.8	25.3	19.2	46.9	0.0	8.6
Incr Delay (d2), s/veh	24.5	97.3	96.6	77.1	5.1	6.0	19.8	47.6	1.3	96.8	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	16.3	16.9	10.7	7.1	6.9	1.4	23.7	5.2	13.1	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.3	142.2	141.4	125.6	40.3	41.3	76.6	72.9	20.5	143.7	0.0	8.9
LnGrp LOS	E	F	F	F	D	D	E	F	C	F		A
Approach Vol, veh/h		797			812			1167			654	
Approach Delay, s/veh		135.0			65.1			57.0			66.8	
Approach LOS		F			E			E			E	

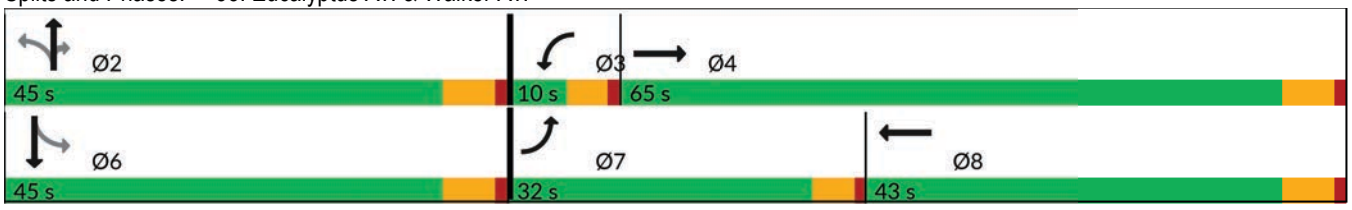
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	52.0	20.0	26.0	8.3	65.7	12.0	34.0
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Max Green Setting (Gmax), s	17.4	46.2	15.4	20.2	7.1	56.5	9.2	26.4
Max Q Clear Time (g_c+I1), s	19.4	48.2	17.4	22.2	4.8	10.5	7.8	19.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.9

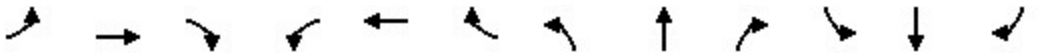
Intersection Summary	
HCM 7th Control Delay, s/veh	78.9
HCM 7th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	251	455	14	297	88	313	23	128	90
Future Volume (vph)	251	455	14	297	88	313	23	128	90
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	7	4	3	8		2			6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	23.8	9.6	23.8	23.8	23.8	23.8	23.8	23.8
Total Split (s)	32.0	65.0	10.0	43.0	45.0	45.0	45.0	45.0	45.0
Total Split (%)	26.7%	54.2%	8.3%	35.8%	37.5%	37.5%	37.5%	37.5%	37.5%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.2	35.7	5.8	14.9	20.5	20.5	20.5	20.5	20.5
Actuated g/C Ratio	0.25	0.51	0.08	0.21	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.63	0.34	0.11	0.56	0.35	0.59	0.04	0.65	0.47
Control Delay (s/veh)	33.4	11.7	41.4	27.0	25.3	26.9	0.1	39.0	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.4	11.7	41.4	27.0	25.3	26.9	0.1	39.0	17.7
LOS	C	B	D	C	C	C	A	D	B
Approach Delay (s/veh)		18.3		27.5		25.1			25.0
Approach LOS		B		C		C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 70.1	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay (s/veh): 22.8	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 33: Eucalyptus Av. & Walker Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	455	124	14	297	116	88	313	23	128	90	158
Future Volume (veh/h)	251	455	124	14	297	116	88	313	23	128	90	158
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	264	479	131	15	313	122	93	329	24	135	95	166
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	324	1020	277	32	493	188	363	603	511	326	197	344
Arrive On Green	0.28	0.55	0.55	0.03	0.29	0.29	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1714	2805	762	1714	2554	976	1076	1900	1610	989	621	1084
Grp Volume(v), veh/h	264	307	303	15	219	216	93	329	24	135	0	261
Grp Sat Flow(s),veh/h/ln	1714	1805	1763	1714	1805	1724	1076	1900	1610	989	0	1705
Q Serve(g_s), s	7.7	5.6	5.7	0.5	5.7	5.9	3.6	6.6	0.4	6.6	0.0	5.6
Cycle Q Clear(g_c), s	7.7	5.6	5.7	0.5	5.7	5.9	9.3	6.6	0.4	13.2	0.0	5.6
Prop In Lane	1.00		0.43	1.00		0.57	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	324	657	641	32	349	333	363	603	511	326	0	541
V/C Ratio(X)	0.81	0.47	0.47	0.47	0.63	0.65	0.26	0.55	0.05	0.41	0.00	0.48
Avail Cap(c_a), veh/h	871	1981	1935	172	1245	1189	804	1381	1170	731	0	1239
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.4	9.1	9.1	26.0	17.5	17.5	14.3	11.4	9.8	16.0	0.0	11.1
Incr Delay (d2), s/veh	4.9	0.5	0.5	10.3	1.9	2.1	0.4	0.8	0.0	0.8	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	1.6	1.6	0.3	2.1	2.1	0.7	2.1	0.1	1.0	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.4	9.6	9.6	36.2	19.3	19.7	14.6	12.2	9.8	16.9	0.0	11.8
LnGrp LOS	C	A	A	D	B	B	B	B	A	B		B
Approach Vol, veh/h		874			450			446			396	
Approach Delay, s/veh		13.8			20.1			12.5			13.5	
Approach LOS		B			C			B			B	

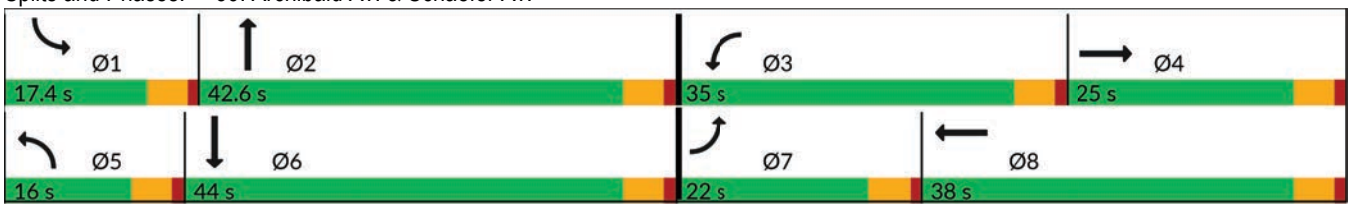
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.9	5.6	25.4		22.9	14.8	16.2				
Change Period (Y+Rc), s		5.8	4.6	5.8		5.8	4.6	5.8				
Max Green Setting (Gmax), s		39.2	5.4	59.2		39.2	27.4	37.2				
Max Q Clear Time (g_c+I1), s		11.3	2.5	7.7		15.2	9.7	7.9				
Green Ext Time (p_c), s		2.3	0.0	3.9		2.0	0.7	2.5				

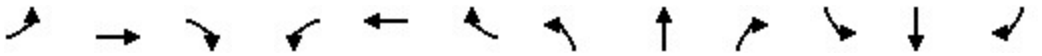
Intersection Summary	
HCM 7th Control Delay, s/veh	14.8
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	325	113	66	89	167	1453	139	1238
Future Volume (vph)	325	113	66	89	167	1453	139	1238
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.5	32.6	32.6	9.6	37.5	9.6	23.5
Total Split (s)	22.0	25.0	35.0	38.0	16.0	42.6	17.4	44.0
Total Split (%)	18.3%	20.8%	29.2%	31.7%	13.3%	35.5%	14.5%	36.7%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.5	22.2	11.9	14.3	11.5	39.3	11.8	39.6
Actuated g/C Ratio	0.17	0.22	0.12	0.14	0.11	0.39	0.12	0.39
v/c Ratio	1.16	0.54	0.35	0.52	0.91	0.79	0.74	1.21
Control Delay (s/veh)	141.9	38.1	44.8	40.3	92.6	32.2	66.9	130.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	141.9	38.1	44.8	40.3	92.6	32.2	66.9	130.7
LOS	F	D	D	D	F	C	E	F
Approach Delay (s/veh)		100.9		41.8		38.2		125.6
Approach LOS		F		D		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay (s/veh): 83.1	Intersection LOS: F
Intersection Capacity Utilization 97.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 39: Archibald Av. & Schaefer Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	113	99	66	89	44	167	1453	49	139	1238	353
Future Volume (veh/h)	325	113	99	66	89	44	167	1453	49	139	1238	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	342	119	104	69	94	44	176	1529	49	146	1303	372
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	310	213	186	89	121	57	203	2203	71	175	1143	318
Arrive On Green	0.27	0.34	0.34	0.08	0.15	0.15	0.18	0.64	0.64	0.15	0.62	0.62
Sat Flow, veh/h	1714	935	817	1714	1224	573	1714	5163	165	1714	2789	776
Grp Volume(v), veh/h	342	0	223	69	0	138	176	1024	554	146	832	843
Grp Sat Flow(s),veh/h/ln	1714	0	1753	1714	0	1797	1714	1729	1870	1714	1805	1760
Q Serve(g_s), s	17.4	0.0	9.9	3.8	0.0	7.1	9.6	18.4	18.4	7.9	39.4	39.4
Cycle Q Clear(g_c), s	17.4	0.0	9.9	3.8	0.0	7.1	9.6	18.4	18.4	7.9	39.4	39.4
Prop In Lane	1.00		0.47	1.00		0.32	1.00		0.09	1.00		0.44
Lane Grp Cap(c), veh/h	310	0	400	89	0	178	203	1476	798	175	740	722
V/C Ratio(X)	1.10	0.00	0.56	0.77	0.00	0.78	0.87	0.69	0.69	0.84	1.12	1.17
Avail Cap(c_a), veh/h	310	0	400	542	0	625	203	1476	798	228	740	722
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	27.7	43.8	0.0	39.9	38.8	13.2	13.2	39.9	18.5	18.5
Incr Delay (d2), s/veh	81.2	0.0	1.7	13.3	0.0	7.1	30.0	1.4	2.6	14.7	72.6	90.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	0.0	3.8	1.8	0.0	3.2	5.2	4.7	5.4	3.7	23.1	26.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	116.2	0.0	29.4	57.0	0.0	47.0	68.8	14.7	15.8	54.7	91.1	108.9
LnGrp LOS	F		C	E		D	E	B	B	D	F	F
Approach Vol, veh/h		565			207			1754			1821	
Approach Delay, s/veh		82.0			50.4			20.5			96.4	
Approach LOS		F			D			C			F	

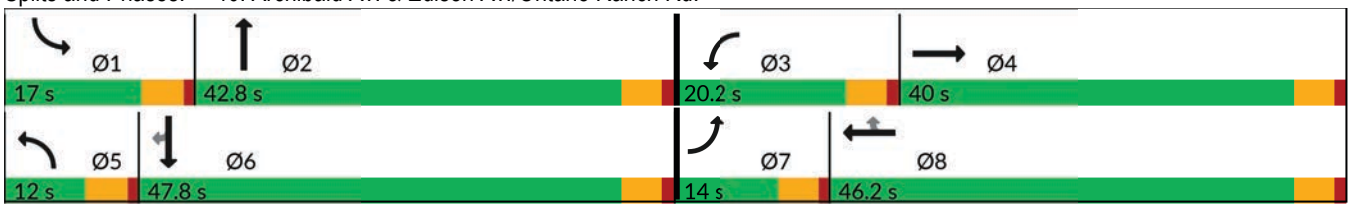
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	45.6	9.6	26.5	16.0	44.0	22.0	14.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	12.8	38.0	30.4	20.4	11.4	39.4	17.4	33.4
Max Q Clear Time (g_c+I1), s	9.9	20.4	5.8	11.9	11.6	41.4	19.4	9.1
Green Ext Time (p_c), s	0.0	9.0	0.1	0.7	0.0	0.0	0.0	0.6

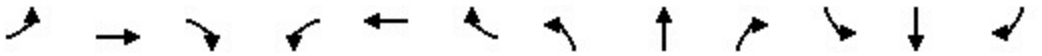
Intersection Summary	
HCM 7th Control Delay, s/veh	61.7
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	1189	259	372	1146	243	117	902	386	220	848	197
Future Volume (vph)	309	1189	259	372	1146	243	117	902	386	220	848	197
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.6	39.2		9.6	46.2	46.2	9.6	39.5		9.6	46.5	46.5
Total Split (s)	14.0	40.0		20.2	46.2	46.2	12.0	42.8		17.0	47.8	47.8
Total Split (%)	11.7%	33.3%		16.8%	38.5%	38.5%	10.0%	35.7%		14.2%	39.8%	39.8%
Yellow Time (s)	3.6	3.6		3.6	3.6	3.6	3.6	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	9.4	35.2	115.5	15.5	41.2	41.2	7.4	34.0	115.5	12.4	39.0	39.0
Actuated g/C Ratio	0.08	0.30	1.00	0.13	0.36	0.36	0.06	0.29	1.00	0.11	0.34	0.34
v/c Ratio	1.24	0.72	0.17	0.91	0.94	0.37	1.13	0.85	0.25	1.27	0.70	0.32
Control Delay (s/veh)	178.7	39.1	0.2	75.5	50.6	11.9	173.1	46.5	0.4	197.8	36.3	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	178.7	39.1	0.2	75.5	50.6	11.9	173.1	46.5	0.4	197.8	36.3	11.0
LOS	F	D	A	E	D	B	F	D	A	F	D	B
Approach Delay (s/veh)		57.9			50.5			44.4			60.5	
Approach LOS		E			D			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay (s/veh): 53.3	Intersection LOS: D
Intersection Capacity Utilization 94.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 40: Archibald Av. & Edison Av./Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	1189	259	372	1146	243	117	902	386	220	848	197
Future Volume (veh/h)	309	1189	259	372	1146	243	117	902	386	220	848	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1700	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	325	1252	0	392	1206	130	123	949	0	232	893	112
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	272	1737		440	1288	574	113	1080		190	1250	530
Arrive On Green	0.13	0.46	0.00	0.20	0.54	0.54	0.10	0.43	0.00	0.17	0.49	0.49
Sat Flow, veh/h	3238	5700	1610	3238	3610	1610	1714	3800	1610	1714	3800	1610
Grp Volume(v), veh/h	325	1252	0	392	1206	130	123	949	0	232	893	112
Grp Sat Flow(s),veh/h/ln	1619	1900	1610	1619	1805	1610	1714	1900	1610	1714	1900	1610
Q Serve(g_s), s	9.4	19.9	0.0	13.2	34.9	4.8	7.4	25.7	0.0	12.4	20.6	4.4
Cycle Q Clear(g_c), s	9.4	19.9	0.0	13.2	34.9	4.8	7.4	25.7	0.0	12.4	20.6	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	272	1737		440	1288	574	113	1080		190	1250	530
V/C Ratio(X)	1.20	0.72		0.89	0.94	0.23	1.09	0.88		1.22	0.71	0.21
Avail Cap(c_a), veh/h	272	1802		451	1341	598	113	1296		190	1466	621
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	26.5	0.0	43.8	24.8	17.9	50.4	30.3	0.0	46.7	24.3	20.2
Incr Delay (d2), s/veh	118.2	1.4	0.0	18.3	12.2	0.2	109.5	6.3	0.0	137.8	1.4	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(50%),veh/ln	7.9	7.2	0.0	5.8	12.8	1.6	6.4	9.9	0.0	12.0	7.2	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	167.1	27.9	0.0	62.1	37.0	18.1	159.9	36.6	0.0	184.5	25.6	20.4
LnGrp LOS	F	C		E	D	B	F	D		F	C	C
Approach Vol, veh/h		1577			1728			1072			1237	
Approach Delay, s/veh		56.6			41.3			50.8			54.9	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	36.4	19.8	38.7	12.0	41.4	14.0	44.5
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	12.4	38.2	15.6	35.4	7.4	43.2	9.4	41.6
Max Q Clear Time (g_c+I1), s	14.4	27.7	15.2	21.9	9.4	22.6	11.4	36.9
Green Ext Time (p_c), s	0.0	4.2	0.0	6.5	0.0	5.8	0.0	3.1

Intersection Summary	
HCM 7th Control Delay, s/veh	50.4
HCM 7th LOS	D

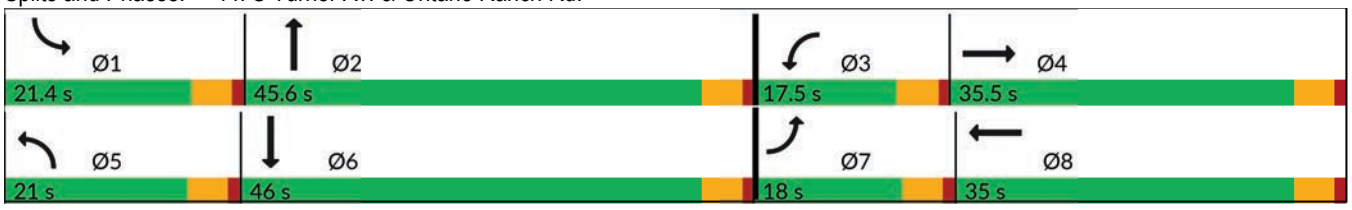
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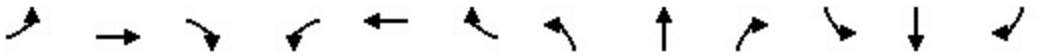
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	219	1714	187	1656	281	344	224	386
Future Volume (vph)	219	1714	187	1656	281	344	224	386
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.6	9.6	22.6	9.6	22.6	9.6	22.6
Total Split (s)	18.0	35.5	17.5	35.0	21.0	45.6	21.4	46.0
Total Split (%)	15.0%	29.6%	14.6%	29.2%	17.5%	38.0%	17.8%	38.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.4	30.9	12.9	30.4	16.4	41.0	16.8	41.4
Actuated g/C Ratio	0.11	0.26	0.11	0.25	0.14	0.34	0.14	0.35
v/c Ratio	1.22	1.05	1.08	1.01	1.27	0.93	0.99	1.15
Control Delay (s/veh)	180.3	78.6	138.8	67.1	193.1	59.0	107.0	118.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	180.3	78.6	138.8	67.1	193.1	59.0	107.0	118.8
LOS	F	E	F	E	F	E	F	F
Approach Delay (s/veh)		88.9		73.7		104.3		115.9
Approach LOS		F		E		F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay (s/veh): 90.0	Intersection LOS: F
Intersection Capacity Utilization 110.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 44: S Turner Av. & Ontario Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1714	228	187	1656	179	281	344	208	224	386	302
Future Volume (veh/h)	219	1714	228	187	1656	179	281	344	208	224	386	302
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	231	1804	135	197	1743	104	296	362	114	236	406	160
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	1841	138	189	1842	110	240	451	142	246	425	168
Arrive On Green	0.17	0.40	0.40	0.17	0.39	0.39	0.21	0.49	0.49	0.22	0.49	0.49
Sat Flow, veh/h	1714	6983	523	1714	7100	424	1714	1385	436	1714	1291	509
Grp Volume(v), veh/h	231	1472	467	197	1399	448	296	0	476	236	0	566
Grp Sat Flow(s),veh/h/ln	1714	1900	1806	1714	1900	1824	1714	0	1821	1714	0	1799
Q Serve(g_s), s	13.4	29.9	29.9	12.9	27.8	27.8	16.4	0.0	25.8	16.0	0.0	35.3
Cycle Q Clear(g_c), s	13.4	29.9	29.9	12.9	27.8	27.8	16.4	0.0	25.8	16.0	0.0	35.3
Prop In Lane	1.00		0.29	1.00		0.23	1.00		0.24	1.00		0.28
Lane Grp Cap(c), veh/h	196	1503	476	189	1478	473	240	0	593	246	0	593
V/C Ratio(X)	1.18	0.98	0.98	1.04	0.95	0.95	1.23	0.00	0.80	0.96	0.00	0.95
Avail Cap(c_a), veh/h	196	1503	476	189	1478	473	240	0	637	246	0	636
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.6	35.1	35.1	48.9	35.0	35.0	46.3	0.0	26.8	45.7	0.0	28.8
Incr Delay (d2), s/veh	120.7	18.5	35.9	77.6	12.9	28.3	136.0	0.0	6.9	46.0	0.0	24.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	14.1	15.7	9.1	12.5	14.0	15.2	0.0	10.0	9.2	0.0	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	169.3	53.7	71.0	126.5	47.9	63.4	182.3	0.0	33.7	91.7	0.0	53.1
LnGrp LOS	F	D	E	F	D	E	F		C	F		D
Approach Vol, veh/h		2170			2044			772			802	
Approach Delay, s/veh		69.7			58.9			90.6			64.4	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.4	42.8	17.5	35.5	21.0	43.2	18.0	35.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	16.8	41.0	12.9	30.9	16.4	41.4	13.4	30.4
Max Q Clear Time (g_c+I1), s	18.0	27.8	14.9	31.9	18.4	37.3	15.4	29.8
Green Ext Time (p_c), s	0.0	2.3	0.0	0.0	0.0	1.3	0.0	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	67.9
HCM 7th LOS	E

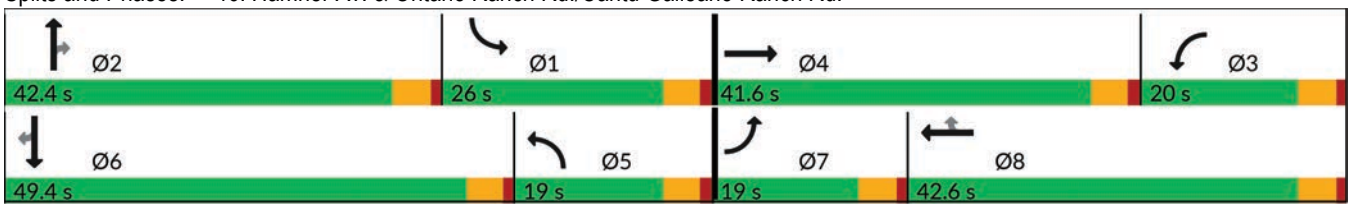
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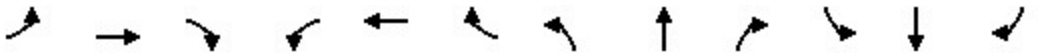
User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	404	1203	431	1642	366	403	898	347	609	1385	750
Future Volume (vph)	404	1203	431	1642	366	403	898	347	609	1385	750
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6	9.6	41.6	41.6
Total Split (s)	19.0	41.6	20.0	42.6	42.6	19.0	42.4	42.4	26.0	49.4	49.4
Total Split (%)	14.6%	32.0%	15.4%	32.8%	32.8%	14.6%	32.6%	32.6%	20.0%	38.0%	38.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.4	35.3	17.1	38.0	38.0	14.4	30.7	30.7	28.5	44.8	44.8
Actuated g/C Ratio	0.11	0.27	0.13	0.29	0.29	0.11	0.24	0.24	0.22	0.34	0.34
v/c Ratio	1.15	0.75	1.03	1.00	0.57	1.15	0.68	0.63	0.88	0.72	1.08
Control Delay (s/veh)	145.2	44.5	106.1	68.4	14.7	144.3	47.5	17.9	63.4	39.6	83.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	145.2	44.5	106.1	68.4	14.7	144.3	47.5	17.9	63.4	39.6	83.8
LOS	F	D	F	E	B	F	D	B	E	D	F
Approach Delay (s/veh)		65.8		67.0			64.9			56.9	
Approach LOS		E		E			E			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay (s/veh): 63.2	Intersection LOS: E
Intersection Capacity Utilization 102.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 46: Hamner Av. & Ontario Ranch Rd./Cantu Galleano Ranch Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	1203	298	431	1642	366	403	898	347	609	1385	750
Future Volume (veh/h)	404	1203	298	431	1642	366	403	898	347	609	1385	750
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
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	1768	1976	1976	1768	1976	1976	1768	1976	1976	1768	1976	1976
Adj Flow Rate, veh/h	425	1266	167	454	1728	227	424	945	186	641	1458	473
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	394	1654	217	614	1820	507	394	1247	348	728	1835	511
Arrive On Green	0.18	0.36	0.36	0.27	0.46	0.46	0.18	0.32	0.32	0.32	0.46	0.46
Sat Flow, veh/h	3368	6843	898	3368	5928	1652	3368	5928	1653	3368	5928	1652
Grp Volume(v), veh/h	425	1096	337	454	1728	227	424	945	186	641	1458	473
Grp Sat Flow(s),veh/h/ln	1684	1976	1813	1684	1976	1652	1684	1976	1653	1684	1976	1652
Q Serve(g_s), s	14.4	20.1	20.2	15.1	34.4	6.7	14.4	17.6	11.4	22.2	25.7	23.9
Cycle Q Clear(g_c), s	14.4	20.1	20.2	15.1	34.4	6.7	14.4	17.6	11.4	22.2	25.7	23.9
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	1433	438	614	1820	507	394	1247	348	728	1835	511
V/C Ratio(X)	1.08	0.76	0.77	0.74	0.95	0.45	1.08	0.76	0.53	0.88	0.79	0.93
Avail Cap(c_a), veh/h	394	1782	545	614	1830	510	394	1821	508	728	2158	601
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	36.1	36.2	42.1	32.3	8.8	50.7	39.3	37.2	40.1	29.6	16.5
Incr Delay (d2), s/veh	68.0	1.6	5.2	4.2	11.3	0.6	67.1	1.1	1.3	11.7	1.8	18.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	8.2	8.0	5.8	14.6	3.8	9.1	7.5	4.2	9.0	10.0	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	118.7	37.7	41.4	46.3	43.6	9.4	117.9	40.4	38.4	51.8	31.5	35.2
LnGrp LOS	F	D	D	D	D	A	F	D	D	D	C	D
Approach Vol, veh/h		1858			2409			1555			2572	
Approach Delay, s/veh		56.9			40.9			61.3			37.2	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.2	30.5	27.0	34.4	19.0	42.7	19.0	42.4
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	21.4	37.8	15.4	37.0	14.4	44.8	14.4	38.0
Max Q Clear Time (g_c+I1), s	24.2	19.6	17.1	22.2	16.4	27.7	16.4	36.4
Green Ext Time (p_c), s	0.0	6.2	0.0	7.4	0.0	10.4	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	47.1
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.