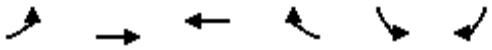
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	579	285	3	442	127
Future Volume (vph)	0	579	285	3	442	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.96
Satd. Flow (prot)		2601	3534			3407
Flt Permitted		1.00	1.00			0.96
Satd. Flow (perm)		2601	3534			3407
Peak-hour factor, PHF	0.93	0.93	0.89	0.89	0.97	0.97
Adj. Flow (vph)	0	623	320	3	456	131
RTOR Reduction (vph)	0	444	1	0	0	0
Lane Group Flow (vph)	0	179	322	0	0	587
Confl. Peds. (#/hr)				5		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		35.7	23.9			92.1
Effective Green, g (s)		35.7	23.9			87.6
Actuated g/C Ratio		0.29	0.19			0.71
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		747	680			2403
v/s Ratio Prot		0.07	c0.09			c0.17
v/s Ratio Perm						
v/c Ratio		0.24	0.47			0.24
Uniform Delay, d1		33.9	44.6			6.5
Progression Factor		1.00	1.00			0.40
Incremental Delay, d2		0.2	0.5			0.1
Delay (s)		34.1	45.1			2.6
Level of Service		C	D			A
Approach Delay (s)	34.1		45.1			2.6
Approach LOS	C		D			A

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	124.2	Sum of lost time (s)	16.8
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

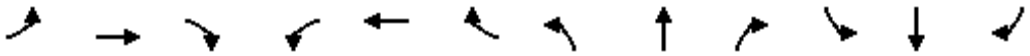
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	406	581	355	118	14
Future Volume (vph)	0	406	581	355	118	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	10	10	12	12	12
Total Lost time (s)		4.4	4.4		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.94		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3303	3091		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3303	3091		1770	1583
Peak-hour factor, PHF	0.82	0.82	0.75	0.75	0.65	0.65
Adj. Flow (vph)	0	495	775	473	182	22
RTOR Reduction (vph)	0	0	94	0	0	10
Lane Group Flow (vph)	0	495	1154	0	182	12
Confl. Peds. (#/hr)				1	137	
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		34.2	34.2		14.5	14.5
Effective Green, g (s)		34.2	34.2		14.5	14.5
Actuated g/C Ratio		0.47	0.47		0.20	0.20
Clearance Time (s)		4.4	4.4		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1541	1442		350	313
v/s Ratio Prot		0.15	c0.37		c0.10	
v/s Ratio Perm						0.01
v/c Ratio		0.32	0.80		0.52	0.04
Uniform Delay, d1		12.3	16.6		26.3	23.8
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1	3.2		1.4	0.0
Delay (s)		12.4	19.8		27.7	23.8
Level of Service		B	B		C	C
Approach Delay (s)		12.4	19.8		27.3	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	73.3	Sum of lost time (s)	12.4
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Future Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	610	28	133	1017	18	55	0	173	0	0	4
Peak Hour Factor	0.87	0.87	0.87	0.93	0.93	0.93	0.82	0.82	0.82	0.50	0.50	0.50
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	4	1255	58	174	1643	29	323	0	284	0	0	7
Arrive On Green	0.00	0.36	0.36	0.10	0.46	0.46	0.18	0.00	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1781	3454	158	1781	3570	63	1781	0	1569	0	0	1585
Grp Volume(v), veh/h	1	313	325	133	506	529	55	0	173	0	0	4
Grp Sat Flow(s),veh/h/ln	1781	1777	1836	1781	1777	1856	1781	0	1569	0	0	1585
Q Serve(g_s), s	0.0	6.7	6.7	3.6	10.5	10.5	1.3	0.0	5.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	6.7	6.7	3.6	10.5	10.5	1.3	0.0	5.0	0.0	0.0	0.1
Prop In Lane	1.00		0.09	1.00		0.03	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	4	646	667	174	818	854	323	0	284	0	0	7
V/C Ratio(X)	0.27	0.49	0.49	0.76	0.62	0.62	0.17	0.00	0.61	0.00	0.00	0.58
Avail Cap(c_a), veh/h	291	1271	1313	910	1271	1327	910	0	802	0	0	259
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	24.4	12.0	12.1	21.5	10.0	10.0	16.9	0.0	18.4	0.0	0.0	24.3
Incr Delay (d2), s/veh	14.4	0.8	0.8	2.6	1.1	1.0	0.4	0.0	3.0	0.0	0.0	25.9
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	0.0	2.3	2.4	1.5	3.4	3.6	0.5	0.0	1.9	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	12.9	12.8	24.2	11.1	11.0	17.3	0.0	21.4	0.0	0.0	50.2
LnGrp LOS	D	B	B	C	B	B	B	A	C	A	A	D
Approach Vol, veh/h		639			1168			228			4	
Approach Delay, s/veh		12.9			12.5			20.4			50.2	
Approach LOS		B			B			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	27.5		13.0	8.9	22.8		4.3				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	8.0	35.0		25.0	25.0	35.0		8.0				
Max Q Clear Time (g_c+I1), s	2.0	12.5		7.0	5.6	8.7		2.1				
Green Ext Time (p_c), s	0.0	10.0		1.6	0.2	6.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		13.6	
HCM 6th LOS		B	

Notes

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	603	1033	21	9	67
Future Vol, veh/h	64	603	1033	21	9	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	655	1123	23	10	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1146	0	-	0	1603	573
Stage 1	-	-	-	-	1135	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	605	-	-	-	96	463
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	597	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	605	-	-	-	85	463
Mov Cap-2 Maneuver	-	-	-	-	185	-
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	597	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	605	-	-	-	393
HCM Lane V/C Ratio	0.115	-	-	-	0.21
HCM Control Delay (s)	11.7	-	-	-	16.6
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	0.8

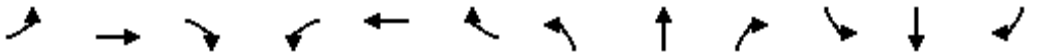
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	603	999	23	18	58
Future Vol, veh/h	14	603	999	23	18	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	655	1086	25	20	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1111	0	-	0	1457	556
Stage 1	-	-	-	-	1099	-
Stage 2	-	-	-	-	358	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	624	-	-	-	120	475
Stage 1	-	-	-	-	281	-
Stage 2	-	-	-	-	678	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	624	-	-	-	117	475
Mov Cap-2 Maneuver	-	-	-	-	219	-
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	678	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	624	-	-	-	372
HCM Lane V/C Ratio	0.024	-	-	-	0.222
HCM Control Delay (s)	10.9	-	-	-	17.4
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Future Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.97		1.00	0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.88		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	3273		1652	3289		1770	1594		1770	1555	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	3273		1652	3289		1770	1594		1770	1555	
Peak-hour factor, PHF	0.69	0.69	0.69	0.84	0.84	0.84	0.64	0.64	0.64	0.74	0.74	0.74
Adj. Flow (vph)	41	870	32	36	1045	23	145	16	55	107	9	55
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	41	900	0	36	1067	0	145	71	0	107	64	0
Confl. Peds. (#/hr)			38			14			30			34
Confl. Bikes (#/hr)			9			8						2
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	4.1	36.9		4.0	36.8		19.3	19.3		18.0	18.0	
Effective Green, g (s)	4.1	36.9		4.0	36.8		19.3	19.3		18.0	18.0	
Actuated g/C Ratio	0.04	0.39		0.04	0.39		0.20	0.20		0.19	0.19	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	73	1268		69	1271		358	323		334	294	
v/s Ratio Prot	c0.02	0.27		0.02	c0.32		c0.08	0.04		c0.06	0.04	
v/s Ratio Perm												
v/c Ratio	0.56	0.71		0.52	0.84		0.41	0.22		0.32	0.22	
Uniform Delay, d1	44.7	24.6		44.7	26.5		33.0	31.7		33.3	32.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.8	1.8		3.3	5.0		0.5	0.3		0.4	0.3	
Delay (s)	50.4	26.5		47.9	31.6		33.5	31.9		33.7	32.9	
Level of Service	D	C		D	C		C	C		C	C	
Approach Delay (s)		27.5			32.1			33.0			33.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	95.2	Sum of lost time (s)	17.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	707	886	30	32	69
Future Vol, veh/h	35	707	886	30	32	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	768	963	33	35	75

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	996	0	-	0	1440	498
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	460	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	690	-	-	-	124	518
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	690	-	-	-	117	518
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	18.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	690	-	-	-	372
HCM Lane V/C Ratio	0.055	-	-	-	0.295
HCM Control Delay (s)	10.5	-	-	-	18.7
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.2

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	665	849	28	32	64
Future Vol, veh/h	62	665	849	28	32	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	723	923	30	35	70

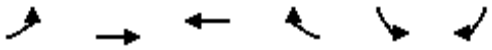
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	953	0	-	0	1434	477
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	496	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	717	-	-	-	125	534
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	577	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	717	-	-	-	113	534
Mov Cap-2 Maneuver	-	-	-	-	229	-
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	577	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	717	-	-	-	370
HCM Lane V/C Ratio	0.094	-	-	-	0.282
HCM Control Delay (s)	10.5	-	-	-	18.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	683	16	28	840	32	74
Future Volume (vph)	683	16	28	840	32	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3292		1711	3421	1663	
Flt Permitted	1.00		0.36	1.00	0.99	
Satd. Flow (perm)	3292		655	3421	1663	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	742	17	30	913	35	80
RTOR Reduction (vph)	3	0	0	0	71	0
Lane Group Flow (vph)	756	0	30	913	44	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	20.3		20.3	20.3	3.6	
Effective Green, g (s)	20.3		20.3	20.3	3.6	
Actuated g/C Ratio	0.62		0.62	0.62	0.11	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2049		407	2130	183	
v/s Ratio Prot	0.23			c0.27		
v/s Ratio Perm			0.05		c0.03	
v/c Ratio	0.37		0.07	0.43	0.24	
Uniform Delay, d1	3.0		2.4	3.2	13.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.1	0.2	0.7	
Delay (s)	3.2		2.5	3.4	13.9	
Level of Service	A		A	A	B	
Approach Delay (s)	3.2			3.3	13.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	3.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	32.6	Sum of lost time (s)	8.7
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	750	853	16	16	78
Future Volume (vph)	50	750	853	16	16	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3421	3410		1769	1561
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3421	3410		1769	1561
Peak-hour factor, PHF	0.76	0.76	0.69	0.69	0.81	0.81
Adj. Flow (vph)	66	987	1236	23	20	96
RTOR Reduction (vph)	0	0	1	0	0	84
Lane Group Flow (vph)	66	987	1258	0	20	12
Confl. Peds. (#/hr)				8	1	4
Confl. Bikes (#/hr)				3		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	4.0	39.0	30.4		6.5	6.5
Effective Green, g (s)	4.0	39.0	30.4		6.5	6.5
Actuated g/C Ratio	0.07	0.72	0.56		0.12	0.12
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	126	2461	1912		212	187
v/s Ratio Prot	0.04	c0.29	c0.37			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.52	0.40	0.66		0.09	0.06
Uniform Delay, d1	24.2	3.0	8.3		21.2	21.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.8	0.1	0.8		0.1	0.1
Delay (s)	26.0	3.1	9.1		21.3	21.2
Level of Service	C	A	A		C	C
Approach Delay (s)		4.5	9.1		21.2	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	13.3
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

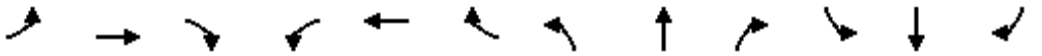
Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	704	30	62	821	39	69
Future Vol, veh/h	704	30	62	821	39	69
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	765	33	67	892	42	75

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	798	0	1362	399
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	580	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	820	-	139	601
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	523	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	820	-	128	601
Mov Cap-2 Maneuver	-	-	-	-	260	-
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	480	-

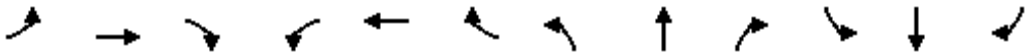
Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	17.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	408	-	-	820	-
HCM Lane V/C Ratio	0.288	-	-	0.082	-
HCM Control Delay (s)	17.3	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.2	-	-	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Future Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3298					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3298					3433		1583
Peak-hour factor, PHF	0.74	0.74	0.74	0.75	0.75	0.75	0.92	0.92	0.92	0.80	0.80	0.80
Adj. Flow (vph)	239	789	0	0	824	215	0	0	0	129	0	382
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	0	0	0	321
Lane Group Flow (vph)	239	789	0	0	1019	0	0	0	0	129	0	62
Confl. Peds. (#/hr)						18						1
Confl. Bikes (#/hr)			26			2						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	15.0	44.7			25.7					10.5		10.5
Effective Green, g (s)	15.0	44.7			25.7					10.5		10.5
Actuated g/C Ratio	0.23	0.69			0.40					0.16		0.16
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	397	2285			1312					557		257
v/s Ratio Prot	c0.14	0.24			c0.31					0.04		c0.04
v/s Ratio Perm												
v/c Ratio	0.60	0.35			0.78					0.23		0.24
Uniform Delay, d1	22.1	4.0			16.9					23.5		23.6
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	1.8	0.0			2.7					0.2		0.5
Delay (s)	23.9	4.1			19.6					23.8		24.1
Level of Service	C	A			B					C		C
Approach Delay (s)		8.7			19.6			0.0			24.0	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	64.6	Sum of lost time (s)	17.4
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



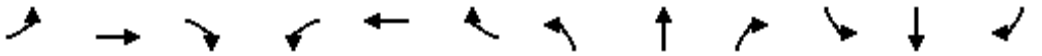
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Future Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	658	85	16	396	30	314	52	44	59	34	188
Peak Hour Factor	0.78	0.78	0.78	0.83	0.83	0.83	0.66	0.66	0.66	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	1029	441	21	855	372	502	373	316	623	98	544
Arrive On Green	0.06	0.29	0.29	0.01	0.24	0.24	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1781	3554	1521	1781	3554	1544	1154	927	784	1293	245	1352
Grp Volume(v), veh/h	85	658	85	16	396	30	314	0	96	59	0	222
Grp Sat Flow(s),veh/h/ln	1781	1777	1521	1781	1777	1544	1154	0	1711	1293	0	1597
Q Serve(g_s), s	2.3	7.8	2.0	0.4	4.6	0.7	12.5	0.0	1.7	1.5	0.0	4.7
Cycle Q Clear(g_c), s	2.3	7.8	2.0	0.4	4.6	0.7	17.2	0.0	1.7	3.2	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.85
Lane Grp Cap(c), veh/h	109	1029	441	21	855	372	502	0	688	623	0	642
V/C Ratio(X)	0.78	0.64	0.19	0.75	0.46	0.08	0.63	0.00	0.14	0.09	0.00	0.35
Avail Cap(c_a), veh/h	553	2944	1260	553	2944	1279	516	0	709	639	0	661
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	22.4	15.0	12.9	23.8	15.7	14.2	16.0	0.0	9.1	10.1	0.0	10.0
Incr Delay (d2), s/veh	4.6	0.5	0.2	17.4	0.3	0.1	2.3	0.0	0.1	0.1	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	1.0	2.6	0.6	0.3	1.6	0.2	3.2	0.0	0.6	0.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	15.4	13.1	41.2	16.0	14.3	18.3	0.0	9.2	10.2	0.0	10.3
LnGrp LOS	C	B	B	D	B	B	B	A	A	B	A	B
Approach Vol, veh/h		828			442			410			281	
Approach Delay, s/veh		16.4			16.8			16.2			10.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	17.0		24.3	4.6	19.4		24.3				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	4.3	6.6		6.7	2.4	9.8		19.2				
Green Ext Time (p_c), s	0.1	2.1		1.3	0.0	3.9		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		15.5	
HCM 6th LOS		B	

Notes

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



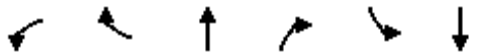
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Future Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	224	404	29	10	23	43	94	240	241	314	290	330
Peak Hour Factor	0.82	0.82	0.82	0.61	0.61	0.61	0.88	0.88	0.88	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	529	470	34	27	242	216	226	508	453	433	532	444
Arrive On Green	0.15	0.27	0.27	0.02	0.14	0.14	0.13	0.29	0.29	0.13	0.28	0.28
Sat Flow, veh/h	3456	1716	123	1781	1777	1585	1781	1777	1585	3456	1870	1560
Grp Volume(v), veh/h	224	0	433	10	23	43	94	240	241	314	290	330
Grp Sat Flow(s),veh/h/ln	1728	0	1839	1781	1777	1585	1781	1777	1585	1728	1870	1560
Q Serve(g_s), s	3.8	0.0	14.3	0.4	0.7	1.5	3.1	7.1	8.2	5.6	8.4	12.3
Cycle Q Clear(g_c), s	3.8	0.0	14.3	0.4	0.7	1.5	3.1	7.1	8.2	5.6	8.4	12.3
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	529	0	504	27	242	216	226	508	453	433	532	444
V/C Ratio(X)	0.42	0.00	0.86	0.37	0.10	0.20	0.42	0.47	0.53	0.73	0.54	0.74
Avail Cap(c_a), veh/h	1887	0	717	834	693	618	695	815	727	1078	876	730
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	24.6	0.0	22.1	31.2	24.2	24.6	25.8	18.9	19.3	27.0	19.4	20.8
Incr Delay (d2), s/veh	0.5	0.0	5.5	3.1	0.1	0.2	0.9	0.3	0.4	0.9	1.2	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	1.4	0.0	6.2	0.2	0.3	0.5	1.3	2.6	2.7	2.1	3.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	27.6	34.3	24.3	24.8	26.7	19.1	19.6	27.8	20.7	24.3
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		657			76			575			934	
Approach Delay, s/veh		26.7			25.9			20.6			24.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	22.9	12.2	23.9	13.9	14.0	12.1	24.0
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	30.0	25.0	25.0	30.0	35.0	25.0	20.0	29.4
Max Q Clear Time (g_c+I1), s	2.4	16.3	5.1	14.3	5.8	3.5	7.6	10.2
Green Ext Time (p_c), s	0.0	1.1	0.1	3.6	0.7	0.2	0.5	1.7

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

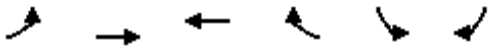
Notes

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



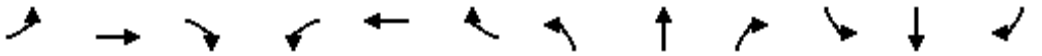
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	541	277	2	699	294
Future Volume (vph)	0	541	277	2	699	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.97
Satd. Flow (prot)		2601	3535			3419
Flt Permitted		1.00	1.00			0.97
Satd. Flow (perm)		2601	3535			3419
Peak-hour factor, PHF	0.82	0.82	0.90	0.90	0.95	0.95
Adj. Flow (vph)	0	660	308	2	736	309
RTOR Reduction (vph)	0	489	0	0	0	0
Lane Group Flow (vph)	0	171	310	0	0	1045
Confl. Peds. (#/hr)		4		9		
Confl. Bikes (#/hr)				1		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		35.1	24.5			102.5
Effective Green, g (s)		35.1	24.5			98.0
Actuated g/C Ratio		0.26	0.18			0.72
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		675	640			2478
v/s Ratio Prot		0.07	c0.09			c0.31
v/s Ratio Perm						
v/c Ratio		0.25	0.48			0.42
Uniform Delay, d1		39.7	49.7			7.4
Progression Factor		1.00	1.00			0.46
Incremental Delay, d2		0.3	0.6			0.1
Delay (s)		39.9	50.3			3.5
Level of Service		D	D			A
Approach Delay (s)	39.9		50.3			3.5
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	135.2	Sum of lost time (s)	16.8
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	688	562	198	206	4
Future Volume (vph)	0	688	562	198	206	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	10	10	12	12	12
Total Lost time (s)		4.4	4.4		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3303	3154		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3303	3154		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.94	0.94	0.80	0.80
Adj. Flow (vph)	0	748	598	211	258	5
RTOR Reduction (vph)	0	0	38	0	0	1
Lane Group Flow (vph)	0	748	771	0	258	4
Confl. Peds. (#/hr)				3	16	
Confl. Bikes (#/hr)				3		
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		23.0	23.0		14.7	14.7
Effective Green, g (s)		23.0	23.0		14.7	14.7
Actuated g/C Ratio		0.43	0.43		0.28	0.28
Clearance Time (s)		4.4	4.4		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1436	1371		491	439
v/s Ratio Prot		0.23	c0.24		c0.15	
v/s Ratio Perm						0.00
v/c Ratio		0.52	0.56		0.53	0.01
Uniform Delay, d1		10.9	11.2		16.2	13.8
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.3	0.5		1.0	0.0
Delay (s)		11.3	11.7		17.2	13.8
Level of Service		B	B		B	B
Approach Delay (s)		11.3	11.7		17.1	
Approach LOS		B	B		B	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	12.4
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Future Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	954	76	128	802	1	56	0	258	0	0	0
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.78	0.78	0.78	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1440	115	167	2185	3	423	0	372	0	3	0
Arrive On Green	0.00	0.43	0.43	0.09	0.60	0.60	0.24	0.00	0.24	0.00	0.00	0.00
Sat Flow, veh/h	1781	3326	265	1781	3642	5	1781	0	1569	0	1870	0
Grp Volume(v), veh/h	0	510	520	128	391	412	56	0	258	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1814	1781	1777	1869	1781	0	1569	0	1870	0
Q Serve(g_s), s	0.0	12.8	12.8	3.9	6.3	6.3	1.4	0.0	8.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.8	12.8	3.9	6.3	6.3	1.4	0.0	8.4	0.0	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	3	769	785	167	1066	1121	423	0	372	0	3	0
V/C Ratio(X)	0.00	0.66	0.66	0.77	0.37	0.37	0.13	0.00	0.69	0.00	0.00	0.00
Avail Cap(c_a), veh/h	255	1112	1135	796	1112	1170	796	0	702	0	268	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)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	12.6	12.6	24.7	5.7	5.7	16.8	0.0	19.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	1.4	2.8	0.3	0.3	0.2	0.0	3.3	0.0	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	0.0	4.5	4.6	1.7	1.8	1.8	0.6	0.0	3.2	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.0	14.0	27.5	6.0	6.0	17.0	0.0	22.7	0.0	0.0	0.0
LnGrp LOS	A	B	B	C	A	A	B	A	C	A	A	A
Approach Vol, veh/h		1030			931			314			0	
Approach Delay, s/veh		14.0			9.0			21.7			0.0	
Approach LOS		B			A			C				

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	38.5		17.4	9.3	29.2		0.0				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	8.0	35.0		25.0	25.0	35.0		8.0				
Max Q Clear Time (g_c+I1), s	0.0	8.3		10.4	5.9	14.8		0.0				
Green Ext Time (p_c), s	0.0	7.9		2.2	0.1	9.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		13.0	
HCM 6th LOS		B	

Notes

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	980	848	16	7	47
Future Vol, veh/h	82	980	848	16	7	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	1065	922	17	8	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	939	0	-	0	1642	470
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	711	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	726	-	-	-	91	540
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	448	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	726	-	-	-	80	540
Mov Cap-2 Maneuver	-	-	-	-	199	-
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	448	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	726	-	-	-	442
HCM Lane V/C Ratio	0.123	-	-	-	0.133
HCM Control Delay (s)	10.7	-	-	-	14.4
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.5

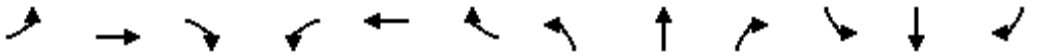
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	920	872	17	6	26
Future Vol, veh/h	37	920	872	17	6	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	1000	948	18	7	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	966	0	-	0	1537	483
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	580	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	709	-	-	-	107	530
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	523	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	709	-	-	-	101	530
Mov Cap-2 Maneuver	-	-	-	-	221	-
Stage 1	-	-	-	-	314	-
Stage 2	-	-	-	-	523	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	709	-	-	-	420
HCM Lane V/C Ratio	0.057	-	-	-	0.083
HCM Control Delay (s)	10.4	-	-	-	14.3
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Future Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	3263		1652	3254		1770	1733		1770	1595	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	3263		1652	3254		1770	1733		1770	1595	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.75	0.75	0.75	0.84	0.84	0.84
Adj. Flow (vph)	106	884	65	13	901	74	57	11	8	90	12	81
RTOR Reduction (vph)	0	3	0	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	106	946	0	13	970	0	57	19	0	90	93	0
Confl. Peds. (#/hr)			5			11			2			6
Confl. Bikes (#/hr)			1			8			1			
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	8.1	42.6		0.9	35.4		8.2	8.2		12.3	12.3	
Effective Green, g (s)	8.1	42.6		0.9	35.4		8.2	8.2		12.3	12.3	
Actuated g/C Ratio	0.10	0.53		0.01	0.44		0.10	0.10		0.15	0.15	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	171	1716		18	1422		179	175		268	242	
v/s Ratio Prot	c0.06	0.29		0.01	c0.30		c0.03	0.01		0.05	c0.06	
v/s Ratio Perm												
v/c Ratio	0.62	0.55		0.72	0.68		0.32	0.11		0.34	0.38	
Uniform Delay, d1	35.0	12.8		39.9	18.3		33.8	33.1		30.7	30.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.6	0.4		77.2	1.4		0.7	0.2		0.5	0.7	
Delay (s)	39.6	13.2		117.1	19.7		34.6	33.3		31.2	31.7	
Level of Service	D	B		F	B		C	C		C	C	
Approach Delay (s)		15.9			20.9			34.2			31.5	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	791	794	95	91	77
Future Vol, veh/h	78	791	794	95	91	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	860	863	103	99	84

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	966	0	-	0	1515	483
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	709	-	-	-	110	530
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	511	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	709	-	-	-	~ 97	530
Mov Cap-2 Maneuver	-	-	-	-	217	-
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	511	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	34.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	709	-	-	-	298
HCM Lane V/C Ratio	0.12	-	-	-	0.613
HCM Control Delay (s)	10.8	-	-	-	34.5
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	3.8

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	829	875	18	14	47
Future Vol, veh/h	24	829	875	18	14	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	901	951	20	15	51

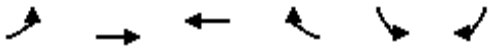
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	971	0	-	0	1464	486
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	503	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	706	-	-	-	119	527
Stage 1	-	-	-	-	332	-
Stage 2	-	-	-	-	573	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	706	-	-	-	115	527
Mov Cap-2 Maneuver	-	-	-	-	234	-
Stage 1	-	-	-	-	320	-
Stage 2	-	-	-	-	573	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	706	-	-	-	409
HCM Lane V/C Ratio	0.037	-	-	-	0.162
HCM Control Delay (s)	10.3	-	-	-	15.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	814	17	36	877	11	24
Future Volume (vph)	814	17	36	877	11	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3293		1711	3421	1664	
Flt Permitted	1.00		0.32	1.00	0.98	
Satd. Flow (perm)	3293		568	3421	1664	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	885	18	39	953	12	26
RTOR Reduction (vph)	2	0	0	0	25	0
Lane Group Flow (vph)	901	0	39	953	13	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	20.1		20.1	20.1	0.8	
Effective Green, g (s)	20.1		20.1	20.1	0.8	
Actuated g/C Ratio	0.68		0.68	0.68	0.03	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2236		385	2323	44	
v/s Ratio Prot	0.27			c0.28		
v/s Ratio Perm			0.07		c0.01	
v/c Ratio	0.40		0.10	0.41	0.29	
Uniform Delay, d1	2.1		1.6	2.1	14.1	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.2	0.2	3.6	
Delay (s)	2.3		1.8	2.3	17.7	
Level of Service	A		A	A	B	
Approach Delay (s)	2.3			2.3	17.7	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	2.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	29.6	Sum of lost time (s)	8.7
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	682	898	35	19	82
Future Volume (vph)	92	682	898	35	19	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3421	3397		1764	1552
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3421	3397		1764	1552
Peak-hour factor, PHF	0.87	0.87	0.83	0.83	0.56	0.56
Adj. Flow (vph)	106	784	1082	42	34	146
RTOR Reduction (vph)	0	0	3	0	0	122
Lane Group Flow (vph)	106	784	1121	0	34	24
Confl. Peds. (#/hr)					5	12
Confl. Bikes (#/hr)				24		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	7.2	42.1	30.3		9.9	9.9
Effective Green, g (s)	7.2	42.1	30.3		9.9	9.9
Actuated g/C Ratio	0.12	0.69	0.50		0.16	0.16
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	202	2372	1695		287	253
v/s Ratio Prot	c0.06	0.23	c0.33			
v/s Ratio Perm					c0.02	0.02
v/c Ratio	0.52	0.33	0.66		0.12	0.09
Uniform Delay, d1	25.1	3.7	11.4		21.7	21.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	0.1	1.0		0.1	0.1
Delay (s)	26.3	3.8	12.3		21.7	21.6
Level of Service	C	A	B		C	C
Approach Delay (s)		6.5	12.3		21.7	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	13.3
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

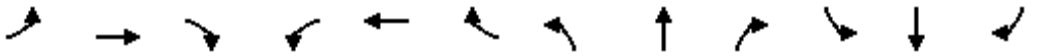
Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	743	0	89	930	20	71
Future Vol, veh/h	743	0	89	930	20	71
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	808	0	97	1011	22	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	808	0	1508	404
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	700	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	813	-	111	596
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	454	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	813	-	98	596
Mov Cap-2 Maneuver	-	-	-	-	227	-
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	400	-

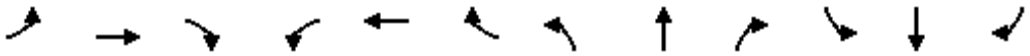
Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	15.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	439	-	-	813	-
HCM Lane V/C Ratio	0.225	-	-	0.119	-
HCM Control Delay (s)	15.6	-	-	10	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.9	-	-	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Future Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3300					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3300					3433		1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.82	0.82	0.82	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	299	611	0	0	880	222	0	0	0	167	0	331
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	0	0	0	279
Lane Group Flow (vph)	299	611	0	0	1082	0	0	0	0	167	0	52
Confl. Peds. (#/hr)			3			3						1
Confl. Bikes (#/hr)			1			24						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	18.5	51.9			29.4					11.4		11.4
Effective Green, g (s)	18.5	51.9			29.4					11.4		11.4
Actuated g/C Ratio	0.25	0.71			0.40					0.16		0.16
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	435	2357			1334					538		248
v/s Ratio Prot	c0.17	0.18			c0.33					c0.05		0.03
v/s Ratio Perm												
v/c Ratio	0.69	0.26			0.81					0.31		0.21
Uniform Delay, d1	24.5	3.7			19.2					27.2		26.7
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	3.6	0.0			3.7					0.3		0.4
Delay (s)	28.1	3.7			22.9					27.5		27.1
Level of Service	C	A			C					C		C
Approach Delay (s)		11.7			22.9			0.0			27.3	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	17.4
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



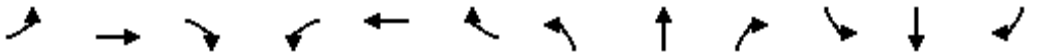
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Future Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	0.99		0.98	0.99		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	392	165	32	764	67	149	14	25	27	18	91
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.72	0.72	0.72	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	1437	625	40	1214	516	400	140	250	465	62	314
Arrive On Green	0.08	0.40	0.40	0.02	0.34	0.34	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3554	1546	1781	3554	1510	1277	594	1060	1359	264	1334
Grp Volume(v), veh/h	117	392	165	32	764	67	149	0	39	27	0	109
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1510	1277	0	1654	1359	0	1598
Q Serve(g_s), s	2.7	3.1	3.0	0.8	7.6	1.3	4.6	0.0	0.8	0.7	0.0	2.4
Cycle Q Clear(g_c), s	2.7	3.1	3.0	0.8	7.6	1.3	7.0	0.0	0.8	1.5	0.0	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		0.83
Lane Grp Cap(c), veh/h	151	1437	625	40	1214	516	400	0	390	465	0	377
V/C Ratio(X)	0.77	0.27	0.26	0.81	0.63	0.13	0.37	0.00	0.10	0.06	0.00	0.29
Avail Cap(c_a), veh/h	631	3355	1460	631	3355	1426	701	0	781	786	0	754
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	19.0	8.4	8.4	20.6	11.7	9.6	16.1	0.0	12.7	13.2	0.0	13.3
Incr Delay (d2), s/veh	3.2	0.1	0.2	13.3	0.4	0.1	0.6	0.0	0.1	0.1	0.0	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	1.1	0.8	0.7	0.4	2.2	0.3	1.2	0.0	0.3	0.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	8.5	8.6	34.0	12.1	9.7	16.7	0.0	12.8	13.3	0.0	13.7
LnGrp LOS	C	A	A	C	B	A	B	A	B	B	A	B
Approach Vol, veh/h		674			863			188			136	
Approach Delay, s/veh		10.9			12.7			15.9			13.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	19.9		14.9	4.9	22.5		14.9				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	4.7	9.6		4.4	2.8	5.1		9.0				
Green Ext Time (p_c), s	0.1	4.6		0.5	0.0	2.5		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		12.4	
HCM 6th LOS		B	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Future Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	318	20	84	256	443	356	68	261	3	22	359	312
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.92	0.92	0.92	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	439	72	303	299	506	405	174	1177	14	100	483	403
Arrive On Green	0.13	0.23	0.23	0.17	0.28	0.28	0.10	0.33	0.33	0.03	0.26	0.26
Sat Flow, veh/h	3456	307	1291	1781	1836	1467	1781	3598	41	3456	1870	1562
Grp Volume(v), veh/h	318	0	104	256	429	370	68	129	135	22	359	312
Grp Sat Flow(s),veh/h/ln	1728	0	1598	1781	1777	1526	1781	1777	1863	1728	1870	1562
Q Serve(g_s), s	7.0	0.0	4.2	11.1	18.3	18.5	2.9	4.2	4.2	0.5	14.0	14.7
Cycle Q Clear(g_c), s	7.0	0.0	4.2	11.1	18.3	18.5	2.9	4.2	4.2	0.5	14.0	14.7
Prop In Lane	1.00		0.81	1.00		0.96	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	439	0	375	299	490	421	174	581	609	100	483	403
V/C Ratio(X)	0.72	0.00	0.28	0.86	0.87	0.88	0.39	0.22	0.22	0.22	0.74	0.77
Avail Cap(c_a), veh/h	1519	0	502	671	558	479	559	656	688	868	705	588
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	33.4	0.0	24.9	32.2	27.5	27.6	33.7	19.4	19.4	37.8	27.1	27.4
Incr Delay (d2), s/veh	2.3	0.0	0.1	2.7	12.1	14.4	1.1	0.1	0.1	0.4	3.4	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	2.9	0.0	1.5	4.7	8.8	7.9	1.2	1.6	1.7	0.2	6.1	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	0.0	25.1	34.9	39.6	42.0	34.8	19.5	19.5	38.2	30.4	32.4
LnGrp LOS	D	A	C	C	D	D	C	B	B	D	C	C
Approach Vol, veh/h		422			1055			332			693	
Approach Delay, s/veh		33.1			39.3			22.6			31.6	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	24.0	11.9	26.3	14.2	27.3	6.4	31.7
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	30.0	25.0	25.0	30.0	35.0	25.0	20.0	29.4
Max Q Clear Time (g_c+I1), s	13.1	6.2	4.9	16.7	9.0	20.5	2.5	6.2
Green Ext Time (p_c), s	0.3	0.3	0.1	3.7	1.1	1.5	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

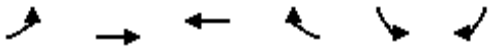
Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	579	285	3	442	127
Future Volume (vph)	0	579	285	3	442	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.96
Satd. Flow (prot)		2601	3533			3407
Flt Permitted		1.00	1.00			0.96
Satd. Flow (perm)		2601	3533			3407
Peak-hour factor, PHF	0.93	0.93	0.89	0.89	0.97	0.97
Adj. Flow (vph)	0	623	320	3	456	131
RTOR Reduction (vph)	0	444	1	0	0	0
Lane Group Flow (vph)	0	179	322	0	0	587
Confl. Peds. (#/hr)				5		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		35.7	23.9			92.1
Effective Green, g (s)		35.7	23.9			87.6
Actuated g/C Ratio		0.29	0.19			0.71
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		747	679			2403
v/s Ratio Prot		0.07	c0.09			c0.17
v/s Ratio Perm						
v/c Ratio		0.24	0.47			0.24
Uniform Delay, d1		33.9	44.6			6.5
Progression Factor		1.00	1.00			0.40
Incremental Delay, d2		0.2	0.5			0.1
Delay (s)		34.1	45.1			2.6
Level of Service		C	D			A
Approach Delay (s)	34.1		45.1			2.6
Approach LOS	C		D			A

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	124.2	Sum of lost time (s)	16.8
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

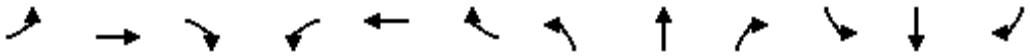
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱	↰	↱
Traffic Volume (vph)	0	406	581	355	118	14
Future Volume (vph)	0	406	581	355	118	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)		4.4	4.4	4.4	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1801	1801	1498	1770	1583
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1801	1801	1498	1770	1583
Peak-hour factor, PHF	0.82	0.82	0.75	0.75	0.65	0.65
Adj. Flow (vph)	0	495	775	473	182	22
RTOR Reduction (vph)	0	0	0	103	0	11
Lane Group Flow (vph)	0	495	775	370	182	11
Confl. Peds. (#/hr)				1	137	
Turn Type		NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)		40.6	40.6	40.6	13.8	13.8
Effective Green, g (s)		40.6	40.6	40.6	13.8	13.8
Actuated g/C Ratio		0.51	0.51	0.51	0.17	0.17
Clearance Time (s)		4.4	4.4	4.4	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		914	914	760	305	273
v/s Ratio Prot		0.27	c0.43		c0.10	
v/s Ratio Perm				0.25		0.01
v/c Ratio		0.54	0.85	0.49	0.60	0.04
Uniform Delay, d1		13.4	17.0	12.9	30.5	27.6
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.7	7.4	0.5	3.1	0.1
Delay (s)		14.0	24.4	13.4	33.7	27.6
Level of Service		B	C	B	C	C
Approach Delay (s)		14.0	20.2		33.0	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Future Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	610	28	133	1017	18	55	0	173	0	0	4
Peak Hour Factor	0.87	0.87	0.87	0.93	0.93	0.93	0.82	0.82	0.82	0.50	0.50	0.50
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	812	37	172	1014	18	298	0	260	0	0	7
Arrive On Green	0.00	0.46	0.46	0.10	0.55	0.55	0.17	0.00	0.17	0.00	0.00	0.00
Sat Flow, veh/h	1781	1771	81	1781	1831	32	1781	0	1557	0	0	1585
Grp Volume(v), veh/h	1	0	638	133	0	1035	55	0	173	0	0	4
Grp Sat Flow(s),veh/h/ln	1781	0	1853	1781	0	1863	1781	0	1557	0	0	1585
Q Serve(g_s), s	0.0	0.0	18.0	4.6	0.0	35.0	1.7	0.0	6.6	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.0	0.0	18.0	4.6	0.0	35.0	1.7	0.0	6.6	0.0	0.0	0.2
Prop In Lane	1.00		0.04	1.00		0.02	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	3	0	849	172	0	1032	298	0	260	0	0	7
V/C Ratio(X)	0.35	0.00	0.75	0.77	0.00	1.00	0.18	0.00	0.66	0.00	0.00	0.59
Avail Cap(c_a), veh/h	226	0	1026	705	0	1032	705	0	616	0	0	201
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	31.5	0.0	14.1	27.9	0.0	14.1	22.6	0.0	24.7	0.0	0.0	31.4
Incr Delay (d2), s/veh	25.9	0.0	3.0	2.8	0.0	28.7	0.4	0.0	4.1	0.0	0.0	26.5
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	0.0	0.0	7.2	2.0	0.0	19.7	0.7	0.0	2.6	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	0.0	17.1	30.6	0.0	42.8	23.0	0.0	28.8	0.0	0.0	57.9
LnGrp LOS	E	A	B	C	A	F	C	A	C	A	A	E
Approach Vol, veh/h		639			1168			228			4	
Approach Delay, s/veh		17.2			41.4			27.4			57.9	
Approach LOS		B			D			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	40.0		14.7	10.2	33.9		4.4				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	8.0	35.0		25.0	25.0	35.0		8.0				
Max Q Clear Time (g_c+I1), s	2.0	37.0		8.6	6.6	20.0		2.2				
Green Ext Time (p_c), s	0.0	0.0		1.5	0.2	5.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		32.3	
HCM 6th LOS		C	

Notes

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	603	1033	21	9	67
Future Vol, veh/h	64	603	1033	21	9	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	655	1123	23	10	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1146	0	-	0	1930	1135
Stage 1	-	-	-	-	1135	-
Stage 2	-	-	-	-	795	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	610	-	-	-	73	246
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	445	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	610	-	-	-	65	246
Mov Cap-2 Maneuver	-	-	-	-	182	-
Stage 1	-	-	-	-	272	-
Stage 2	-	-	-	-	445	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	28.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	610	-	-	-	236
HCM Lane V/C Ratio	0.114	-	-	-	0.35
HCM Control Delay (s)	11.7	-	-	-	28.3
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	1.5

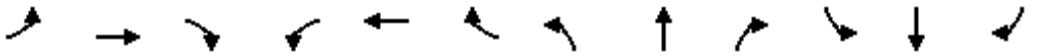
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	603	999	23	18	58
Future Vol, veh/h	14	603	999	23	18	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	655	1086	25	20	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1111	0	-	0	1784	1099
Stage 1	-	-	-	-	1099	-
Stage 2	-	-	-	-	685	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	629	-	-	-	90	258
Stage 1	-	-	-	-	319	-
Stage 2	-	-	-	-	500	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	629	-	-	-	88	258
Mov Cap-2 Maneuver	-	-	-	-	212	-
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	500	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	27
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	629	-	-	-	245
HCM Lane V/C Ratio	0.024	-	-	-	0.337
HCM Control Delay (s)	10.9	-	-	-	27
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Future Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.92		1.00	0.89	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.88		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1842		1711	1792		1770	1507		1770	1446	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	1842		1711	1792		1770	1507		1770	1446	
Peak-hour factor, PHF	0.69	0.69	0.69	0.84	0.84	0.84	0.64	0.64	0.64	0.74	0.74	0.74
Adj. Flow (vph)	41	870	32	36	1045	23	145	16	55	107	9	55
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	41	901	0	36	1068	0	145	71	0	107	64	0
Confl. Peds. (#/hr)			38			14			30			34
Confl. Bikes (#/hr)			9			8						2
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	6.2	78.4		4.7	76.9		17.2	17.2		16.2	16.2	
Effective Green, g (s)	6.2	78.4		4.7	76.9		17.2	17.2		16.2	16.2	
Actuated g/C Ratio	0.05	0.59		0.04	0.58		0.13	0.13		0.12	0.12	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	79	1081		60	1032		228	194		214	175	
v/s Ratio Prot	c0.02	0.49		0.02	c0.60		c0.08	0.05		c0.06	0.04	
v/s Ratio Perm												
v/c Ratio	0.52	0.83		0.60	1.03		0.64	0.37		0.50	0.37	
Uniform Delay, d1	62.2	22.3		63.5	28.3		55.2	53.2		54.9	53.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	7.6		10.3	37.3		5.0	0.9		1.3	0.9	
Delay (s)	64.6	29.9		73.8	65.6		60.2	54.0		56.2	54.9	
Level of Service	E	C		E	E		E	D		E	D	
Approach Delay (s)		31.4			65.9			58.2			55.7	
Approach LOS		C			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	51.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	133.5	Sum of lost time (s)	17.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	707	886	30	32	69
Future Vol, veh/h	35	707	886	30	32	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	768	963	33	35	75

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	996	0	-	0	1824	980
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	844	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	695	-	-	-	85	303
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	422	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	695	-	-	-	80	303
Mov Cap-2 Maneuver	-	-	-	-	209	-
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	422	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	27.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	695	-	-	-	265
HCM Lane V/C Ratio	0.055	-	-	-	0.414
HCM Control Delay (s)	10.5	-	-	-	27.9
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	1.9

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	665	849	28	32	64
Future Vol, veh/h	62	665	849	28	32	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	723	923	30	35	70

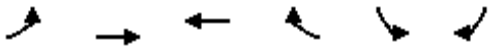
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	953	0	-	0	1795	477
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	857	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	719	-	-	-	80	535
Stage 1	-	-	-	-	342	-
Stage 2	-	-	-	-	415	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	719	-	-	-	73	535
Mov Cap-2 Maneuver	-	-	-	-	194	-
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	415	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	20.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	719	-	-	-	337
HCM Lane V/C Ratio	0.094	-	-	-	0.31
HCM Control Delay (s)	10.5	-	-	-	20.4
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	683	16	28	840	32	74
Future Volume (vph)	683	16	28	840	32	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	10	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3292		1711	3303	1663	
Flt Permitted	1.00		0.36	1.00	0.99	
Satd. Flow (perm)	3292		655	3303	1663	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	742	17	30	913	35	80
RTOR Reduction (vph)	3	0	0	0	71	0
Lane Group Flow (vph)	756	0	30	913	44	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	20.7		20.7	20.7	3.6	
Effective Green, g (s)	20.7		20.7	20.7	3.6	
Actuated g/C Ratio	0.63		0.63	0.63	0.11	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2064		410	2071	181	
v/s Ratio Prot	0.23			c0.28		
v/s Ratio Perm			0.05		c0.03	
v/c Ratio	0.37		0.07	0.44	0.24	
Uniform Delay, d1	3.0		2.4	3.2	13.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.1	0.2	0.7	
Delay (s)	3.1		2.5	3.4	14.1	
Level of Service	A		A	A	B	
Approach Delay (s)	3.1			3.3	14.1	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	3.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	33.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	750	853	16	16	78
Future Volume (vph)	50	750	853	16	16	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3303	3292		1769	1561
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3303	3292		1769	1561
Peak-hour factor, PHF	0.76	0.76	0.69	0.69	0.81	0.81
Adj. Flow (vph)	66	987	1236	23	20	96
RTOR Reduction (vph)	0	0	1	0	0	85
Lane Group Flow (vph)	66	987	1258	0	20	11
Confl. Peds. (#/hr)				8	1	4
Confl. Bikes (#/hr)				3		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	4.0	40.2	31.6		6.5	6.5
Effective Green, g (s)	4.0	40.2	31.6		6.5	6.5
Actuated g/C Ratio	0.07	0.73	0.57		0.12	0.12
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	123	2396	1877		207	183
v/s Ratio Prot	0.04	c0.30	c0.38			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.54	0.41	0.67		0.10	0.06
Uniform Delay, d1	24.8	3.0	8.3		21.8	21.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.2	0.1	1.0		0.1	0.1
Delay (s)	27.1	3.1	9.2		21.9	21.8
Level of Service	C	A	A		C	C
Approach Delay (s)		4.6	9.2		21.8	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	55.4	Sum of lost time (s)	13.3
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

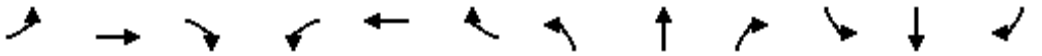
Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	704	30	62	821	39	69
Future Vol, veh/h	704	30	62	821	39	69
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	765	33	67	892	42	75

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	798	0	1362	399
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	580	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	820	-	139	601
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	523	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	820	-	128	601
Mov Cap-2 Maneuver	-	-	-	-	260	-
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	480	-

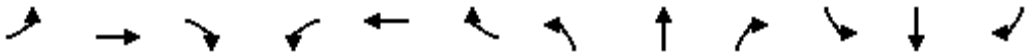
Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	17.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	408	-	-	820	-
HCM Lane V/C Ratio	0.288	-	-	0.082	-
HCM Control Delay (s)	17.3	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.2	-	-	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Future Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	11	11	10	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3184					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3184					3433		1583
Peak-hour factor, PHF	0.74	0.74	0.74	0.75	0.75	0.75	0.92	0.92	0.92	0.80	0.80	0.80
Adj. Flow (vph)	239	789	0	0	824	215	0	0	0	129	0	382
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	0	0	0	321
Lane Group Flow (vph)	239	789	0	0	1019	0	0	0	0	129	0	62
Confl. Peds. (#/hr)						18						1
Confl. Bikes (#/hr)			26			2						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	15.1	46.2			27.1					10.8		10.8
Effective Green, g (s)	15.1	46.2			27.1					10.8		10.8
Actuated g/C Ratio	0.23	0.70			0.41					0.16		0.16
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	389	2298			1299					558		257
v/s Ratio Prot	c0.14	0.24			c0.32					0.04		c0.04
v/s Ratio Perm												
v/c Ratio	0.61	0.34			0.78					0.23		0.24
Uniform Delay, d1	23.0	4.0			17.1					24.2		24.2
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	2.0	0.0			2.9					0.2		0.5
Delay (s)	25.1	4.1			20.0					24.4		24.7
Level of Service	C	A			C					C		C
Approach Delay (s)		9.0			20.0			0.0			24.6	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	17.4
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



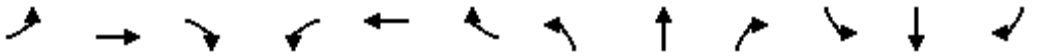
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Future Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	658	85	16	396	30	314	52	44	59	34	188
Peak Hour Factor	0.78	0.78	0.78	0.83	0.83	0.83	0.66	0.66	0.66	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	1029	441	21	855	372	502	373	316	623	98	544
Arrive On Green	0.06	0.29	0.29	0.01	0.24	0.24	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1781	3554	1521	1781	3554	1544	1154	927	784	1293	245	1352
Grp Volume(v), veh/h	85	658	85	16	396	30	314	0	96	59	0	222
Grp Sat Flow(s),veh/h/ln	1781	1777	1521	1781	1777	1544	1154	0	1711	1293	0	1597
Q Serve(g_s), s	2.3	7.8	2.0	0.4	4.6	0.7	12.5	0.0	1.7	1.5	0.0	4.7
Cycle Q Clear(g_c), s	2.3	7.8	2.0	0.4	4.6	0.7	17.2	0.0	1.7	3.2	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.85
Lane Grp Cap(c), veh/h	109	1029	441	21	855	372	502	0	688	623	0	642
V/C Ratio(X)	0.78	0.64	0.19	0.75	0.46	0.08	0.63	0.00	0.14	0.09	0.00	0.35
Avail Cap(c_a), veh/h	553	2944	1260	553	2944	1279	516	0	709	639	0	661
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	22.4	15.0	12.9	23.8	15.7	14.2	16.0	0.0	9.1	10.1	0.0	10.0
Incr Delay (d2), s/veh	4.6	0.5	0.2	17.4	0.3	0.1	2.3	0.0	0.1	0.1	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	1.0	2.6	0.6	0.3	1.6	0.2	3.2	0.0	0.6	0.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	15.4	13.1	41.2	16.0	14.3	18.3	0.0	9.2	10.2	0.0	10.3
LnGrp LOS	C	B	B	D	B	B	B	A	A	B	A	B
Approach Vol, veh/h		828			442			410			281	
Approach Delay, s/veh		16.4			16.8			16.2			10.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	17.0		24.3	4.6	19.4		24.3				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	4.3	6.6		6.7	2.4	9.8		19.2				
Green Ext Time (p_c), s	0.1	2.1		1.3	0.0	3.9		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		15.5	
HCM 6th LOS		B	

Notes

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



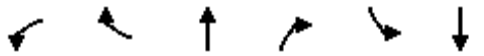
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Future Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	224	404	29	10	23	43	94	240	241	314	290	330
Peak Hour Factor	0.82	0.82	0.82	0.61	0.61	0.61	0.88	0.88	0.88	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	529	470	34	27	242	216	226	508	453	433	532	444
Arrive On Green	0.15	0.27	0.27	0.02	0.14	0.14	0.13	0.29	0.29	0.13	0.28	0.28
Sat Flow, veh/h	3456	1716	123	1781	1777	1585	1781	1777	1585	3456	1870	1560
Grp Volume(v), veh/h	224	0	433	10	23	43	94	240	241	314	290	330
Grp Sat Flow(s),veh/h/ln	1728	0	1839	1781	1777	1585	1781	1777	1585	1728	1870	1560
Q Serve(g_s), s	3.8	0.0	14.3	0.4	0.7	1.5	3.1	7.1	8.2	5.6	8.4	12.3
Cycle Q Clear(g_c), s	3.8	0.0	14.3	0.4	0.7	1.5	3.1	7.1	8.2	5.6	8.4	12.3
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	529	0	504	27	242	216	226	508	453	433	532	444
V/C Ratio(X)	0.42	0.00	0.86	0.37	0.10	0.20	0.42	0.47	0.53	0.73	0.54	0.74
Avail Cap(c_a), veh/h	1887	0	717	834	693	618	695	815	727	1078	876	730
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	24.6	0.0	22.1	31.2	24.2	24.6	25.8	18.9	19.3	27.0	19.4	20.8
Incr Delay (d2), s/veh	0.5	0.0	5.5	3.1	0.1	0.2	0.9	0.3	0.4	0.9	1.2	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	1.4	0.0	6.2	0.2	0.3	0.5	1.3	2.6	2.7	2.1	3.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	27.6	34.3	24.3	24.8	26.7	19.1	19.6	27.8	20.7	24.3
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		657			76			575			934	
Approach Delay, s/veh		26.7			25.9			20.6			24.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	22.9	12.2	23.9	13.9	14.0	12.1	24.0
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	30.0	25.0	25.0	30.0	35.0	25.0	20.0	29.4
Max Q Clear Time (g_c+I1), s	2.4	16.3	5.1	14.3	5.8	3.5	7.6	10.2
Green Ext Time (p_c), s	0.0	1.1	0.1	3.6	0.7	0.2	0.5	1.7

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

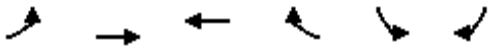
Notes

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



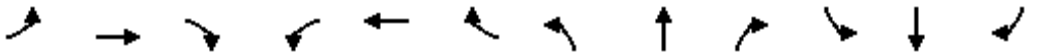
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	541	277	2	699	294
Future Volume (vph)	0	541	277	2	699	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.97
Satd. Flow (prot)		2601	3535			3419
Flt Permitted		1.00	1.00			0.97
Satd. Flow (perm)		2601	3535			3419
Peak-hour factor, PHF	0.82	0.82	0.90	0.90	0.95	0.95
Adj. Flow (vph)	0	660	308	2	736	309
RTOR Reduction (vph)	0	489	0	0	0	0
Lane Group Flow (vph)	0	171	310	0	0	1045
Confl. Peds. (#/hr)		4		9		
Confl. Bikes (#/hr)				1		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		35.1	24.5			102.5
Effective Green, g (s)		35.1	24.5			98.0
Actuated g/C Ratio		0.26	0.18			0.72
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		675	640			2478
v/s Ratio Prot		0.07	c0.09			c0.31
v/s Ratio Perm						
v/c Ratio		0.25	0.48			0.42
Uniform Delay, d1		39.7	49.7			7.4
Progression Factor		1.00	1.00			0.46
Incremental Delay, d2		0.3	0.6			0.1
Delay (s)		39.9	50.3			3.5
Level of Service		D	D			A
Approach Delay (s)	39.9		50.3			3.5
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	135.2	Sum of lost time (s)	16.8
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	688	562	198	206	4
Future Volume (vph)	0	688	562	198	206	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)		4.4	4.4	4.4	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.97	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1801	1801	1492	1770	1583
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1801	1801	1492	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.94	0.94	0.80	0.80
Adj. Flow (vph)	0	748	598	211	258	5
RTOR Reduction (vph)	0	0	0	60	0	2
Lane Group Flow (vph)	0	748	598	151	258	3
Confl. Peds. (#/hr)				3	16	
Confl. Bikes (#/hr)				3		
Turn Type		NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)		36.3	36.3	36.3	15.5	15.5
Effective Green, g (s)		36.3	36.3	36.3	15.5	15.5
Actuated g/C Ratio		0.51	0.51	0.51	0.22	0.22
Clearance Time (s)		4.4	4.4	4.4	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		910	910	754	382	341
v/s Ratio Prot		c0.42	0.33		c0.15	
v/s Ratio Perm				0.10		0.00
v/c Ratio		0.82	0.66	0.20	0.68	0.01
Uniform Delay, d1		15.0	13.1	9.8	25.8	22.1
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		6.0	1.7	0.1	4.7	0.0
Delay (s)		21.1	14.9	9.9	30.5	22.1
Level of Service		C	B	A	C	C
Approach Delay (s)		21.1	13.6		30.4	
Approach LOS		C	B		C	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	71.8	Sum of lost time (s)	12.4
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Future Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	954	76	128	802	1	56	0	258	0	0	0
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.78	0.78	0.78	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	977	78	158	1316	2	357	0	311	0	2	0
Arrive On Green	0.00	0.57	0.57	0.09	0.70	0.70	0.20	0.00	0.20	0.00	0.00	0.00
Sat Flow, veh/h	1781	1706	136	1781	1868	2	1781	0	1553	0	1870	0
Grp Volume(v), veh/h	0	0	1030	128	0	803	56	0	258	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1842	1781	0	1870	1781	0	1553	0	1870	0
Q Serve(g_s), s	0.0	0.0	51.8	6.7	0.0	21.3	2.5	0.0	15.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	51.8	6.7	0.0	21.3	2.5	0.0	15.2	0.0	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	2	0	1055	158	0	1317	357	0	311	0	2	0
V/C Ratio(X)	0.00	0.00	0.98	0.81	0.00	0.61	0.16	0.00	0.83	0.00	0.00	0.00
Avail Cap(c_a), veh/h	203	0	1060	203	0	1317	483	0	421	0	213	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)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	19.8	42.8	0.0	7.3	31.6	0.0	36.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	22.0	13.4	0.0	1.0	0.3	0.0	11.4	0.0	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	0.0	0.0	26.3	3.5	0.0	7.3	1.1	0.0	6.7	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	41.8	56.2	0.0	8.3	31.9	0.0	48.0	0.0	0.0	0.0
LnGrp LOS	A	A	D	E	A	A	C	A	D	A	A	A
Approach Vol, veh/h		1030			931			314			0	
Approach Delay, s/veh		41.8			14.9			45.1			0.0	
Approach LOS		D			B			D				

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	72.4		23.3	12.6	59.8		0.0				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	10.9	55.0		25.9	10.9	55.0		10.9				
Max Q Clear Time (g_c+I1), s	0.0	23.3		17.2	8.7	53.8		0.0				
Green Ext Time (p_c), s	0.0	10.1		1.6	0.0	1.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.2	
HCM 6th LOS		C	

Notes

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

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	980	848	16	7	47
Future Vol, veh/h	82	980	848	16	7	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	1065	922	17	8	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	939	0	-	0	2174	931
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	1243	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	730	-	-	-	51	324
Stage 1	-	-	-	-	384	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	730	-	-	-	45	324
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	272	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	730	-	-	-	285
HCM Lane V/C Ratio	0.122	-	-	-	0.206
HCM Control Delay (s)	10.6	-	-	-	20.9
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	0.8

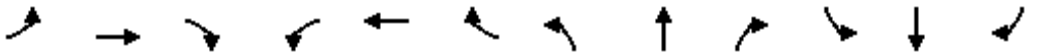
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	920	872	17	6	26
Future Vol, veh/h	37	920	872	17	6	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	1000	948	18	7	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	966	0	-	0	2037	957
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	1080	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	713	-	-	-	62	313
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	326	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	713	-	-	-	59	313
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	326	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	20
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	713	-	-	-	275
HCM Lane V/C Ratio	0.056	-	-	-	0.126
HCM Control Delay (s)	10.4	-	-	-	20
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Future Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1839		1711	1772		1770	1724		1770	1571	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	1839		1711	1772		1770	1724		1770	1571	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.75	0.75	0.75	0.84	0.84	0.84
Adj. Flow (vph)	106	884	65	13	901	74	57	11	8	90	12	81
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	106	948	0	13	973	0	57	19	0	90	93	0
Confl. Peds. (#/hr)			5			11			2			6
Confl. Bikes (#/hr)			1			8			1			
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	8.0	66.6		1.2	59.8		8.5	8.5		11.6	11.6	
Effective Green, g (s)	8.0	66.6		1.2	59.8		8.5	8.5		11.6	11.6	
Actuated g/C Ratio	0.08	0.63		0.01	0.57		0.08	0.08		0.11	0.11	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	130	1167		19	1010		143	139		195	173	
v/s Ratio Prot	c0.06	0.52		0.01	c0.55		c0.03	0.01		0.05	c0.06	
v/s Ratio Perm												
v/c Ratio	0.82	0.81		0.68	0.96		0.40	0.14		0.46	0.54	
Uniform Delay, d1	47.7	14.4		51.7	21.5		45.8	44.8		43.7	44.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	29.7	4.4		58.7	19.9		1.3	0.3		1.3	2.5	
Delay (s)	77.4	18.8		110.3	41.4		47.1	45.1		45.0	46.6	
Level of Service	E	B		F	D		D	D		D	D	
Approach Delay (s)		24.7			42.4			46.6			45.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	104.9	Sum of lost time (s)	17.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	791	794	95	91	77
Future Vol, veh/h	78	791	794	95	91	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	860	863	103	99	84

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	966	0	-	0	1945	915
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	1030	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	713	-	-	-	~ 71	331
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	344	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	713	-	-	-	~ 63	331
Mov Cap-2 Maneuver	-	-	-	-	186	-
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	344	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	60.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	713	-	-	-	233
HCM Lane V/C Ratio	0.119	-	-	-	0.784
HCM Control Delay (s)	10.7	-	-	-	60.2
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.4	-	-	-	5.7

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	829	875	18	14	47
Future Vol, veh/h	24	829	875	18	14	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	901	951	20	15	51

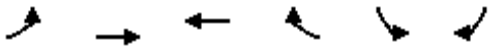
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	971	0	-	0	1914	486
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	953	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	708	-	-	-	67	528
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	374	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	708	-	-	-	65	528
Mov Cap-2 Maneuver	-	-	-	-	187	-
Stage 1	-	-	-	-	321	-
Stage 2	-	-	-	-	374	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	708	-	-	-	372
HCM Lane V/C Ratio	0.037	-	-	-	0.178
HCM Control Delay (s)	10.3	-	-	-	16.8
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	814	17	36	877	11	24
Future Volume (vph)	814	17	36	877	11	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	10	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3293		1711	3303	1664	
Flt Permitted	1.00		0.32	1.00	0.98	
Satd. Flow (perm)	3293		568	3303	1664	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	885	18	39	953	12	26
RTOR Reduction (vph)	2	0	0	0	25	0
Lane Group Flow (vph)	901	0	39	953	13	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	20.4		20.4	20.4	0.8	
Effective Green, g (s)	20.4		20.4	20.4	0.8	
Actuated g/C Ratio	0.68		0.68	0.68	0.03	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2246		387	2253	44	
v/s Ratio Prot	0.27			c0.29		
v/s Ratio Perm			0.07		c0.01	
v/c Ratio	0.40		0.10	0.42	0.29	
Uniform Delay, d1	2.1		1.6	2.1	14.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.2	0.2	3.6	
Delay (s)	2.2		1.8	2.3	17.9	
Level of Service	A		A	A	B	
Approach Delay (s)	2.2			2.3	17.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	2.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	29.9	Sum of lost time (s)	8.7
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	682	898	35	19	82
Future Volume (vph)	92	682	898	35	19	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3303	3280		1764	1552
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3303	3280		1764	1552
Peak-hour factor, PHF	0.87	0.87	0.83	0.83	0.56	0.56
Adj. Flow (vph)	106	784	1082	42	34	146
RTOR Reduction (vph)	0	0	2	0	0	122
Lane Group Flow (vph)	106	784	1122	0	34	24
Confl. Peds. (#/hr)					5	12
Confl. Bikes (#/hr)				24		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	7.2	42.6	30.8		9.9	9.9
Effective Green, g (s)	7.2	42.6	30.8		9.9	9.9
Actuated g/C Ratio	0.12	0.70	0.50		0.16	0.16
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	201	2299	1650		285	251
v/s Ratio Prot	c0.06	0.24	c0.34			
v/s Ratio Perm					c0.02	0.02
v/c Ratio	0.53	0.34	0.68		0.12	0.09
Uniform Delay, d1	25.4	3.7	11.5		21.9	21.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.2	0.1	1.1		0.1	0.1
Delay (s)	26.6	3.8	12.6		22.0	21.9
Level of Service	C	A	B		C	C
Approach Delay (s)		6.5	12.6		21.9	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	61.2	Sum of lost time (s)	13.3
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

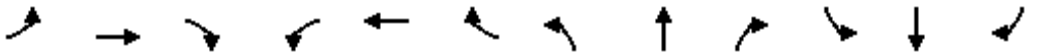
Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	743	0	89	930	20	71
Future Vol, veh/h	743	0	89	930	20	71
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	808	0	97	1011	22	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	808	0	1508	404
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	700	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	813	-	111	596
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	454	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	813	-	98	596
Mov Cap-2 Maneuver	-	-	-	-	227	-
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	400	-

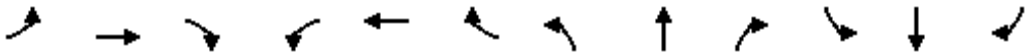
Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	15.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	439	-	-	813	-
HCM Lane V/C Ratio	0.225	-	-	0.119	-
HCM Control Delay (s)	15.6	-	-	10	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.9	-	-	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Future Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	11	11	10	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3186					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3186					3433		1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.82	0.82	0.82	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	299	611	0	0	880	222	0	0	0	167	0	331
RTOR Reduction (vph)	0	0	0	0	19	0	0	0	0	0	0	279
Lane Group Flow (vph)	299	611	0	0	1083	0	0	0	0	167	0	52
Confl. Peds. (#/hr)			3			3						1
Confl. Bikes (#/hr)			1			24						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	18.7	54.0			31.3					11.7		11.7
Effective Green, g (s)	18.7	54.0			31.3					11.7		11.7
Actuated g/C Ratio	0.25	0.72			0.42					0.16		0.16
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	426	2374			1327					534		246
v/s Ratio Prot	c0.17	0.18			c0.34					c0.05		0.03
v/s Ratio Perm												
v/c Ratio	0.70	0.26			0.82					0.31		0.21
Uniform Delay, d1	25.7	3.6			19.4					28.1		27.7
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	4.2	0.0			3.8					0.3		0.4
Delay (s)	29.9	3.7			23.1					28.5		28.1
Level of Service	C	A			C					C		C
Approach Delay (s)		12.3			23.1			0.0			28.2	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.1	Sum of lost time (s)	17.4
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



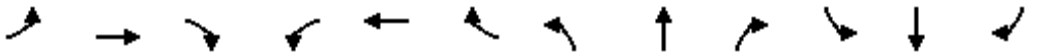
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Future Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	0.99		0.98	0.99		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	392	165	32	764	67	149	14	25	27	18	91
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.72	0.72	0.72	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	1437	625	40	1214	516	400	140	250	465	62	314
Arrive On Green	0.08	0.40	0.40	0.02	0.34	0.34	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3554	1546	1781	3554	1510	1277	594	1060	1359	264	1334
Grp Volume(v), veh/h	117	392	165	32	764	67	149	0	39	27	0	109
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1510	1277	0	1654	1359	0	1598
Q Serve(g_s), s	2.7	3.1	3.0	0.8	7.6	1.3	4.6	0.0	0.8	0.7	0.0	2.4
Cycle Q Clear(g_c), s	2.7	3.1	3.0	0.8	7.6	1.3	7.0	0.0	0.8	1.5	0.0	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		0.83
Lane Grp Cap(c), veh/h	151	1437	625	40	1214	516	400	0	390	465	0	377
V/C Ratio(X)	0.77	0.27	0.26	0.81	0.63	0.13	0.37	0.00	0.10	0.06	0.00	0.29
Avail Cap(c_a), veh/h	631	3355	1460	631	3355	1426	701	0	781	786	0	754
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	19.0	8.4	8.4	20.6	11.7	9.6	16.1	0.0	12.7	13.2	0.0	13.3
Incr Delay (d2), s/veh	3.2	0.1	0.2	13.3	0.4	0.1	0.6	0.0	0.1	0.1	0.0	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	1.1	0.8	0.7	0.4	2.2	0.3	1.2	0.0	0.3	0.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	8.5	8.6	34.0	12.1	9.7	16.7	0.0	12.8	13.3	0.0	13.7
LnGrp LOS	C	A	A	C	B	A	B	A	B	B	A	B
Approach Vol, veh/h		674			863			188			136	
Approach Delay, s/veh		10.9			12.7			15.9			13.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	19.9		14.9	4.9	22.5		14.9				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	4.7	9.6		4.4	2.8	5.1		9.0				
Green Ext Time (p_c), s	0.1	4.6		0.5	0.0	2.5		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		12.4	
HCM 6th LOS		B	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Future Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	318	20	84	256	443	356	68	261	3	22	359	312
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.92	0.92	0.92	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	439	72	303	299	506	405	174	1177	14	100	483	403
Arrive On Green	0.13	0.23	0.23	0.17	0.28	0.28	0.10	0.33	0.33	0.03	0.26	0.26
Sat Flow, veh/h	3456	307	1291	1781	1836	1467	1781	3598	41	3456	1870	1562
Grp Volume(v), veh/h	318	0	104	256	429	370	68	129	135	22	359	312
Grp Sat Flow(s),veh/h/ln	1728	0	1598	1781	1777	1526	1781	1777	1863	1728	1870	1562
Q Serve(g_s), s	7.0	0.0	4.2	11.1	18.3	18.5	2.9	4.2	4.2	0.5	14.0	14.7
Cycle Q Clear(g_c), s	7.0	0.0	4.2	11.1	18.3	18.5	2.9	4.2	4.2	0.5	14.0	14.7
Prop In Lane	1.00		0.81	1.00		0.96	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	439	0	375	299	490	421	174	581	609	100	483	403
V/C Ratio(X)	0.72	0.00	0.28	0.86	0.87	0.88	0.39	0.22	0.22	0.22	0.74	0.77
Avail Cap(c_a), veh/h	1519	0	502	671	558	479	559	656	688	868	705	588
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	33.4	0.0	24.9	32.2	27.5	27.6	33.7	19.4	19.4	37.8	27.1	27.4
Incr Delay (d2), s/veh	2.3	0.0	0.1	2.7	12.1	14.4	1.1	0.1	0.1	0.4	3.4	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	2.9	0.0	1.5	4.7	8.8	7.9	1.2	1.6	1.7	0.2	6.1	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	0.0	25.1	34.9	39.6	42.0	34.8	19.5	19.5	38.2	30.4	32.4
LnGrp LOS	D	A	C	C	D	D	C	B	B	D	C	C
Approach Vol, veh/h		422			1055			332			693	
Approach Delay, s/veh		33.1			39.3			22.6			31.6	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	24.0	11.9	26.3	14.2	27.3	6.4	31.7
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	30.0	25.0	25.0	30.0	35.0	25.0	20.0	29.4
Max Q Clear Time (g_c+I1), s	13.1	6.2	4.9	16.7	9.0	20.5	2.5	6.2
Green Ext Time (p_c), s	0.3	0.3	0.1	3.7	1.1	1.5	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

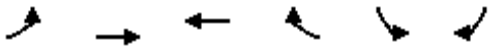
Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	579	285	3	442	127
Future Volume (vph)	0	579	285	3	442	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.96
Satd. Flow (prot)		2601	3533			3407
Flt Permitted		1.00	1.00			0.96
Satd. Flow (perm)		2601	3533			3407
Peak-hour factor, PHF	0.93	0.93	0.89	0.89	0.97	0.97
Adj. Flow (vph)	0	623	320	3	456	131
RTOR Reduction (vph)	0	444	1	0	0	0
Lane Group Flow (vph)	0	179	322	0	0	587
Confl. Peds. (#/hr)				5		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		35.7	23.9			92.1
Effective Green, g (s)		35.7	23.9			87.6
Actuated g/C Ratio		0.29	0.19			0.71
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		747	679			2403
v/s Ratio Prot		0.07	c0.09			c0.17
v/s Ratio Perm						
v/c Ratio		0.24	0.47			0.24
Uniform Delay, d1		33.9	44.6			6.5
Progression Factor		1.00	1.00			0.40
Incremental Delay, d2		0.2	0.5			0.1
Delay (s)		34.1	45.1			2.6
Level of Service		C	D			A
Approach Delay (s)	34.1		45.1			2.6
Approach LOS	C		D			A

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	124.2	Sum of lost time (s)	16.8
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

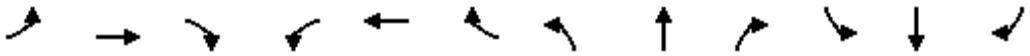
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	406	581	355	118	14
Future Volume (vph)	0	406	581	355	118	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	12	12
Total Lost time (s)		4.4	4.4	4.4	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1739	1739	1447	1770	1583
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1739	1739	1447	1770	1583
Peak-hour factor, PHF	0.82	0.82	0.75	0.75	0.65	0.65
Adj. Flow (vph)	0	495	775	473	182	22
RTOR Reduction (vph)	0	0	0	101	0	11
Lane Group Flow (vph)	0	495	775	372	182	11
Confl. Peds. (#/hr)				1	137	
Turn Type		NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)		42.7	42.7	42.7	13.7	13.7
Effective Green, g (s)		42.7	42.7	42.7	13.7	13.7
Actuated g/C Ratio		0.52	0.52	0.52	0.17	0.17
Clearance Time (s)		4.4	4.4	4.4	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		901	901	749	294	263
v/s Ratio Prot		0.28	c0.45		c0.10	
v/s Ratio Perm				0.26		0.01
v/c Ratio		0.55	0.86	0.50	0.62	0.04
Uniform Delay, d1		13.4	17.3	12.9	31.9	28.8
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.7	8.4	0.5	3.9	0.1
Delay (s)		14.1	25.7	13.4	35.8	28.9
Level of Service		B	C	B	D	C
Approach Delay (s)		14.1	21.0		35.0	
Approach LOS		B	C		D	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	82.4	Sum of lost time (s)	12.4
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Future Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	610	28	133	1017	18	55	0	173	0	0	4
Peak Hour Factor	0.87	0.87	0.87	0.93	0.93	0.93	0.82	0.82	0.82	0.50	0.50	0.50
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	809	37	172	1012	18	302	0	264	0	0	7
Arrive On Green	0.00	0.46	0.46	0.10	0.55	0.55	0.17	0.00	0.17	0.00	0.00	0.00
Sat Flow, veh/h	1781	1771	81	1781	1831	32	1781	0	1557	0	0	1585
Grp Volume(v), veh/h	1	0	638	133	0	1035	55	0	173	0	0	4
Grp Sat Flow(s),veh/h/ln	1781	0	1853	1781	0	1863	1781	0	1557	0	0	1585
Q Serve(g_s), s	0.0	0.0	18.1	4.6	0.0	35.0	1.7	0.0	6.6	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.0	0.0	18.1	4.6	0.0	35.0	1.7	0.0	6.6	0.0	0.0	0.2
Prop In Lane	1.00		0.04	1.00		0.02	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	3	0	846	172	0	1029	302	0	264	0	0	7
V/C Ratio(X)	0.36	0.00	0.75	0.77	0.00	1.01	0.18	0.00	0.66	0.00	0.00	0.59
Avail Cap(c_a), veh/h	225	0	1024	703	0	1029	703	0	614	0	0	200
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	31.6	0.0	14.3	27.9	0.0	14.2	22.6	0.0	24.6	0.0	0.0	31.5
Incr Delay (d2), s/veh	26.0	0.0	3.0	2.8	0.0	29.4	0.4	0.0	3.9	0.0	0.0	26.5
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	0.0	0.0	7.2	2.0	0.0	19.9	0.7	0.0	2.6	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	0.0	17.3	30.7	0.0	43.5	23.0	0.0	28.5	0.0	0.0	58.0
LnGrp LOS	E	A	B	C	A	F	C	A	C	A	A	E
Approach Vol, veh/h		639			1168			228			4	
Approach Delay, s/veh		17.4			42.1			27.2			58.0	
Approach LOS		B			D			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	40.0		14.8	10.2	33.9		4.4				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	8.0	35.0		25.0	25.0	35.0		8.0				
Max Q Clear Time (g_c+I1), s	2.0	37.0		8.6	6.6	20.1		2.2				
Green Ext Time (p_c), s	0.0	0.0		1.5	0.2	5.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		32.7	
HCM 6th LOS		C	

Notes

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	603	1033	21	9	67
Future Vol, veh/h	64	603	1033	21	9	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	655	1123	23	10	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1146	0	-	0	1930	1135
Stage 1	-	-	-	-	1135	-
Stage 2	-	-	-	-	795	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	610	-	-	-	73	246
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	445	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	610	-	-	-	65	246
Mov Cap-2 Maneuver	-	-	-	-	182	-
Stage 1	-	-	-	-	272	-
Stage 2	-	-	-	-	445	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	28.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	610	-	-	-	236
HCM Lane V/C Ratio	0.114	-	-	-	0.35
HCM Control Delay (s)	11.7	-	-	-	28.3
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	1.5

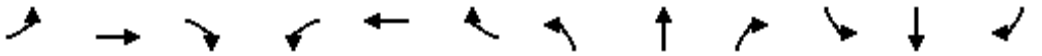
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	603	999	23	18	58
Future Vol, veh/h	14	603	999	23	18	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	655	1086	25	20	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1111	0	-	0	1784	1099
Stage 1	-	-	-	-	1099	-
Stage 2	-	-	-	-	685	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	629	-	-	-	90	258
Stage 1	-	-	-	-	319	-
Stage 2	-	-	-	-	500	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	629	-	-	-	88	258
Mov Cap-2 Maneuver	-	-	-	-	212	-
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	500	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	27
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	629	-	-	-	245
HCM Lane V/C Ratio	0.024	-	-	-	0.337
HCM Control Delay (s)	10.9	-	-	-	27
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Future Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.93		1.00	0.91	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.88		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1782		1711	1792		1770	1530		1770	1471	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	1782		1711	1792		1770	1530		1770	1471	
Peak-hour factor, PHF	0.69	0.69	0.69	0.84	0.84	0.84	0.64	0.64	0.64	0.74	0.74	0.74
Adj. Flow (vph)	41	870	32	36	1045	23	145	16	55	107	9	55
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	41	901	0	36	1068	0	145	71	0	107	64	0
Confl. Peds. (#/hr)			38			14			30			34
Confl. Bikes (#/hr)			9			8						2
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	6.3	79.1		4.7	77.5		20.8	20.8		19.3	19.3	
Effective Green, g (s)	6.3	79.1		4.7	77.5		20.8	20.8		19.3	19.3	
Actuated g/C Ratio	0.04	0.56		0.03	0.55		0.15	0.15		0.14	0.14	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	76	1000		57	985		261	225		242	201	
v/s Ratio Prot	c0.02	0.51		0.02	c0.60		c0.08	0.05		c0.06	0.04	
v/s Ratio Perm												
v/c Ratio	0.54	0.90		0.63	1.08		0.56	0.32		0.44	0.32	
Uniform Delay, d1	65.9	27.4		67.2	31.7		55.8	53.7		55.9	54.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.7	11.0		15.5	54.2		2.0	0.6		0.9	0.7	
Delay (s)	69.5	38.5		82.8	85.9		57.8	54.3		56.8	55.5	
Level of Service	E	D		F	F		E	D		E	E	
Approach Delay (s)		39.8			85.8			56.6			56.3	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	63.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	140.9	Sum of lost time (s)	17.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	707	886	30	32	69
Future Vol, veh/h	35	707	886	30	32	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	768	963	33	35	75

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	996	0	-	0	1824	980
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	844	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	695	-	-	-	85	303
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	422	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	695	-	-	-	80	303
Mov Cap-2 Maneuver	-	-	-	-	209	-
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	422	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	27.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	695	-	-	-	265
HCM Lane V/C Ratio	0.055	-	-	-	0.414
HCM Control Delay (s)	10.5	-	-	-	27.9
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	1.9

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	665	849	28	32	64
Future Vol, veh/h	62	665	849	28	32	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	723	923	30	35	70

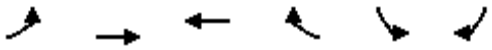
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	953	0	-	0	1795	938
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	857	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	721	-	-	-	88	321
Stage 1	-	-	-	-	381	-
Stage 2	-	-	-	-	416	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	721	-	-	-	80	321
Mov Cap-2 Maneuver	-	-	-	-	209	-
Stage 1	-	-	-	-	346	-
Stage 2	-	-	-	-	416	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	26.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	721	-	-	-	272
HCM Lane V/C Ratio	0.093	-	-	-	0.384
HCM Control Delay (s)	10.5	-	-	-	26.2
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.3	-	-	-	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	683	16	28	840	32	74
Future Volume (vph)	683	16	28	840	32	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	1795		1770	1801	1663	
Flt Permitted	1.00		0.31	1.00	0.99	
Satd. Flow (perm)	1795		576	1801	1663	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	742	17	30	913	35	80
RTOR Reduction (vph)	1	0	0	0	70	0
Lane Group Flow (vph)	758	0	30	913	45	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	30.4		30.4	30.4	5.3	
Effective Green, g (s)	30.4		30.4	30.4	5.3	
Actuated g/C Ratio	0.68		0.68	0.68	0.12	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	1229		394	1233	198	
v/s Ratio Prot	0.42			c0.51		
v/s Ratio Perm			0.05		c0.03	
v/c Ratio	0.62		0.08	0.74	0.22	
Uniform Delay, d1	3.8		2.3	4.5	17.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.1		0.1	2.6	0.6	
Delay (s)	4.9		2.4	7.1	18.3	
Level of Service	A		A	A	B	
Approach Delay (s)	4.9			6.9	18.3	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	8.7
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	750	853	16	16	78
Future Volume (vph)	50	750	853	16	16	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	1863	1857		1767	1560
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	1863	1857		1767	1560
Peak-hour factor, PHF	0.76	0.76	0.69	0.69	0.81	0.81
Adj. Flow (vph)	66	987	1236	23	20	96
RTOR Reduction (vph)	0	0	0	0	0	86
Lane Group Flow (vph)	66	987	1259	0	20	10
Confl. Peds. (#/hr)				8	1	4
Confl. Bikes (#/hr)				3		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	4.5	51.4	42.3		7.1	7.1
Effective Green, g (s)	4.5	51.4	42.3		7.1	7.1
Actuated g/C Ratio	0.07	0.76	0.63		0.11	0.11
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	114	1424	1168		186	164
v/s Ratio Prot	0.04	c0.53	c0.68			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.58	0.69	1.08		0.11	0.06
Uniform Delay, d1	30.4	4.0	12.5		27.2	27.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.4	1.5	49.9		0.1	0.1
Delay (s)	34.8	5.4	62.3		27.3	27.1
Level of Service	C	A	E		C	C
Approach Delay (s)		7.3	62.3		27.1	
Approach LOS		A	E		C	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	67.2	Sum of lost time (s)	13.3
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

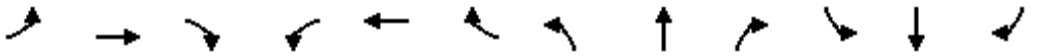
Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	704	30	62	821	39	69
Future Vol, veh/h	704	30	62	821	39	69
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	765	33	67	892	42	75

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	798	0	1808	782
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	1026	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	824	-	87	394
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	346	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	824	-	80	394
Mov Cap-2 Maneuver	-	-	-	-	205	-
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	318	-

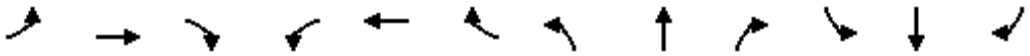
Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	24.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	296	-	-	824	-
HCM Lane V/C Ratio	0.397	-	-	0.082	-
HCM Control Delay (s)	24.9	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.8	-	-	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Future Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4	5.4				4.0		4.0
Lane Util. Factor	1.00	1.00			1.00	1.00				0.97		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.97				1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1770	1863			1863	1488				3433		1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1770	1863			1863	1488				3433		1583
Peak-hour factor, PHF	0.74	0.74	0.74	0.75	0.75	0.75	0.92	0.92	0.92	0.80	0.80	0.80
Adj. Flow (vph)	239	789	0	0	824	215	0	0	0	129	0	382
RTOR Reduction (vph)	0	0	0	0	0	45	0	0	0	0	0	331
Lane Group Flow (vph)	239	789	0	0	824	170	0	0	0	129	0	52
Confl. Peds. (#/hr)						18						1
Confl. Bikes (#/hr)			26			2						
Turn Type	Prot	NA			NA	Perm				Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases						6						
Actuated Green, G (s)	15.1	60.0			40.9	40.9				10.9		10.9
Effective Green, g (s)	15.1	60.0			40.9	40.9				10.9		10.9
Actuated g/C Ratio	0.19	0.75			0.51	0.51				0.14		0.14
Clearance Time (s)	4.0	5.4			5.4	5.4				4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0	1.0				3.0		3.0
Lane Grp Cap (vph)	332	1392			948	757				465		214
v/s Ratio Prot	c0.14	0.42			c0.44					c0.04		0.03
v/s Ratio Perm						0.11						
v/c Ratio	0.72	0.57			0.87	0.23				0.28		0.24
Uniform Delay, d1	30.6	4.5			17.3	10.9				31.2		31.0
Progression Factor	1.00	1.00			1.00	1.00				1.00		1.00
Incremental Delay, d2	6.1	0.3			8.3	0.1				0.3		0.6
Delay (s)	36.7	4.8			25.6	11.0				31.5		31.6
Level of Service	D	A			C	B				C		C
Approach Delay (s)		12.2			22.6			0.0			31.6	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	17.4
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



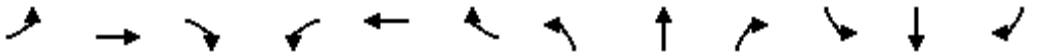
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Future Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.97	0.99		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	1870	1870	1945	1870	1870	1945	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	658	85	16	396	30	314	52	44	59	34	188
Peak Hour Factor	0.78	0.78	0.78	0.83	0.83	0.83	0.66	0.66	0.66	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	770	655	21	677	582	383	309	262	503	81	449
Arrive On Green	0.06	0.41	0.41	0.01	0.36	0.36	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1781	1870	1592	1781	1870	1609	1150	920	778	1287	241	1335
Grp Volume(v), veh/h	85	658	85	16	396	30	314	0	96	59	0	222
Grp Sat Flow(s),veh/h/ln	1781	1870	1592	1781	1870	1609	1150	0	1698	1287	0	1577
Q Serve(g_s), s	2.8	19.0	2.0	0.5	10.2	0.7	13.5	0.0	2.4	2.0	0.0	6.5
Cycle Q Clear(g_c), s	2.8	19.0	2.0	0.5	10.2	0.7	20.0	0.0	2.4	4.4	0.0	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.85
Lane Grp Cap(c), veh/h	110	770	655	21	677	582	383	0	571	503	0	530
V/C Ratio(X)	0.78	0.85	0.13	0.77	0.59	0.05	0.82	0.00	0.17	0.12	0.00	0.42
Avail Cap(c_a), veh/h	449	1258	1071	449	1258	1082	383	0	571	503	0	530
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	27.5	15.9	10.9	29.3	15.4	12.3	24.1	0.0	13.9	15.4	0.0	15.2
Incr Delay (d2), s/veh	4.4	2.6	0.1	19.2	0.6	0.0	13.3	0.0	0.1	0.1	0.0	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	1.2	7.0	0.6	0.3	3.7	0.2	5.8	0.0	0.9	0.6	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	18.5	10.9	48.5	16.0	12.4	37.4	0.0	14.0	15.5	0.0	15.8
LnGrp LOS	C	B	B	D	B	B	D	A	B	B	A	B
Approach Vol, veh/h		828			442			410			281	
Approach Delay, s/veh		19.1			16.9			31.9			15.7	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	26.9		24.9	4.7	29.9		24.9				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	4.8	12.2		8.5	2.5	21.0		22.0				
Green Ext Time (p_c), s	0.1	1.9		1.2	0.0	3.5		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			20.8									
HCM 6th LOS			C									

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Future Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	224	404	29	10	23	43	94	240	241	314	290	330
Peak Hour Factor	0.82	0.82	0.82	0.61	0.61	0.61	0.88	0.88	0.88	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	529	470	34	27	242	216	226	508	453	433	532	444
Arrive On Green	0.15	0.27	0.27	0.02	0.14	0.14	0.13	0.29	0.29	0.13	0.28	0.28
Sat Flow, veh/h	3456	1716	123	1781	1777	1585	1781	1777	1585	3456	1870	1560
Grp Volume(v), veh/h	224	0	433	10	23	43	94	240	241	314	290	330
Grp Sat Flow(s),veh/h/ln	1728	0	1839	1781	1777	1585	1781	1777	1585	1728	1870	1560
Q Serve(g_s), s	3.8	0.0	14.3	0.4	0.7	1.5	3.1	7.1	8.2	5.6	8.4	12.3
Cycle Q Clear(g_c), s	3.8	0.0	14.3	0.4	0.7	1.5	3.1	7.1	8.2	5.6	8.4	12.3
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	529	0	504	27	242	216	226	508	453	433	532	444
V/C Ratio(X)	0.42	0.00	0.86	0.37	0.10	0.20	0.42	0.47	0.53	0.73	0.54	0.74
Avail Cap(c_a), veh/h	1887	0	717	834	693	618	695	815	727	1078	876	730
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	24.6	0.0	22.1	31.2	24.2	24.6	25.8	18.9	19.3	27.0	19.4	20.8
Incr Delay (d2), s/veh	0.5	0.0	5.5	3.1	0.1	0.2	0.9	0.3	0.4	0.9	1.2	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	1.4	0.0	6.2	0.2	0.3	0.5	1.3	2.6	2.7	2.1	3.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	27.6	34.3	24.3	24.8	26.7	19.1	19.6	27.8	20.7	24.3
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		657			76			575			934	
Approach Delay, s/veh		26.7			25.9			20.6			24.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	22.9	12.2	23.9	13.9	14.0	12.1	24.0
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	30.0	25.0	25.0	30.0	35.0	25.0	20.0	29.4
Max Q Clear Time (g_c+I1), s	2.4	16.3	5.1	14.3	5.8	3.5	7.6	10.2
Green Ext Time (p_c), s	0.0	1.1	0.1	3.6	0.7	0.2	0.5	1.7

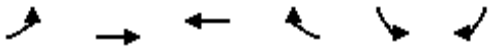
Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

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

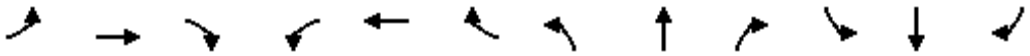
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	541	277	2	699	294
Future Volume (vph)	0	541	277	2	699	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.97
Satd. Flow (prot)		2601	3535			3419
Flt Permitted		1.00	1.00			0.97
Satd. Flow (perm)		2601	3535			3419
Peak-hour factor, PHF	0.82	0.82	0.90	0.90	0.95	0.95
Adj. Flow (vph)	0	660	308	2	736	309
RTOR Reduction (vph)	0	489	0	0	0	0
Lane Group Flow (vph)	0	171	310	0	0	1045
Confl. Peds. (#/hr)		4		9		
Confl. Bikes (#/hr)				1		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		35.1	24.5			102.5
Effective Green, g (s)		35.1	24.5			98.0
Actuated g/C Ratio		0.26	0.18			0.72
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		675	640			2478
v/s Ratio Prot		0.07	c0.09			c0.31
v/s Ratio Perm						
v/c Ratio		0.25	0.48			0.42
Uniform Delay, d1		39.7	49.7			7.4
Progression Factor		1.00	1.00			0.46
Incremental Delay, d2		0.3	0.6			0.1
Delay (s)		39.9	50.3			3.5
Level of Service		D	D			A
Approach Delay (s)	39.9		50.3			3.5
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	135.2	Sum of lost time (s)	16.8
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	688	562	198	206	4
Future Volume (vph)	0	688	562	198	206	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	12	12
Total Lost time (s)		4.4	4.4	4.4	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.97	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1739	1739	1441	1770	1583
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1739	1739	1441	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.94	0.94	0.80	0.80
Adj. Flow (vph)	0	748	598	211	258	5
RTOR Reduction (vph)	0	0	0	57	0	2
Lane Group Flow (vph)	0	748	598	154	258	3
Confl. Peds. (#/hr)				3	16	
Confl. Bikes (#/hr)				3		
Turn Type		NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)		39.8	39.8	39.8	15.3	15.3
Effective Green, g (s)		39.8	39.8	39.8	15.3	15.3
Actuated g/C Ratio		0.53	0.53	0.53	0.20	0.20
Clearance Time (s)		4.4	4.4	4.4	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		916	916	759	358	320
v/s Ratio Prot		c0.43	0.34		c0.15	
v/s Ratio Perm				0.11		0.00
v/c Ratio		0.82	0.65	0.20	0.72	0.01
Uniform Delay, d1		14.8	12.9	9.4	28.1	24.1
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.7	1.7	0.1	7.0	0.0
Delay (s)		20.5	14.6	9.6	35.1	24.1
Level of Service		C	B	A	D	C
Approach Delay (s)		20.5	13.3		34.9	
Approach LOS		C	B		C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	75.5	Sum of lost time (s)	12.4
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Future Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	954	76	128	802	1	56	0	258	0	0	0
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.78	0.78	0.78	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	968	77	158	1306	2	366	0	319	0	2	0
Arrive On Green	0.00	0.57	0.57	0.09	0.70	0.70	0.21	0.00	0.21	0.00	0.00	0.00
Sat Flow, veh/h	1781	1706	136	1781	1868	2	1781	0	1554	0	1870	0
Grp Volume(v), veh/h	0	0	1030	128	0	803	56	0	258	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1842	1781	0	1870	1781	0	1554	0	1870	0
Q Serve(g_s), s	0.0	0.0	52.3	6.7	0.0	21.6	2.5	0.0	15.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	52.3	6.7	0.0	21.6	2.5	0.0	15.1	0.0	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	2	0	1045	158	0	1307	366	0	319	0	2	0
V/C Ratio(X)	0.00	0.00	0.99	0.81	0.00	0.61	0.15	0.00	0.81	0.00	0.00	0.00
Avail Cap(c_a), veh/h	204	0	1045	204	0	1307	503	0	439	0	214	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)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	20.2	42.6	0.0	7.5	31.0	0.0	36.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	24.4	13.2	0.0	1.0	0.3	0.0	9.2	0.0	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	0.0	0.0	27.0	3.5	0.0	7.5	1.1	0.0	6.5	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	44.6	55.8	0.0	8.6	31.3	0.0	45.3	0.0	0.0	0.0
LnGrp LOS	A	A	D	E	A	A	C	A	D	A	A	A
Approach Vol, veh/h		1030			931			314			0	
Approach Delay, s/veh		44.6			15.1			42.8			0.0	
Approach LOS		D			B			D				

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	71.6		23.6	12.6	59.0		0.0				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	10.9	54.0		26.9	10.9	54.0		10.9				
Max Q Clear Time (g_c+I1), s	0.0	23.6		17.1	8.7	54.3		0.0				
Green Ext Time (p_c), s	0.0	10.0		1.7	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		32.3	
HCM 6th LOS		C	

Notes

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

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	980	848	16	7	47
Future Vol, veh/h	82	980	848	16	7	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	1065	922	17	8	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	939	0	-	0	2174	931
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	1243	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	730	-	-	-	51	324
Stage 1	-	-	-	-	384	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	730	-	-	-	45	324
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	272	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	730	-	-	-	285
HCM Lane V/C Ratio	0.122	-	-	-	0.206
HCM Control Delay (s)	10.6	-	-	-	20.9
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	0.8

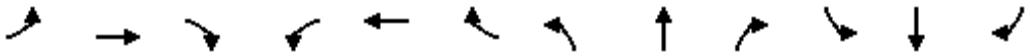
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	920	872	17	6	26
Future Vol, veh/h	37	920	872	17	6	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	1000	948	18	7	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	966	0	-	0	2037	957
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	1080	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	713	-	-	-	62	313
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	326	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	713	-	-	-	59	313
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	326	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	20
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	713	-	-	-	275
HCM Lane V/C Ratio	0.056	-	-	-	0.126
HCM Control Delay (s)	10.4	-	-	-	20
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Future Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1778		1711	1773		1770	1724		1770	1574	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	1778		1711	1773		1770	1724		1770	1574	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.75	0.75	0.75	0.84	0.84	0.84
Adj. Flow (vph)	106	884	65	13	901	74	57	11	8	90	12	81
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	106	948	0	13	974	0	57	19	0	90	93	0
Confl. Peds. (#/hr)			5			11			2			6
Confl. Bikes (#/hr)			1			8			1			
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	10.0	73.1		1.1	64.2		9.7	9.7		13.3	13.3	
Effective Green, g (s)	10.0	73.1		1.1	64.2		9.7	9.7		13.3	13.3	
Actuated g/C Ratio	0.09	0.64		0.01	0.56		0.08	0.08		0.12	0.12	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.5	4.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		3.0	3.0	
Lane Grp Cap (vph)	149	1134		16	993		149	145		205	182	
v/s Ratio Prot	c0.06	c0.53		0.01	c0.55		c0.03	0.01		0.05	c0.06	
v/s Ratio Perm												
v/c Ratio	0.71	0.84		0.81	0.98		0.38	0.13		0.44	0.51	
Uniform Delay, d1	50.9	16.1		56.6	24.6		49.6	48.5		47.2	47.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.5	5.5		127.7	23.8		1.2	0.3		1.5	2.4	
Delay (s)	63.4	21.6		184.3	48.4		50.8	48.8		48.7	50.0	
Level of Service	E	C		F	D		D	D		D	D	
Approach Delay (s)		25.8			50.2			50.3			49.4	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	114.6	Sum of lost time (s)	17.4
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	791	794	95	91	77
Future Vol, veh/h	78	791	794	95	91	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	860	863	103	99	84

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	966	0	-	0	1945	915
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	1030	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	713	-	-	-	~ 71	331
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	344	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	713	-	-	-	~ 63	331
Mov Cap-2 Maneuver	-	-	-	-	186	-
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	344	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	60.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	713	-	-	-	233
HCM Lane V/C Ratio	0.119	-	-	-	0.784
HCM Control Delay (s)	10.7	-	-	-	60.2
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.4	-	-	-	5.7

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

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	829	875	18	14	47
Future Vol, veh/h	24	829	875	18	14	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	901	951	20	15	51

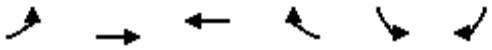
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	971	0	-	0	1914	961
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	953	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	710	-	-	-	75	311
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	375	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	710	-	-	-	72	311
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	357	-
Stage 2	-	-	-	-	375	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	22.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	710	-	-	-	276
HCM Lane V/C Ratio	0.037	-	-	-	0.24
HCM Control Delay (s)	10.3	-	-	-	22.1
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	814	17	36	877	11	24
Future Volume (vph)	814	17	36	877	11	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	1796		1770	1801	1664	
Flt Permitted	1.00		0.26	1.00	0.98	
Satd. Flow (perm)	1796		488	1801	1664	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	885	18	39	953	12	26
RTOR Reduction (vph)	1	0	0	0	25	0
Lane Group Flow (vph)	902	0	39	953	13	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	28.9		28.9	28.9	1.9	
Effective Green, g (s)	28.9		28.9	28.9	1.9	
Actuated g/C Ratio	0.73		0.73	0.73	0.05	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	1314		357	1317	80	
v/s Ratio Prot	0.50			c0.53		
v/s Ratio Perm			0.08		c0.01	
v/c Ratio	0.69		0.11	0.72	0.17	
Uniform Delay, d1	2.9		1.5	3.0	18.0	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.6		0.2	2.1	1.0	
Delay (s)	4.5		1.7	5.2	19.0	
Level of Service	A		A	A	B	
Approach Delay (s)	4.5			5.0	19.0	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	5.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	39.5	Sum of lost time (s)	8.7
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	682	898	35	19	82
Future Volume (vph)	92	682	898	35	19	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		0.99	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	1863	1851		1757	1549
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	1863	1851		1757	1549
Peak-hour factor, PHF	0.87	0.87	0.83	0.83	0.56	0.56
Adj. Flow (vph)	106	784	1082	42	34	146
RTOR Reduction (vph)	0	0	1	0	0	122
Lane Group Flow (vph)	106	784	1123	0	34	24
Confl. Peds. (#/hr)					5	12
Confl. Bikes (#/hr)				24		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	7.7	54.2	41.9		12.3	12.3
Effective Green, g (s)	7.7	54.2	41.9		12.3	12.3
Actuated g/C Ratio	0.10	0.72	0.56		0.16	0.16
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	175	1342	1031		287	253
v/s Ratio Prot	0.06	c0.42	c0.61			
v/s Ratio Perm					c0.02	0.02
v/c Ratio	0.61	0.58	1.09		0.12	0.09
Uniform Delay, d1	32.3	5.1	16.7		26.8	26.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.0	0.7	55.4		0.1	0.1
Delay (s)	36.3	5.7	72.1		26.9	26.8
Level of Service	D	A	E		C	C
Approach Delay (s)		9.4	72.1		26.8	
Approach LOS		A	E		C	

Intersection Summary			
HCM 2000 Control Delay	42.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	75.2	Sum of lost time (s)	13.3
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

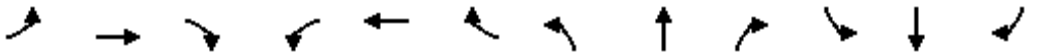
Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	743	0	89	930	20	71
Future Vol, veh/h	743	0	89	930	20	71
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	808	0	97	1011	22	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	808	0	2013	808
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	1205	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	817	-	65	381
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	284	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	817	-	57	381
Mov Cap-2 Maneuver	-	-	-	-	169	-
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	250	-

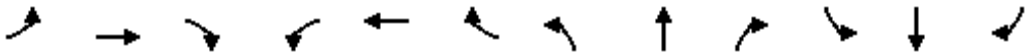
Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	22.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	299	-	-	817	-
HCM Lane V/C Ratio	0.331	-	-	0.118	-
HCM Control Delay (s)	22.9	-	-	10	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.4	-	-	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Future Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4	5.4				4.0		4.0
Lane Util. Factor	1.00	1.00			1.00	1.00				0.97		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.97				1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1770	1863			1863	1491				3433		1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1770	1863			1863	1491				3433		1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.82	0.82	0.82	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	299	611	0	0	880	222	0	0	0	167	0	331
RTOR Reduction (vph)	0	0	0	0	0	47	0	0	0	0	0	284
Lane Group Flow (vph)	299	611	0	0	880	175	0	0	0	167	0	47
Confl. Peds. (#/hr)			3			3						1
Confl. Bikes (#/hr)			1			24						
Turn Type	Prot	NA			NA	Perm				Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases						6						
Actuated Green, G (s)	18.1	62.8			40.7	40.7				11.9		11.9
Effective Green, g (s)	18.1	62.8			40.7	40.7				11.9		11.9
Actuated g/C Ratio	0.22	0.75			0.48	0.48				0.14		0.14
Clearance Time (s)	4.0	5.4			5.4	5.4				4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0	1.0				3.0		3.0
Lane Grp Cap (vph)	380	1391			901	721				485		223
v/s Ratio Prot	c0.17	0.33			c0.47					c0.05		0.03
v/s Ratio Perm						0.12						
v/c Ratio	0.79	0.44			0.98	0.24				0.34		0.21
Uniform Delay, d1	31.2	4.0			21.2	12.7				32.6		31.9
Progression Factor	1.00	1.00			1.00	1.00				1.00		1.00
Incremental Delay, d2	9.5	0.1			24.0	0.1				0.4		0.5
Delay (s)	40.7	4.1			45.3	12.8				33.0		32.4
Level of Service	D	A			D	B				C		C
Approach Delay (s)		16.1			38.7			0.0			32.6	
Approach LOS		B			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	84.1	Sum of lost time (s)	17.4
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



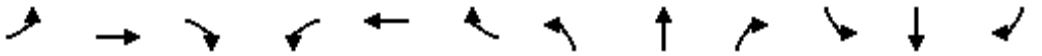
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Future Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	392	165	32	764	67	149	14	25	27	18	91
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.72	0.72	0.72	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	988	850	38	869	736	321	129	230	387	57	288
Arrive On Green	0.08	0.53	0.53	0.02	0.46	0.46	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	1870	1610	1781	1870	1583	1271	587	1049	1351	260	1316
Grp Volume(v), veh/h	117	392	165	32	764	67	149	0	39	27	0	109
Grp Sat Flow(s),veh/h/ln	1781	1870	1610	1781	1870	1583	1271	0	1636	1351	0	1577
Q Serve(g_s), s	4.0	7.7	3.3	1.1	22.8	1.5	6.9	0.0	1.2	1.0	0.0	3.6
Cycle Q Clear(g_c), s	4.0	7.7	3.3	1.1	22.8	1.5	10.5	0.0	1.2	2.2	0.0	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		0.83
Lane Grp Cap(c), veh/h	151	988	850	38	869	736	321	0	358	387	0	345
V/C Ratio(X)	0.77	0.40	0.19	0.84	0.88	0.09	0.46	0.00	0.11	0.07	0.00	0.32
Avail Cap(c_a), veh/h	433	1211	1042	433	1211	1025	454	0	530	528	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	27.7	8.7	7.7	30.1	15.0	9.2	24.6	0.0	19.3	20.2	0.0	20.2
Incr Delay (d2), s/veh	3.2	0.2	0.1	16.4	5.2	0.0	1.0	0.0	0.1	0.1	0.0	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	1.7	2.4	0.9	0.6	8.8	0.4	2.1	0.0	0.4	0.3	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	8.9	7.7	46.6	20.2	9.3	25.7	0.0	19.4	20.3	0.0	20.8
LnGrp LOS	C	A	A	D	C	A	C	A	B	C	A	C
Approach Vol, veh/h		674			863			188			136	
Approach Delay, s/veh		12.4			20.3			24.4			20.7	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	34.1		18.4	5.3	38.0		18.4				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	6.0	24.8		5.6	3.1	9.7		12.5				
Green Ext Time (p_c), s	0.1	3.9		0.5	0.0	2.3		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		17.9	
HCM 6th LOS		B	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Future Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	318	20	84	256	443	356	68	261	3	22	359	312
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.92	0.92	0.92	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	439	72	303	299	506	405	174	1177	14	100	483	403
Arrive On Green	0.13	0.23	0.23	0.17	0.28	0.28	0.10	0.33	0.33	0.03	0.26	0.26
Sat Flow, veh/h	3456	307	1291	1781	1836	1467	1781	3598	41	3456	1870	1562
Grp Volume(v), veh/h	318	0	104	256	429	370	68	129	135	22	359	312
Grp Sat Flow(s),veh/h/ln	1728	0	1598	1781	1777	1526	1781	1777	1863	1728	1870	1562
Q Serve(g_s), s	7.0	0.0	4.2	11.1	18.3	18.5	2.9	4.2	4.2	0.5	14.0	14.7
Cycle Q Clear(g_c), s	7.0	0.0	4.2	11.1	18.3	18.5	2.9	4.2	4.2	0.5	14.0	14.7
Prop In Lane	1.00		0.81	1.00		0.96	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	439	0	375	299	490	421	174	581	609	100	483	403
V/C Ratio(X)	0.72	0.00	0.28	0.86	0.87	0.88	0.39	0.22	0.22	0.22	0.74	0.77
Avail Cap(c_a), veh/h	1519	0	502	671	558	479	559	656	688	868	705	588
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	33.4	0.0	24.9	32.2	27.5	27.6	33.7	19.4	19.4	37.8	27.1	27.4
Incr Delay (d2), s/veh	2.3	0.0	0.1	2.7	12.1	14.4	1.1	0.1	0.1	0.4	3.4	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	2.9	0.0	1.5	4.7	8.8	7.9	1.2	1.6	1.7	0.2	6.1	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	0.0	25.1	34.9	39.6	42.0	34.8	19.5	19.5	38.2	30.4	32.4
LnGrp LOS	D	A	C	C	D	D	C	B	B	D	C	C
Approach Vol, veh/h		422			1055			332			693	
Approach Delay, s/veh		33.1			39.3			22.6			31.6	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	24.0	11.9	26.3	14.2	27.3	6.4	31.7
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	30.0	25.0	25.0	30.0	35.0	25.0	20.0	29.4
Max Q Clear Time (g_c+I1), s	13.1	6.2	4.9	16.7	9.0	20.5	2.5	6.2
Green Ext Time (p_c), s	0.3	0.3	0.1	3.7	1.1	1.5	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	579	285	3	442	127
Future Volume (vph)	0	579	285	3	442	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.96
Satd. Flow (prot)		2787	3533			3407
Flt Permitted		1.00	1.00			0.96
Satd. Flow (perm)		2787	3533			3407
Peak-hour factor, PHF	0.93	0.93	0.89	0.89	0.97	0.97
Adj. Flow (vph)	0	623	320	3	456	131
RTOR Reduction (vph)	0	444	1	0	0	0
Lane Group Flow (vph)	0	179	322	0	0	587
Confl. Peds. (#/hr)				5		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		35.7	23.9			92.1
Effective Green, g (s)		35.7	23.9			87.6
Actuated g/C Ratio		0.29	0.19			0.71
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		801	679			2403
v/s Ratio Prot		0.06	c0.09			c0.17
v/s Ratio Perm						
v/c Ratio		0.22	0.47			0.24
Uniform Delay, d1		33.7	44.6			6.5
Progression Factor		1.00	1.00			0.40
Incremental Delay, d2		0.2	0.5			0.1
Delay (s)		33.9	45.1			2.6
Level of Service		C	D			A
Approach Delay (s)	33.9		45.1			2.6
Approach LOS	C		D			A

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	124.2	Sum of lost time (s)	16.8
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	445	0	25	577	2	13
Future Vol, veh/h	445	0	25	577	2	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	484	0	27	627	2	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	484	0	1165	484
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	681	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1079	-	215	583
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	503	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1079	-	207	583
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	484	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.3	13
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	469	-	-	1079	-
HCM Lane V/C Ratio	0.035	-	-	0.025	-
HCM Control Delay (s)	13	-	-	8.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

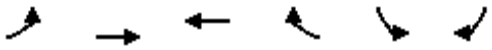
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	406	599	5	0	3
Future Vol, veh/h	52	406	599	5	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	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	441	651	5	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	656	0	-	0	1209	654
Stage 1	-	-	-	-	654	-
Stage 2	-	-	-	-	555	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	931	-	-	-	202	467
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	575	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	931	-	-	-	190	467
Mov Cap-2 Maneuver	-	-	-	-	190	-
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	575	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	931	-	-	-	467
HCM Lane V/C Ratio	0.061	-	-	-	0.007
HCM Control Delay (s)	9.1	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	406	581	355	118	14
Future Volume (vph)	0	406	581	355	118	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.4	4.4	4.4	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00	1.00	0.98	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	
Frt		1.00	1.00	0.85	0.99	
Flt Protected		1.00	1.00	1.00	0.96	
Satd. Flow (prot)		1863	1863	1550	1758	
Flt Permitted		1.00	1.00	1.00	0.96	
Satd. Flow (perm)		1863	1863	1550	1758	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	441	632	386	128	15
RTOR Reduction (vph)	0	0	0	193	5	0
Lane Group Flow (vph)	0	441	632	193	138	0
Confl. Peds. (#/hr)				1	137	
Turn Type		NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases				6		
Actuated Green, G (s)		33.3	33.3	33.3	9.3	
Effective Green, g (s)		33.3	33.3	33.3	9.3	
Actuated g/C Ratio		0.50	0.50	0.50	0.14	
Clearance Time (s)		4.4	4.4	4.4	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		930	930	773	245	
v/s Ratio Prot		0.24	c0.34		c0.08	
v/s Ratio Perm				0.12		
v/c Ratio		0.47	0.68	0.25	0.56	
Uniform Delay, d1		11.0	12.7	9.6	26.8	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.4	2.0	0.2	2.9	
Delay (s)		11.3	14.6	9.7	29.7	
Level of Service		B	B	A	C	
Approach Delay (s)		11.3	12.8		29.7	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	66.7	Sum of lost time (s)	12.4
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

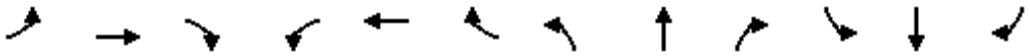
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	510	14	76	937	0	45
Future Vol, veh/h	510	14	76	937	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	70	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	554	15	83	1018	0	49

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	569	0	-	562
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.13	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.219	-	-	3.319
Pot Cap-1 Maneuver	-	-	1001	-	0	526
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1001	-	-	526
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	526	-	-	1001	-
HCM Lane V/C Ratio	0.093	-	-	0.083	-
HCM Control Delay (s)	12.5	-	-	8.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Future Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	577	26	135	1028	18	49	0	154	0	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	757	34	174	1871	33	288	0	252	0	0	3
Arrive On Green	0.00	0.43	0.43	0.10	0.52	0.52	0.16	0.00	0.16	0.00	0.00	0.00
Sat Flow, veh/h	1781	1773	80	1781	3571	63	1781	0	1556	0	0	1585
Grp Volume(v), veh/h	1	0	603	135	512	534	49	0	154	0	0	2
Grp Sat Flow(s),veh/h/ln	1781	0	1853	1781	1777	1857	1781	0	1556	0	0	1585
Q Serve(g_s), s	0.0	0.0	15.4	4.1	10.7	10.7	1.3	0.0	5.1	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	15.4	4.1	10.7	10.7	1.3	0.0	5.1	0.0	0.0	0.1
Prop In Lane	1.00		0.04	1.00		0.03	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	3	0	792	174	931	973	288	0	252	0	0	3
V/C Ratio(X)	0.31	0.00	0.76	0.78	0.55	0.55	0.17	0.00	0.61	0.00	0.00	0.58
Avail Cap(c_a), veh/h	99	0	1499	413	1750	1829	836	0	730	0	0	117
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	0.0	13.5	24.5	8.8	8.8	20.1	0.0	21.7	0.0	0.0	27.7
Incr Delay (d2), s/veh	19.3	0.0	2.2	2.8	0.7	0.7	0.4	0.0	3.4	0.0	0.0	45.7
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	0.0	0.0	5.8	1.7	3.4	3.5	0.6	0.0	2.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	0.0	15.7	27.3	9.6	9.5	20.5	0.0	25.1	0.0	0.0	73.5
LnGrp LOS	D	A	B	C	A	A	C	A	C	A	A	E
Approach Vol, veh/h		604			1181			203			2	
Approach Delay, s/veh		15.8			11.6			24.0			73.5	
Approach LOS		B			B			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	34.2		13.1	9.5	28.8		4.2				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	3.1	54.8		26.1	12.9	45.0		4.1				
Max Q Clear Time (g_c+I1), s	2.0	12.7		7.1	6.1	17.4		2.1				
Green Ext Time (p_c), s	0.0	13.0		1.4	0.1	6.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		14.2	
HCM 6th LOS		B	

Notes

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	603	1033	21	9	67
Future Vol, veh/h	64	603	1033	21	9	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	655	1123	23	10	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1146	0	-	0	1930	573
Stage 1	-	-	-	-	1135	-
Stage 2	-	-	-	-	795	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	608	-	-	-	65	463
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	444	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	608	-	-	-	58	463
Mov Cap-2 Maneuver	-	-	-	-	165	-
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	444	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	608	-	-	-	381
HCM Lane V/C Ratio	0.114	-	-	-	0.217
HCM Control Delay (s)	11.7	-	-	-	17
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	0.8

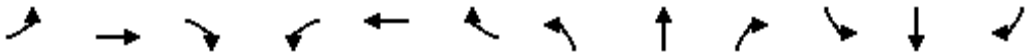
Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	603	999	23	18	58
Future Vol, veh/h	14	603	999	23	18	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	655	1086	25	20	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1111	0	-	0	1784	556
Stage 1	-	-	-	-	1099	-
Stage 2	-	-	-	-	685	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	626	-	-	-	81	475
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	499	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	626	-	-	-	79	475
Mov Cap-2 Maneuver	-	-	-	-	79	-
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	499	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	31.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	626	-	-	-	217
HCM Lane V/C Ratio	0.024	-	-	-	0.381
HCM Control Delay (s)	10.9	-	-	-	31.4
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Future Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.97		1.00	0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.88		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3508		1770	3524		1770	1597		1770	1564	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3508		1770	3524		1770	1597		1770	1564	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	652	24	33	954	21	101	11	38	86	8	45
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	30	674	0	33	974	0	101	49	0	86	53	0
Confl. Peds. (#/hr)			38			14			30			34
Confl. Bikes (#/hr)			9			8						2
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	1.9	38.5		1.7	38.3		15.0	15.0		14.9	14.9	
Effective Green, g (s)	1.9	38.5		1.7	38.3		15.0	15.0		14.9	14.9	
Actuated g/C Ratio	0.02	0.44		0.02	0.44		0.17	0.17		0.17	0.17	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	38	1550		34	1549		304	275		302	267	
v/s Ratio Prot	0.02	0.19		c0.02	c0.28		c0.06	0.03		c0.05	0.03	
v/s Ratio Perm												
v/c Ratio	0.79	0.44		0.97	0.63		0.33	0.18		0.28	0.20	
Uniform Delay, d1	42.4	16.8		42.7	18.9		31.7	30.8		31.5	31.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	63.7	0.2		141.4	0.8		0.5	0.2		0.4	0.3	
Delay (s)	106.1	17.0		184.1	19.7		32.1	31.0		31.8	31.2	
Level of Service	F	B		F	B		C	C		C	C	
Approach Delay (s)		20.8			25.1			31.8			31.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	87.1	Sum of lost time (s)	17.0
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	723	7	39	918	12	14
Future Vol, veh/h	723	7	39	918	12	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	786	8	42	998	13	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	794	0	1373	397
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	583	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	823	-	137	602
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	823	-	130	602
Mov Cap-2 Maneuver	-	-	-	-	130	-
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	494	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	23.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	225	-	-	823	-
HCM Lane V/C Ratio	0.126	-	-	0.052	-
HCM Control Delay (s)	23.3	-	-	9.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	707	886	30	32	69
Future Vol, veh/h	35	707	886	30	32	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	40
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	768	963	33	35	75

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	996	0	-	0	1440	498
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	460	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	690	-	-	-	124	518
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	690	-	-	-	117	518
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	16.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	690	-	-	-	231	518
HCM Lane V/C Ratio	0.055	-	-	-	0.151	0.145
HCM Control Delay (s)	10.5	-	-	-	23.3	13.1
HCM Lane LOS	B	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	0.5

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	715	21	18	885	41	9
Future Vol, veh/h	715	21	18	885	41	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	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	777	23	20	962	45	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	800	0	1310	400
Stage 1	-	-	-	-	789	-
Stage 2	-	-	-	-	521	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	819	-	151	600
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	561	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	819	-	147	600
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	548	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	19.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	308	-	-	819	-
HCM Lane V/C Ratio	0.176	-	-	0.024	-
HCM Control Delay (s)	19.2	-	-	9.5	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	665	849	28	32	64
Future Vol, veh/h	62	665	849	28	32	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	723	923	30	35	70

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	953	0	-	0	1434	477
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	496	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	717	-	-	-	125	534
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	577	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	717	-	-	-	113	534
Mov Cap-2 Maneuver	-	-	-	-	229	-
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	577	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	717	-	-	-	370
HCM Lane V/C Ratio	0.094	-	-	-	0.282
HCM Control Delay (s)	10.5	-	-	-	18.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	683	16	28	840	32	74
Future Volume (vph)	683	16	28	840	32	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3292		1711	3421	1663	
Flt Permitted	1.00		0.36	1.00	0.99	
Satd. Flow (perm)	3292		655	3421	1663	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	742	17	30	913	35	80
RTOR Reduction (vph)	3	0	0	0	71	0
Lane Group Flow (vph)	756	0	30	913	44	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	20.3		20.3	20.3	3.6	
Effective Green, g (s)	20.3		20.3	20.3	3.6	
Actuated g/C Ratio	0.62		0.62	0.62	0.11	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2049		407	2130	183	
v/s Ratio Prot	0.23			c0.27		
v/s Ratio Perm			0.05		c0.03	
v/c Ratio	0.37		0.07	0.43	0.24	
Uniform Delay, d1	3.0		2.4	3.2	13.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.1	0.2	0.7	
Delay (s)	3.2		2.5	3.4	13.9	
Level of Service	A		A	A	B	
Approach Delay (s)	3.2			3.3	13.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	3.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	32.6	Sum of lost time (s)	8.7
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	751	5	0	863	5	0	0	9	0	0	0
Future Vol, veh/h	0	751	5	0	863	5	0	0	9	0	0	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	-	-	-	60	-	-	-	-	-	-	-	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	816	5	0	938	5	0	0	10	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	821	0	0	1288	1762	411	-	-	472
Stage 1	-	-	-	-	-	-	819	819	-	-	-	-
Stage 2	-	-	-	-	-	-	469	943	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	7.54	6.54	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	3.52	4.02	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	804	-	-	121	83	590	0	0	538
Stage 1	0	-	-	-	-	-	336	388	-	0	0	-
Stage 2	0	-	-	-	-	-	544	339	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	804	-	-	121	83	590	-	-	538
Mov Cap-2 Maneuver	-	-	-	-	-	-	241	203	-	-	-	-
Stage 1	-	-	-	-	-	-	336	388	-	-	-	-
Stage 2	-	-	-	-	-	-	544	339	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.2	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	590	-	-	804	-	-	-
HCM Lane V/C Ratio	0.017	-	-	-	-	-	-
HCM Control Delay (s)	11.2	-	-	0	-	-	0
HCM Lane LOS	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	-

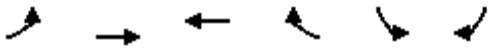
Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	700	87	145	805	62	99
Future Vol, veh/h	700	87	145	805	62	99
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	761	95	158	875	67	108

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	856	0	1563	428
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	754	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	780	-	102	575
Stage 1	-	-	-	-	398	-
Stage 2	-	-	-	-	425	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	780	-	81	575
Mov Cap-2 Maneuver	-	-	-	-	204	-
Stage 1	-	-	-	-	398	-
Stage 2	-	-	-	-	339	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	26.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	338	-	-	780	-
HCM Lane V/C Ratio	0.518	-	-	0.202	-
HCM Control Delay (s)	26.5	-	-	10.8	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	2.8	-	-	0.8	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	750	853	16	16	78
Future Volume (vph)	50	750	853	16	16	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3421	3410		1769	1561
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3421	3410		1769	1561
Peak-hour factor, PHF	0.76	0.76	0.69	0.69	0.81	0.81
Adj. Flow (vph)	66	987	1236	23	20	96
RTOR Reduction (vph)	0	0	1	0	0	84
Lane Group Flow (vph)	66	987	1258	0	20	12
Confl. Peds. (#/hr)				8	1	4
Confl. Bikes (#/hr)				3		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	4.0	39.0	30.4		6.5	6.5
Effective Green, g (s)	4.0	39.0	30.4		6.5	6.5
Actuated g/C Ratio	0.07	0.72	0.56		0.12	0.12
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	126	2461	1912		212	187
v/s Ratio Prot	0.04	c0.29	c0.37			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.52	0.40	0.66		0.09	0.06
Uniform Delay, d1	24.2	3.0	8.3		21.2	21.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.8	0.1	0.8		0.1	0.1
Delay (s)	26.0	3.1	9.1		21.3	21.2
Level of Service	C	A	A		C	C
Approach Delay (s)		4.5	9.1		21.2	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	13.3
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	704	30	62	821	39	69
Future Vol, veh/h	704	30	62	821	39	69
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	765	33	67	892	42	75

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	798	0	1362	399
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	580	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	820	-	139	601
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	523	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	820	-	128	601
Mov Cap-2 Maneuver	-	-	-	-	260	-
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	480	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	17.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	408	-	-	820	-
HCM Lane V/C Ratio	0.288	-	-	0.082	-
HCM Control Delay (s)	17.3	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.2	-	-	0.3	-

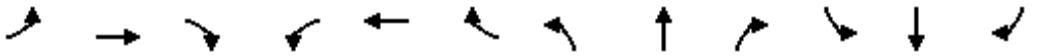
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	754	21	41	883	0	2
Future Vol, veh/h	754	21	41	883	0	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	-	-	25	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	820	23	45	960	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	843	0	1402	422
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	570	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	789	-	131	580
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	789	-	124	580
Mov Cap-2 Maneuver	-	-	-	-	255	-
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	499	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	580	-	-	789	-
HCM Lane V/C Ratio	0.004	-	-	0.056	-
HCM Control Delay (s)	11.2	-	-	9.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Future Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3298					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3298					3433		1583
Peak-hour factor, PHF	0.74	0.74	0.74	0.75	0.75	0.75	0.92	0.92	0.92	0.80	0.80	0.80
Adj. Flow (vph)	239	789	0	0	824	215	0	0	0	129	0	382
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	0	0	0	321
Lane Group Flow (vph)	239	789	0	0	1019	0	0	0	0	129	0	62
Confl. Peds. (#/hr)						18						1
Confl. Bikes (#/hr)			26			2						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	15.0	44.7			25.7					10.5		10.5
Effective Green, g (s)	15.0	44.7			25.7					10.5		10.5
Actuated g/C Ratio	0.23	0.69			0.40					0.16		0.16
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	397	2285			1312					557		257
v/s Ratio Prot	c0.14	0.24			c0.31					0.04		c0.04
v/s Ratio Perm												
v/c Ratio	0.60	0.35			0.78					0.23		0.24
Uniform Delay, d1	22.1	4.0			16.9					23.5		23.6
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	1.8	0.0			2.7					0.2		0.5
Delay (s)	23.9	4.1			19.6					23.8		24.1
Level of Service	C	A			B					C		C
Approach Delay (s)		8.7			19.6			0.0			24.0	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	64.6	Sum of lost time (s)	17.4
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

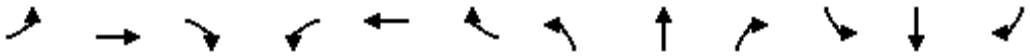
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	659	717	2	7	62
Future Vol, veh/h	28	659	717	2	7	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	716	779	2	8	67

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	781	0	-	0	1198	391
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	418	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	832	-	-	-	178	608
Stage 1	-	-	-	-	412	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	832	-	-	-	172	608
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	632	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	832	-	-	-	484
HCM Lane V/C Ratio	0.037	-	-	-	0.155
HCM Control Delay (s)	9.5	-	-	-	13.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Future Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	658	85	16	396	30	314	52	44	59	34	188
Peak Hour Factor	0.78	0.78	0.78	0.83	0.83	0.83	0.66	0.66	0.66	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	1029	441	21	855	372	502	373	316	623	98	544
Arrive On Green	0.06	0.29	0.29	0.01	0.24	0.24	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1781	3554	1521	1781	3554	1544	1154	927	784	1293	245	1352
Grp Volume(v), veh/h	85	658	85	16	396	30	314	0	96	59	0	222
Grp Sat Flow(s),veh/h/ln	1781	1777	1521	1781	1777	1544	1154	0	1711	1293	0	1597
Q Serve(g_s), s	2.3	7.8	2.0	0.4	4.6	0.7	12.5	0.0	1.7	1.5	0.0	4.7
Cycle Q Clear(g_c), s	2.3	7.8	2.0	0.4	4.6	0.7	17.2	0.0	1.7	3.2	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.85
Lane Grp Cap(c), veh/h	109	1029	441	21	855	372	502	0	688	623	0	642
V/C Ratio(X)	0.78	0.64	0.19	0.75	0.46	0.08	0.63	0.00	0.14	0.09	0.00	0.35
Avail Cap(c_a), veh/h	553	2944	1260	553	2944	1279	516	0	709	639	0	661
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	22.4	15.0	12.9	23.8	15.7	14.2	16.0	0.0	9.1	10.1	0.0	10.0
Incr Delay (d2), s/veh	4.6	0.5	0.2	17.4	0.3	0.1	2.3	0.0	0.1	0.1	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	1.0	2.6	0.6	0.3	1.6	0.2	3.2	0.0	0.6	0.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	15.4	13.1	41.2	16.0	14.3	18.3	0.0	9.2	10.2	0.0	10.3
LnGrp LOS	C	B	B	D	B	B	B	A	A	B	A	B
Approach Vol, veh/h		828			442			410			281	
Approach Delay, s/veh		16.4			16.8			16.2			10.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	17.0		24.3	4.6	19.4		24.3				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	4.3	6.6		6.7	2.4	9.8		19.2				
Green Ext Time (p_c), s	0.1	2.1		1.3	0.0	3.9		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		15.5	
HCM 6th LOS		B	

Notes

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

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	545	48	76	294	5	48	0	16	7	0	14
Future Vol, veh/h	7	545	48	76	294	5	48	0	16	7	0	14
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	100	-	-	25	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	592	52	83	320	5	52	0	17	8	0	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	325	0	0	644	0	0	960	1125	322	801	1149	163
Stage 1	-	-	-	-	-	-	634	634	-	489	489	-
Stage 2	-	-	-	-	-	-	326	491	-	312	660	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1231	-	-	937	-	-	211	204	674	276	197	853
Stage 1	-	-	-	-	-	-	434	471	-	529	548	-
Stage 2	-	-	-	-	-	-	661	546	-	673	458	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1231	-	-	937	-	-	192	185	674	250	178	853
Mov Cap-2 Maneuver	-	-	-	-	-	-	192	185	-	250	178	-
Stage 1	-	-	-	-	-	-	431	468	-	526	499	-
Stage 2	-	-	-	-	-	-	592	497	-	651	455	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.9	26.8	13
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	234	1231	-	-	937	-	-	473
HCM Lane V/C Ratio	0.297	0.006	-	-	0.088	-	-	0.048
HCM Control Delay (s)	26.8	7.9	-	-	9.2	-	-	13
HCM Lane LOS	D	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.2	0	-	-	0.3	-	-	0.2

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	566	350	9	12	25
Future Vol, veh/h	9	566	350	9	12	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	699	455	12	16	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	467	0	-	0	833	234
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	372	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1091	-	-	-	307	768
Stage 1	-	-	-	-	601	-
Stage 2	-	-	-	-	667	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1091	-	-	-	304	768
Mov Cap-2 Maneuver	-	-	-	-	304	-
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	667	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1091	-	-	-	514
HCM Lane V/C Ratio	0.01	-	-	-	0.093
HCM Control Delay (s)	8.3	-	-	-	12.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

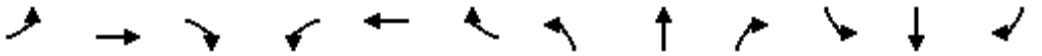
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	573	2	0	358	0	5
Future Vol, veh/h	573	2	0	358	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, %	2	2	2	2	2	2
Mvmt Flow	623	2	0	389	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	313
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	683
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	683
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	683	-	-	-
HCM Lane V/C Ratio	0.008	-	-	-
HCM Control Delay (s)	10.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Future Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	224	404	29	10	23	43	94	240	241	314	290	330
Peak Hour Factor	0.82	0.82	0.82	0.61	0.61	0.61	0.88	0.88	0.88	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	529	470	34	27	242	216	226	508	453	433	532	444
Arrive On Green	0.15	0.27	0.27	0.02	0.14	0.14	0.13	0.29	0.29	0.13	0.28	0.28
Sat Flow, veh/h	3456	1716	123	1781	1777	1585	1781	1777	1585	3456	1870	1560
Grp Volume(v), veh/h	224	0	433	10	23	43	94	240	241	314	290	330
Grp Sat Flow(s),veh/h/ln	1728	0	1839	1781	1777	1585	1781	1777	1585	1728	1870	1560
Q Serve(g_s), s	3.8	0.0	14.3	0.4	0.7	1.5	3.1	7.1	8.2	5.6	8.4	12.3
Cycle Q Clear(g_c), s	3.8	0.0	14.3	0.4	0.7	1.5	3.1	7.1	8.2	5.6	8.4	12.3
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	529	0	504	27	242	216	226	508	453	433	532	444
V/C Ratio(X)	0.42	0.00	0.86	0.37	0.10	0.20	0.42	0.47	0.53	0.73	0.54	0.74
Avail Cap(c_a), veh/h	1887	0	717	834	693	618	695	815	727	1078	876	730
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	24.6	0.0	22.1	31.2	24.2	24.6	25.8	18.9	19.3	27.0	19.4	20.8
Incr Delay (d2), s/veh	0.5	0.0	5.5	3.1	0.1	0.2	0.9	0.3	0.4	0.9	1.2	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	1.4	0.0	6.2	0.2	0.3	0.5	1.3	2.6	2.7	2.1	3.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	27.6	34.3	24.3	24.8	26.7	19.1	19.6	27.8	20.7	24.3
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		657			76			575			934	
Approach Delay, s/veh		26.7			25.9			20.6			24.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	22.9	12.2	23.9	13.9	14.0	12.1	24.0
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	30.0	25.0	25.0	30.0	35.0	25.0	20.0	29.4
Max Q Clear Time (g_c+I1), s	2.4	16.3	5.1	14.3	5.8	3.5	7.6	10.2
Green Ext Time (p_c), s	0.0	1.1	0.1	3.6	0.7	0.2	0.5	1.7

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	541	277	2	699	294
Future Volume (vph)	0	541	277	2	699	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.97
Satd. Flow (prot)		2787	3535			3419
Flt Permitted		1.00	1.00			0.97
Satd. Flow (perm)		2787	3535			3419
Peak-hour factor, PHF	0.82	0.82	0.90	0.90	0.95	0.95
Adj. Flow (vph)	0	660	308	2	736	309
RTOR Reduction (vph)	0	489	0	0	0	0
Lane Group Flow (vph)	0	171	310	0	0	1045
Confl. Peds. (#/hr)		4		9		
Confl. Bikes (#/hr)				1		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		35.1	24.5			102.5
Effective Green, g (s)		35.1	24.5			98.0
Actuated g/C Ratio		0.26	0.18			0.72
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		723	640			2478
v/s Ratio Prot		0.06	c0.09			c0.31
v/s Ratio Perm						
v/c Ratio		0.24	0.48			0.42
Uniform Delay, d1		39.5	49.7			7.4
Progression Factor		1.00	1.00			0.46
Incremental Delay, d2		0.2	0.6			0.1
Delay (s)		39.7	50.3			3.5
Level of Service		D	D			A
Approach Delay (s)	39.7		50.3			3.5
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	135.2	Sum of lost time (s)	16.8
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	698	3	16	540	1	28
Future Vol, veh/h	698	3	16	540	1	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	759	3	17	587	1	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	762	0	1382	761
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	621	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	850	-	159	405
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	536	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	850	-	154	405
Mov Cap-2 Maneuver	-	-	-	-	154	-
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	520	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.3	15.2
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	383	-	-	850	-
HCM Lane V/C Ratio	0.082	-	-	0.02	-
HCM Control Delay (s)	15.2	-	-	9.3	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

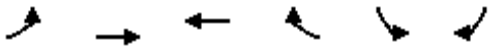
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	700	562	6	0	9
Future Vol, veh/h	14	700	562	6	0	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	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	761	611	7	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	618	0	-	0	1406	615
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	791	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	962	-	-	-	153	491
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	447	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	962	-	-	-	151	491
Mov Cap-2 Maneuver	-	-	-	-	151	-
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	447	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	962	-	-	-	491
HCM Lane V/C Ratio	0.016	-	-	-	0.02
HCM Control Delay (s)	8.8	-	-	-	12.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	688	562	198	206	4
Future Volume (vph)	0	688	562	198	206	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.4	4.4	4.4	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00	1.00	0.98	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	
Frt		1.00	1.00	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		1863	1863	1544	1771	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		1863	1863	1544	1771	
Peak-hour factor, PHF	0.92	0.92	0.94	0.94	0.80	0.80
Adj. Flow (vph)	0	748	598	211	258	5
RTOR Reduction (vph)	0	0	0	94	1	0
Lane Group Flow (vph)	0	748	598	117	262	0
Confl. Peds. (#/hr)				3	16	
Confl. Bikes (#/hr)				3		
Turn Type		NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases				6		
Actuated Green, G (s)		38.5	38.5	38.5	14.6	
Effective Green, g (s)		38.5	38.5	38.5	14.6	
Actuated g/C Ratio		0.56	0.56	0.56	0.21	
Clearance Time (s)		4.4	4.4	4.4	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1035	1035	857	373	
v/s Ratio Prot		c0.40	0.32		c0.15	
v/s Ratio Perm				0.08		
v/c Ratio		0.72	0.58	0.14	0.70	
Uniform Delay, d1		11.4	10.1	7.4	25.3	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.5	0.8	0.1	5.9	
Delay (s)		14.0	10.9	7.5	31.2	
Level of Service		B	B	A	C	
Approach Delay (s)		14.0	10.0		31.2	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	12.4
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

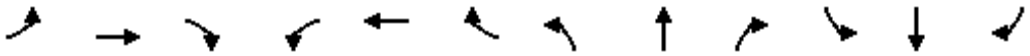
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	866	28	55	770	0	51
Future Vol, veh/h	866	28	55	770	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	70	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	941	30	60	837	0	55

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	971	0	-	956
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.13	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.219	-	-	3.319
Pot Cap-1 Maneuver	-	-	708	-	0	312
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	708	-	-	312
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	19
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	312	-	-	708	-
HCM Lane V/C Ratio	0.178	-	-	0.084	-
HCM Control Delay (s)	19	-	-	10.6	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.6	-	-	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Future Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	954	76	128	802	1	56	0	258	0	0	0
Peak Hour Factor	0.91	0.91	0.91	0.96	0.96	0.96	0.78	0.78	0.78	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1025	82	155	2638	3	346	0	302	0	2	0
Arrive On Green	0.00	0.60	0.60	0.09	0.72	0.72	0.19	0.00	0.19	0.00	0.00	0.00
Sat Flow, veh/h	1781	1706	136	1781	3642	5	1781	0	1552	0	1870	0
Grp Volume(v), veh/h	0	0	1030	128	391	412	56	0	258	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1842	1781	1777	1869	1781	0	1552	0	1870	0
Q Serve(g_s), s	0.0	0.0	56.8	7.9	8.7	8.7	2.9	0.0	18.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	56.8	7.9	8.7	8.7	2.9	0.0	18.0	0.0	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	2	0	1107	155	1287	1354	346	0	302	0	2	0
V/C Ratio(X)	0.00	0.00	0.93	0.83	0.30	0.30	0.16	0.00	0.85	0.00	0.00	0.00
Avail Cap(c_a), veh/h	48	0	1183	168	1287	1354	415	0	361	0	67	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)	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	20.3	50.4	5.5	5.5	37.6	0.0	43.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	12.7	23.7	0.2	0.2	0.3	0.0	16.8	0.0	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	0.0	0.0	26.2	4.5	2.9	3.1	1.3	0.0	8.4	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	33.0	74.0	5.6	5.6	37.9	0.0	60.5	0.0	0.0	0.0
LnGrp LOS	A	A	C	E	A	A	D	A	E	A	A	A
Approach Vol, veh/h		1030			931			314			0	
Approach Delay, s/veh		33.0			15.0			56.4			0.0	
Approach LOS		C			B			E				

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	86.2		25.9	13.9	72.4		0.0				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	3.0	79.6		26.1	10.6	72.0		4.0				
Max Q Clear Time (g_c+I1), s	0.0	10.7		20.0	9.9	58.8		0.0				
Green Ext Time (p_c), s	0.0	9.4		1.2	0.0	8.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		28.9	
HCM 6th LOS		C	

Notes

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

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	980	848	16	7	47
Future Vol, veh/h	82	980	848	16	7	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	1065	922	17	8	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	939	0	-	0	2174	470
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	1243	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	728	-	-	-	45	541
Stage 1	-	-	-	-	345	-
Stage 2	-	-	-	-	271	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	728	-	-	-	40	541
Mov Cap-2 Maneuver	-	-	-	-	149	-
Stage 1	-	-	-	-	303	-
Stage 2	-	-	-	-	271	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	728	-	-	-	403
HCM Lane V/C Ratio	0.122	-	-	-	0.146
HCM Control Delay (s)	10.6	-	-	-	15.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	0.5

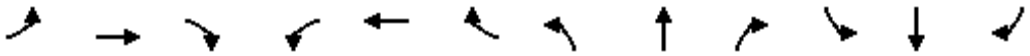
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	920	872	17	6	26
Future Vol, veh/h	37	920	872	17	6	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	1000	948	18	7	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	966	0	-	0	2037	483
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	1080	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	711	-	-	-	55	530
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	325	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	711	-	-	-	52	530
Mov Cap-2 Maneuver	-	-	-	-	52	-
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	325	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	27.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	711	-	-	-	195
HCM Lane V/C Ratio	0.057	-	-	-	0.178
HCM Control Delay (s)	10.4	-	-	-	27.4
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Future Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3496		1770	3487		1770	1733		1770	1595	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3496		1770	3487		1770	1733		1770	1595	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.75	0.75	0.75	0.84	0.84	0.84
Adj. Flow (vph)	106	884	65	13	901	74	57	11	8	90	12	81
RTOR Reduction (vph)	0	3	0	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	106	946	0	13	971	0	57	19	0	90	93	0
Confl. Peds. (#/hr)			5			11			2			6
Confl. Bikes (#/hr)			1			8			1			
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	8.2	44.4		0.4	36.6		8.4	8.4		13.0	13.0	
Effective Green, g (s)	8.2	44.4		0.4	36.6		8.4	8.4		13.0	13.0	
Actuated g/C Ratio	0.10	0.53		0.00	0.44		0.10	0.10		0.16	0.16	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	174	1865		8	1533		178	174		276	249	
v/s Ratio Prot	c0.06	0.27		0.01	c0.28		c0.03	0.01		0.05	c0.06	
v/s Ratio Perm												
v/c Ratio	0.61	0.51		1.62	0.63		0.32	0.11		0.33	0.37	
Uniform Delay, d1	36.0	12.4		41.4	18.1		34.7	34.0		31.2	31.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.1	0.2		569.9	0.9		0.8	0.2		0.5	0.7	
Delay (s)	40.1	12.6		611.3	19.0		35.5	34.2		31.7	32.1	
Level of Service	D	B		F	B		D	C		C	C	
Approach Delay (s)		15.4			26.7			35.2			31.9	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	83.2	Sum of lost time (s)	17.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	843	7	27	853	11	4
Future Vol, veh/h	843	7	27	853	11	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	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	916	8	29	927	12	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	924	0	1442	462
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	522	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	735	-	123	547
Stage 1	-	-	-	-	349	-
Stage 2	-	-	-	-	560	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	735	-	118	547
Mov Cap-2 Maneuver	-	-	-	-	118	-
Stage 1	-	-	-	-	349	-
Stage 2	-	-	-	-	538	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	32.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	149	-	-	735	-
HCM Lane V/C Ratio	0.109	-	-	0.04	-
HCM Control Delay (s)	32.1	-	-	10.1	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	791	794	95	91	77
Future Vol, veh/h	78	791	794	95	91	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	40
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	860	863	103	99	84

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	966	0	-	0	1515	483
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	709	-	-	-	110	530
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	511	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	709	-	-	-	~ 97	530
Mov Cap-2 Maneuver	-	-	-	-	217	-
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	511	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	24.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	709	-	-	-	217	530
HCM Lane V/C Ratio	0.12	-	-	-	0.456	0.158
HCM Control Delay (s)	10.8	-	-	-	34.8	13.1
HCM Lane LOS	B	-	-	-	D	B
HCM 95th %tile Q(veh)	0.4	-	-	-	2.2	0.6

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

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	842	28	11	911	16	14
Future Vol, veh/h	842	28	11	911	16	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	915	30	12	990	17	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	945	0	1449	473
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	519	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	722	-	122	538
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	562	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	722	-	120	538
Mov Cap-2 Maneuver	-	-	-	-	244	-
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	552	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	17.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	328	-	-	722	-
HCM Lane V/C Ratio	0.099	-	-	0.017	-
HCM Control Delay (s)	17.2	-	-	10.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	829	875	18	14	47
Future Vol, veh/h	24	829	875	18	14	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	901	951	20	15	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	971	0	-	0	1464	486
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	503	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	706	-	-	-	119	527
Stage 1	-	-	-	-	332	-
Stage 2	-	-	-	-	573	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	706	-	-	-	115	527
Mov Cap-2 Maneuver	-	-	-	-	234	-
Stage 1	-	-	-	-	320	-
Stage 2	-	-	-	-	573	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	706	-	-	-	409
HCM Lane V/C Ratio	0.037	-	-	-	0.162
HCM Control Delay (s)	10.3	-	-	-	15.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	814	17	36	877	11	24
Future Volume (vph)	814	17	36	877	11	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3293		1711	3421	1664	
Flt Permitted	1.00		0.32	1.00	0.98	
Satd. Flow (perm)	3293		568	3421	1664	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	885	18	39	953	12	26
RTOR Reduction (vph)	2	0	0	0	25	0
Lane Group Flow (vph)	901	0	39	953	13	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	20.1		20.1	20.1	0.8	
Effective Green, g (s)	20.1		20.1	20.1	0.8	
Actuated g/C Ratio	0.68		0.68	0.68	0.03	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2236		385	2323	44	
v/s Ratio Prot	0.27			c0.28		
v/s Ratio Perm			0.07		c0.01	
v/c Ratio	0.40		0.10	0.41	0.29	
Uniform Delay, d1	2.1		1.6	2.1	14.1	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.2	0.2	3.6	
Delay (s)	2.3		1.8	2.3	17.7	
Level of Service	A		A	A	B	
Approach Delay (s)	2.3			2.3	17.7	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	2.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	29.6	Sum of lost time (s)	8.7
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	798	10	4	911	0	4	0	4	3	0	3
Future Vol, veh/h	0	798	10	4	911	0	4	0	4	3	0	3
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	-	-	-	60	-	-	-	-	-	-	-	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	867	11	4	990	0	4	0	4	3	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	878	0	0	1376	1871	439	1432	-	495
Stage 1	-	-	-	-	-	-	873	873	-	998	-	-
Stage 2	-	-	-	-	-	-	503	998	-	434	-	-
Critical Hdwy	-	-	-	4.14	-	-	7.54	6.54	6.94	7.54	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	3.52	4.02	3.32	3.52	-	3.32
Pot Cap-1 Maneuver	0	-	-	765	-	-	104	71	566	95	0	520
Stage 1	0	-	-	-	-	-	311	366	-	261	0	-
Stage 2	0	-	-	-	-	-	519	320	-	570	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	765	-	-	103	71	566	94	-	520
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	188	-	198	-	-
Stage 1	-	-	-	-	-	-	311	366	-	261	-	-
Stage 2	-	-	-	-	-	-	513	318	-	566	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	16.7	12
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	317	-	-	765	-	-	520
HCM Lane V/C Ratio	0.027	-	-	0.006	-	-	0.006
HCM Control Delay (s)	16.7	-	-	9.7	-	-	12
HCM Lane LOS	C	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0

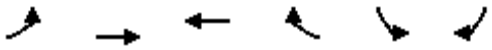
Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	737	33	47	900	64	81
Future Vol, veh/h	737	33	47	900	64	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	801	36	51	978	70	88

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	837	0	1410	419
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	591	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	793	-	129	583
Stage 1	-	-	-	-	394	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	793	-	121	583
Mov Cap-2 Maneuver	-	-	-	-	253	-
Stage 1	-	-	-	-	394	-
Stage 2	-	-	-	-	483	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	21.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	370	-	-	793	-
HCM Lane V/C Ratio	0.426	-	-	0.064	-
HCM Control Delay (s)	21.8	-	-	9.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.1	-	-	0.2	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	682	898	35	19	82
Future Volume (vph)	92	682	898	35	19	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3421	3397		1764	1552
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3421	3397		1764	1552
Peak-hour factor, PHF	0.87	0.87	0.83	0.83	0.56	0.56
Adj. Flow (vph)	106	784	1082	42	34	146
RTOR Reduction (vph)	0	0	3	0	0	122
Lane Group Flow (vph)	106	784	1121	0	34	24
Confl. Peds. (#/hr)					5	12
Confl. Bikes (#/hr)				24		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	7.2	42.1	30.3		9.9	9.9
Effective Green, g (s)	7.2	42.1	30.3		9.9	9.9
Actuated g/C Ratio	0.12	0.69	0.50		0.16	0.16
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	202	2372	1695		287	253
v/s Ratio Prot	c0.06	0.23	c0.33			
v/s Ratio Perm					c0.02	0.02
v/c Ratio	0.52	0.33	0.66		0.12	0.09
Uniform Delay, d1	25.1	3.7	11.4		21.7	21.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	0.1	1.0		0.1	0.1
Delay (s)	26.3	3.8	12.3		21.7	21.6
Level of Service	C	A	B		C	C
Approach Delay (s)		6.5	12.3		21.7	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	13.3
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	743	0	89	930	20	71
Future Vol, veh/h	743	0	89	930	20	71
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	808	0	97	1011	22	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	808	0	1508	404
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	700	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	813	-	111	596
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	454	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	813	-	98	596
Mov Cap-2 Maneuver	-	-	-	-	227	-
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	400	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	15.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	439	-	-	813	-
HCM Lane V/C Ratio	0.225	-	-	0.119	-
HCM Control Delay (s)	15.6	-	-	10	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.9	-	-	0.4	-

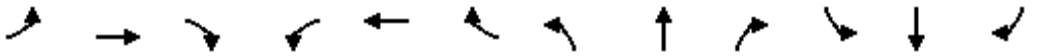
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	811	3	9	1018	9	1
Future Vol, veh/h	811	3	9	1018	9	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	-	-	25	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	882	3	10	1107	10	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	885	0	1458	443
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	574	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	760	-	120	562
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	760	-	118	562
Mov Cap-2 Maneuver	-	-	-	-	247	-
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	520	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	19.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	262	-	-	760	-
HCM Lane V/C Ratio	0.041	-	-	0.013	-
HCM Control Delay (s)	19.3	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Future Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3300					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3300					3433		1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.82	0.82	0.82	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	299	611	0	0	880	222	0	0	0	167	0	331
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	0	0	0	279
Lane Group Flow (vph)	299	611	0	0	1082	0	0	0	0	167	0	52
Confl. Peds. (#/hr)			3			3						1
Confl. Bikes (#/hr)			1			24						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	18.5	51.9			29.4					11.4		11.4
Effective Green, g (s)	18.5	51.9			29.4					11.4		11.4
Actuated g/C Ratio	0.25	0.71			0.40					0.16		0.16
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	435	2357			1334					538		248
v/s Ratio Prot	c0.17	0.18			c0.33					c0.05		0.03
v/s Ratio Perm												
v/c Ratio	0.69	0.26			0.81					0.31		0.21
Uniform Delay, d1	24.5	3.7			19.2					27.2		26.7
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	3.6	0.0			3.7					0.3		0.4
Delay (s)	28.1	3.7			22.9					27.5		27.1
Level of Service	C	A			C					C		C
Approach Delay (s)		11.7			22.9			0.0			27.3	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	17.4
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

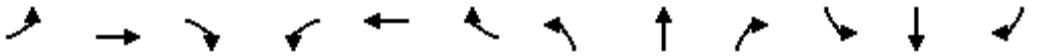
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	583	830	17	6	43
Future Vol, veh/h	82	583	830	17	6	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	634	902	18	7	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	920	0	-	0	1406	460
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	495	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	738	-	-	-	130	548
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	578	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	738	-	-	-	114	548
Mov Cap-2 Maneuver	-	-	-	-	114	-
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	578	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	16.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	738	-	-	-	374
HCM Lane V/C Ratio	0.121	-	-	-	0.142
HCM Control Delay (s)	10.5	-	-	-	16.2
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Future Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	0.99		0.98	0.99		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	392	165	32	764	67	149	14	25	27	18	91
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.72	0.72	0.72	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	1437	625	40	1214	516	400	140	250	465	62	314
Arrive On Green	0.08	0.40	0.40	0.02	0.34	0.34	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3554	1546	1781	3554	1510	1277	594	1060	1359	264	1334
Grp Volume(v), veh/h	117	392	165	32	764	67	149	0	39	27	0	109
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1510	1277	0	1654	1359	0	1598
Q Serve(g_s), s	2.7	3.1	3.0	0.8	7.6	1.3	4.6	0.0	0.8	0.7	0.0	2.4
Cycle Q Clear(g_c), s	2.7	3.1	3.0	0.8	7.6	1.3	7.0	0.0	0.8	1.5	0.0	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		0.83
Lane Grp Cap(c), veh/h	151	1437	625	40	1214	516	400	0	390	465	0	377
V/C Ratio(X)	0.77	0.27	0.26	0.81	0.63	0.13	0.37	0.00	0.10	0.06	0.00	0.29
Avail Cap(c_a), veh/h	631	3355	1460	631	3355	1426	701	0	781	786	0	754
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	19.0	8.4	8.4	20.6	11.7	9.6	16.1	0.0	12.7	13.2	0.0	13.3
Incr Delay (d2), s/veh	3.2	0.1	0.2	13.3	0.4	0.1	0.6	0.0	0.1	0.1	0.0	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	1.1	0.8	0.7	0.4	2.2	0.3	1.2	0.0	0.3	0.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	8.5	8.6	34.0	12.1	9.7	16.7	0.0	12.8	13.3	0.0	13.7
LnGrp LOS	C	A	A	C	B	A	B	A	B	B	A	B
Approach Vol, veh/h		674			863			188			136	
Approach Delay, s/veh		10.9			12.7			15.9			13.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	19.9		14.9	4.9	22.5		14.9				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	4.7	9.6		4.4	2.8	5.1		9.0				
Green Ext Time (p_c), s	0.1	4.6		0.5	0.0	2.5		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		12.4	
HCM 6th LOS		B	

Notes

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

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	16	385	31	9	701	14	34	0	33	3	0	11
Future Vol, veh/h	16	385	31	9	701	14	34	0	33	3	0	11
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	100	-	-	25	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	418	34	10	762	15	37	0	36	3	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	777	0	0	452	0	0	870	1266	226	1033	1276	389
Stage 1	-	-	-	-	-	-	469	469	-	790	790	-
Stage 2	-	-	-	-	-	-	401	797	-	243	486	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	835	-	-	1105	-	-	246	168	777	187	165	610
Stage 1	-	-	-	-	-	-	544	559	-	350	400	-
Stage 2	-	-	-	-	-	-	597	397	-	739	549	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	835	-	-	1105	-	-	236	163	777	174	160	610
Mov Cap-2 Maneuver	-	-	-	-	-	-	236	163	-	174	160	-
Stage 1	-	-	-	-	-	-	533	548	-	343	396	-
Stage 2	-	-	-	-	-	-	580	393	-	691	538	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	17.6	14.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	359	835	-	-	1105	-	-	397
HCM Lane V/C Ratio	0.203	0.021	-	-	0.009	-	-	0.038
HCM Control Delay (s)	17.6	9.4	-	-	8.3	-	-	14.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	395	725	9	7	14
Future Vol, veh/h	16	395	725	9	7	14
Conflicting Peds, #/hr	0	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	90	90	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	425	806	10	9	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	818	0	-	0	1060	410
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	247	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	806	-	-	-	219	591
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	771	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	804	-	-	-	214	590
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	769	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	804	-	-	-	372
HCM Lane V/C Ratio	0.021	-	-	-	0.071
HCM Control Delay (s)	9.6	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

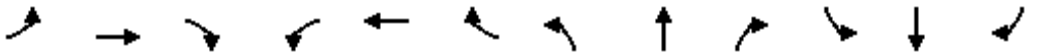
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	393	11	0	738	0	3
Future Vol, veh/h	393	11	0	738	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, %	2	2	2	2	2	2
Mvmt Flow	427	12	0	802	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	220
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	784
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	784
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	784	-	-	-
HCM Lane V/C Ratio	0.004	-	-	-
HCM Control Delay (s)	9.6	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Future Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	318	20	84	256	443	356	68	261	3	22	359	312
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.92	0.92	0.92	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	439	72	303	299	506	405	174	1177	14	100	483	403
Arrive On Green	0.13	0.23	0.23	0.17	0.28	0.28	0.10	0.33	0.33	0.03	0.26	0.26
Sat Flow, veh/h	3456	307	1291	1781	1836	1467	1781	3598	41	3456	1870	1562
Grp Volume(v), veh/h	318	0	104	256	429	370	68	129	135	22	359	312
Grp Sat Flow(s),veh/h/ln	1728	0	1598	1781	1777	1526	1781	1777	1863	1728	1870	1562
Q Serve(g_s), s	7.0	0.0	4.2	11.1	18.3	18.5	2.9	4.2	4.2	0.5	14.0	14.7
Cycle Q Clear(g_c), s	7.0	0.0	4.2	11.1	18.3	18.5	2.9	4.2	4.2	0.5	14.0	14.7
Prop In Lane	1.00		0.81	1.00		0.96	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	439	0	375	299	490	421	174	581	609	100	483	403
V/C Ratio(X)	0.72	0.00	0.28	0.86	0.87	0.88	0.39	0.22	0.22	0.22	0.74	0.77
Avail Cap(c_a), veh/h	1519	0	502	671	558	479	559	656	688	868	705	588
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	33.4	0.0	24.9	32.2	27.5	27.6	33.7	19.4	19.4	37.8	27.1	27.4
Incr Delay (d2), s/veh	2.3	0.0	0.1	2.7	12.1	14.4	1.1	0.1	0.1	0.4	3.4	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	2.9	0.0	1.5	4.7	8.8	7.9	1.2	1.6	1.7	0.2	6.1	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	0.0	25.1	34.9	39.6	42.0	34.8	19.5	19.5	38.2	30.4	32.4
LnGrp LOS	D	A	C	C	D	D	C	B	B	D	C	C
Approach Vol, veh/h		422			1055			332			693	
Approach Delay, s/veh		33.1			39.3			22.6			31.6	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	24.0	11.9	26.3	14.2	27.3	6.4	31.7
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	30.0	25.0	25.0	30.0	35.0	25.0	20.0	29.4
Max Q Clear Time (g_c+I1), s	13.1	6.2	4.9	16.7	9.0	20.5	2.5	6.2
Green Ext Time (p_c), s	0.3	0.3	0.1	3.7	1.1	1.5	0.0	0.8

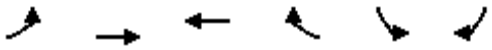
Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Notes

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

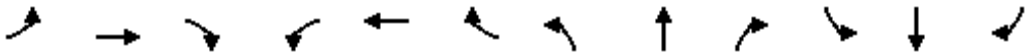
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	579	285	3	442	127
Future Volume (vph)	0	579	285	3	442	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.96
Satd. Flow (prot)		2601	3533			3407
Flt Permitted		1.00	1.00			0.96
Satd. Flow (perm)		2601	3533			3407
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	812	400	4	620	178
RTOR Reduction (vph)	0	658	1	0	0	0
Lane Group Flow (vph)	0	154	403	0	0	798
Confl. Peds. (#/hr)				5		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		20.8	26.5			74.7
Effective Green, g (s)		20.8	26.5			70.2
Actuated g/C Ratio		0.19	0.24			0.64
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		494	855			2186
v/s Ratio Prot		0.06	c0.11			c0.23
v/s Ratio Perm						
v/c Ratio		0.31	0.47			0.37
Uniform Delay, d1		38.1	35.5			9.2
Progression Factor		1.00	1.00			0.44
Incremental Delay, d2		0.5	0.4			0.1
Delay (s)		38.6	35.9			4.1
Level of Service		D	D			A
Approach Delay (s)	38.6		35.9			4.1
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	109.4	Sum of lost time (s)	16.8
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	406	581	355	118	14
Future Volume (vph)	0	406	581	355	118	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	10	10	12	12	12
Total Lost time (s)		4.4	4.4		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.94		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3303	3090		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3303	3090		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	569	815	498	165	20
RTOR Reduction (vph)	0	0	80	0	0	11
Lane Group Flow (vph)	0	569	1233	0	165	9
Confl. Peds. (#/hr)				1	137	
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		38.8	38.8		12.7	12.7
Effective Green, g (s)		38.8	38.8		12.7	12.7
Actuated g/C Ratio		0.50	0.50		0.16	0.16
Clearance Time (s)		4.4	4.4		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1660	1553		291	260
v/s Ratio Prot		0.17	c0.40		c0.09	
v/s Ratio Perm						0.01
v/c Ratio		0.34	0.79		0.57	0.04
Uniform Delay, d1		11.5	15.9		29.7	27.1
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1	2.9		2.5	0.1
Delay (s)		11.7	18.8		32.2	27.2
Level of Service		B	B		C	C
Approach Delay (s)		11.7	18.8		31.7	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	12.4
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Future Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	745	34	174	1326	24	63	0	199	0	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1309	60	220	1789	32	346	0	305	0	0	3
Arrive On Green	0.00	0.38	0.38	0.12	0.50	0.50	0.19	0.00	0.19	0.00	0.00	0.00
Sat Flow, veh/h	1781	3455	158	1781	3568	65	1781	0	1570	0	0	1585
Grp Volume(v), veh/h	1	383	396	174	660	690	63	0	199	0	0	2
Grp Sat Flow(s),veh/h/ln	1781	1777	1836	1781	1777	1856	1781	0	1570	0	0	1585
Q Serve(g_s), s	0.0	9.8	9.8	5.4	16.9	16.9	1.7	0.0	6.7	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	9.8	9.8	5.4	16.9	16.9	1.7	0.0	6.7	0.0	0.0	0.1
Prop In Lane	1.00		0.09	1.00		0.03	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	3	673	695	220	891	931	346	0	305	0	0	3
V/C Ratio(X)	0.32	0.57	0.57	0.79	0.74	0.74	0.18	0.00	0.65	0.00	0.00	0.58
Avail Cap(c_a), veh/h	338	962	994	406	1030	1076	806	0	711	0	0	221
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	28.7	14.1	14.1	24.4	11.4	11.4	19.3	0.0	21.3	0.0	0.0	28.6
Incr Delay (d2), s/veh	20.7	1.1	1.0	2.4	2.8	2.7	0.4	0.0	3.3	0.0	0.0	45.8
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	0.0	3.6	3.7	2.3	6.0	6.3	0.7	0.0	2.6	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	15.2	15.2	26.9	14.2	14.1	19.7	0.0	24.7	0.0	0.0	74.4
LnGrp LOS	D	B	B	C	B	B	B	A	C	A	A	E
Approach Vol, veh/h		780			1524			262			2	
Approach Delay, s/veh		15.2			15.6			23.5			74.4	
Approach LOS		B			B			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	33.8		15.3	11.2	26.8		4.2				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	10.9	33.3		26.0	13.1	31.1		8.0				
Max Q Clear Time (g_c+I1), s	2.0	18.9		8.7	7.4	11.8		2.1				
Green Ext Time (p_c), s	0.0	9.9		1.9	0.1	6.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		16.3	
HCM 6th LOS		B	

Notes

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	603	1033	21	9	67
Future Vol, veh/h	64	603	1033	21	9	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	846	1448	23	10	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1471	0	-	0	2023	736
Stage 1	-	-	-	-	1460	-
Stage 2	-	-	-	-	563	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	454	-	-	-	50	361
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	534	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	454	-	-	-	42	361
Mov Cap-2 Maneuver	-	-	-	-	120	-
Stage 1	-	-	-	-	152	-
Stage 2	-	-	-	-	534	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	22.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	454	-	-	-	292
HCM Lane V/C Ratio	0.153	-	-	-	0.283
HCM Control Delay (s)	14.4	-	-	-	22.1
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	1.1

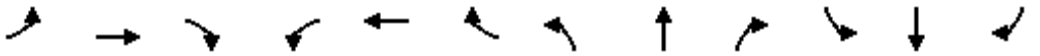
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	603	999	23	18	58
Future Vol, veh/h	14	603	999	23	18	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	846	1401	25	20	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1426	0	-	0	1867	713
Stage 1	-	-	-	-	1414	-
Stage 2	-	-	-	-	453	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	473	-	-	-	64	374
Stage 1	-	-	-	-	190	-
Stage 2	-	-	-	-	607	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	473	-	-	-	62	374
Mov Cap-2 Maneuver	-	-	-	-	148	-
Stage 1	-	-	-	-	184	-
Stage 2	-	-	-	-	607	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	23.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	473	-	-	-	275
HCM Lane V/C Ratio	0.032	-	-	-	0.3
HCM Control Delay (s)	12.9	-	-	-	23.6
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Future Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.96		1.00	0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.88		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	3272		1652	3289		1770	1575		1770	1553	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	3272		1652	3289		1770	1575		1770	1553	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%	100%	100%	129%	129%	100%	100%
Adj. Flow (vph)	39	841	31	42	1231	27	101	11	49	111	8	45
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	39	870	0	42	1257	0	101	60	0	111	53	0
Confl. Peds. (#/hr)			38			14			30			34
Confl. Bikes (#/hr)			9			8						2
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	4.4	47.9		4.5	48.0		18.6	18.6		18.3	18.3	
Effective Green, g (s)	4.4	47.9		4.5	48.0		18.6	18.6		18.3	18.3	
Actuated g/C Ratio	0.04	0.45		0.04	0.45		0.17	0.17		0.17	0.17	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	70	1474		69	1485		309	275		304	267	
v/s Ratio Prot	0.02	0.27		c0.03	c0.38		c0.06	0.04		c0.06	0.03	
v/s Ratio Perm												
v/c Ratio	0.56	0.59		0.61	0.85		0.33	0.22		0.37	0.20	
Uniform Delay, d1	50.0	21.9		50.0	25.9		38.4	37.6		38.9	37.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.4	0.6		10.0	4.7		0.5	0.3		0.5	0.3	
Delay (s)	55.3	22.5		60.0	30.5		38.8	37.9		39.4	38.0	
Level of Service	E	C		E	C		D	D		D	D	
Approach Delay (s)		23.9			31.5			38.5			38.9	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	106.3	Sum of lost time (s)	17.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	707	886	30	32	69
Future Vol, veh/h	35	707	886	30	32	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	991	1242	33	35	75

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1275	0	-	0	1831	638
Stage 1	-	-	-	-	1259	-
Stage 2	-	-	-	-	572	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	540	-	-	-	68	419
Stage 1	-	-	-	-	231	-
Stage 2	-	-	-	-	528	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	540	-	-	-	63	419
Mov Cap-2 Maneuver	-	-	-	-	162	-
Stage 1	-	-	-	-	215	-
Stage 2	-	-	-	-	528	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	26
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	540	-	-	-	279
HCM Lane V/C Ratio	0.07	-	-	-	0.393
HCM Control Delay (s)	12.2	-	-	-	26
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	1.8

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	665	849	28	32	64
Future Vol, veh/h	62	665	849	28	32	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	932	1190	30	35	70

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1220	0	-	0	1805	610
Stage 1	-	-	-	-	1205	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	567	-	-	-	71	437
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	511	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	567	-	-	-	63	437
Mov Cap-2 Maneuver	-	-	-	-	163	-
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	511	-

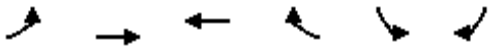
Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	25.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	567	-	-	-	280
HCM Lane V/C Ratio	0.119	-	-	-	0.373
HCM Control Delay (s)	12.2	-	-	-	25.3
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	683	16	28	840	32	74
Future Volume (vph)	683	16	28	840	32	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3295		1711	3421	1663	
Flt Permitted	1.00		0.28	1.00	0.99	
Satd. Flow (perm)	3295		509	3421	1663	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	100%	100%	129%	100%	100%
Adj. Flow (vph)	958	17	30	1178	35	80
RTOR Reduction (vph)	1	0	0	0	51	0
Lane Group Flow (vph)	974	0	30	1178	64	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	23.5		23.5	23.5	5.3	
Effective Green, g (s)	23.5		23.5	23.5	5.3	
Actuated g/C Ratio	0.63		0.63	0.63	0.14	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2064		318	2143	235	
v/s Ratio Prot	0.30			c0.34		
v/s Ratio Perm			0.06		c0.04	
v/c Ratio	0.47		0.09	0.55	0.27	
Uniform Delay, d1	3.7		2.8	4.0	14.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.2	0.4	0.6	
Delay (s)	3.9		3.0	4.4	15.0	
Level of Service	A		A	A	B	
Approach Delay (s)	3.9			4.3	15.0	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	37.5	Sum of lost time (s)	8.7
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	750	853	16	16	78
Future Volume (vph)	50	750	853	16	16	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3421	3413		1769	1561
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3421	3413		1769	1561
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	100%	100%
Adj. Flow (vph)	54	1052	1196	17	17	85
RTOR Reduction (vph)	0	0	1	0	0	76
Lane Group Flow (vph)	54	1052	1212	0	17	9
Confl. Peds. (#/hr)				8	1	4
Confl. Bikes (#/hr)				3		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	3.6	38.2	30.0		5.4	5.4
Effective Green, g (s)	3.6	38.2	30.0		5.4	5.4
Actuated g/C Ratio	0.07	0.73	0.57		0.10	0.10
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	117	2498	1957		182	161
v/s Ratio Prot	0.03	c0.31	c0.36			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.46	0.42	0.62		0.09	0.05
Uniform Delay, d1	23.4	2.7	7.4		21.2	21.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	0.1	0.6		0.1	0.1
Delay (s)	24.5	2.9	8.0		21.3	21.2
Level of Service	C	A	A		C	C
Approach Delay (s)		3.9	8.0		21.2	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	52.3	Sum of lost time (s)	13.3
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

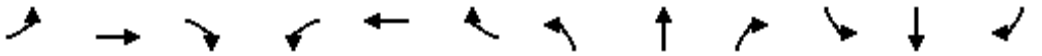
Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	704	30	62	821	39	69
Future Vol, veh/h	704	30	62	821	39	69
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	987	42	87	1151	55	97

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1029	0	1758	515
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	750	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	671	-	76	505
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	427	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	671	-	66	505
Mov Cap-2 Maneuver	-	-	-	-	185	-
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	371	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	27.1
HCM LOS			D

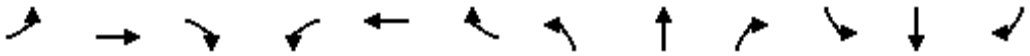
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	311	-	-	671	-
HCM Lane V/C Ratio	0.487	-	-	0.13	-
HCM Control Delay (s)	27.1	-	-	11.2	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	2.5	-	-	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Future Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3298					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3298					3433		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	100%	100%	129%	129%	100%	100%	100%	129%	100%	129%
Adj. Flow (vph)	248	819	0	0	867	226	0	0	0	144	0	429
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	0	0	0	361
Lane Group Flow (vph)	248	819	0	0	1073	0	0	0	0	144	0	68
Confl. Peds. (#/hr)						18						1
Confl. Bikes (#/hr)			26			2						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	15.2	47.0			27.8					10.6		10.6
Effective Green, g (s)	15.2	47.0			27.8					10.6		10.6
Actuated g/C Ratio	0.23	0.70			0.41					0.16		0.16
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	388	2317			1368					543		250
v/s Ratio Prot	c0.14	0.25			c0.33					0.04		c0.04
v/s Ratio Perm												
v/c Ratio	0.64	0.35			0.78					0.27		0.27
Uniform Delay, d1	23.4	4.0			17.0					24.8		24.8
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	2.5	0.0			2.8					0.3		0.6
Delay (s)	26.0	4.0			19.8					25.0		25.4
Level of Service	C	A			B					C		C
Approach Delay (s)		9.1			19.8			0.0			25.3	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	17.4
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



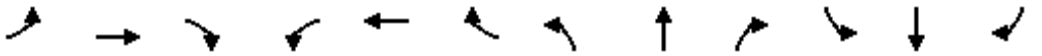
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Future Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	719	72	14	461	27	290	37	32	53	30	219
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1034	443	19	889	387	499	393	340	672	82	599
Arrive On Green	0.05	0.29	0.29	0.01	0.25	0.25	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1781	3554	1521	1781	3554	1545	1127	917	793	1325	191	1397
Grp Volume(v), veh/h	72	719	72	14	461	27	290	0	69	53	0	249
Grp Sat Flow(s),veh/h/ln	1781	1777	1521	1781	1777	1545	1127	0	1710	1325	0	1589
Q Serve(g_s), s	2.1	9.5	1.9	0.4	5.9	0.7	12.4	0.0	1.3	1.3	0.0	5.6
Cycle Q Clear(g_c), s	2.1	9.5	1.9	0.4	5.9	0.7	18.1	0.0	1.3	2.6	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.88
Lane Grp Cap(c), veh/h	91	1034	443	19	889	387	499	0	733	672	0	681
V/C Ratio(X)	0.79	0.70	0.16	0.75	0.52	0.07	0.58	0.00	0.09	0.08	0.00	0.37
Avail Cap(c_a), veh/h	370	1824	781	370	1824	793	718	0	1065	929	0	989
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	24.9	16.7	14.0	26.2	17.1	15.2	16.4	0.0	9.0	9.8	0.0	10.3
Incr Delay (d2), s/veh	5.6	0.6	0.1	19.3	0.3	0.1	1.1	0.0	0.1	0.0	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	0.9	3.3	0.5	0.3	2.1	0.2	3.0	0.0	0.4	0.3	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	17.3	14.1	45.4	17.5	15.2	17.4	0.0	9.1	9.8	0.0	10.6
LnGrp LOS	C	B	B	D	B	B	B	A	A	A	A	B
Approach Vol, veh/h		863			502			359			302	
Approach Delay, s/veh		18.2			18.1			15.8			10.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	18.7		27.6	4.6	20.8		27.6				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	11.0	27.2		33.0	11.0	27.2		33.0				
Max Q Clear Time (g_c+I1), s	4.1	7.9		7.6	2.4	11.5		20.1				
Green Ext Time (p_c), s	0.0	2.3		1.8	0.0	3.6		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		16.6	
HCM 6th LOS		B	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Future Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	258	464	34	7	15	28	116	229	230	270	249	366
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	533	39	19	334	298	218	558	498	362	554	462
Arrive On Green	0.13	0.31	0.31	0.01	0.19	0.19	0.12	0.31	0.31	0.10	0.30	0.30
Sat Flow, veh/h	3456	1713	126	1781	1777	1585	1781	1777	1585	3456	1870	1560
Grp Volume(v), veh/h	258	0	498	7	15	28	116	229	230	270	249	366
Grp Sat Flow(s),veh/h/ln	1728	0	1839	1781	1777	1585	1781	1777	1585	1728	1870	1560
Q Serve(g_s), s	5.2	0.0	19.0	0.3	0.5	1.1	4.5	7.5	8.6	5.6	8.0	16.0
Cycle Q Clear(g_c), s	5.2	0.0	19.0	0.3	0.5	1.1	4.5	7.5	8.6	5.6	8.0	16.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	0	573	19	334	298	218	558	498	362	554	462
V/C Ratio(X)	0.56	0.00	0.87	0.36	0.04	0.09	0.53	0.41	0.46	0.75	0.45	0.79
Avail Cap(c_a), veh/h	508	0	1079	262	1043	930	264	839	748	508	880	734
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	30.0	0.0	24.1	36.4	24.6	24.9	30.5	20.0	20.4	32.2	21.2	24.0
Incr Delay (d2), s/veh	1.1	0.0	1.6	4.2	0.0	0.1	1.5	0.2	0.2	2.0	0.8	4.4
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	2.1	0.0	7.7	0.1	0.2	0.4	1.9	2.9	2.9	2.3	3.3	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	25.7	40.6	24.7	24.9	32.0	20.2	20.6	34.2	22.0	28.3
LnGrp LOS	C	A	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		756			50			575			885	
Approach Delay, s/veh		27.6			27.0			22.8			28.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	28.4	13.2	27.7	14.1	19.2	11.9	29.0
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	10.9	43.5	11.0	34.9	10.9	43.5	10.9	35.0
Max Q Clear Time (g_c+I1), s	2.3	21.0	6.5	18.0	7.2	3.1	7.6	10.6
Green Ext Time (p_c), s	0.0	1.8	0.1	3.6	0.3	0.1	0.2	1.7

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

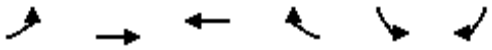
Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	541	277	2	699	294
Future Volume (vph)	0	541	277	2	699	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.97
Satd. Flow (prot)		2601	3536			3419
Flt Permitted		1.00	1.00			0.97
Satd. Flow (perm)		2601	3536			3419
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	129%	129%
Adj. Flow (vph)	0	759	388	2	980	412
RTOR Reduction (vph)	0	627	0	0	0	0
Lane Group Flow (vph)	0	132	390	0	0	1392
Confl. Peds. (#/hr)		4		9		
Confl. Bikes (#/hr)				1		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		19.5	26.0			77.8
Effective Green, g (s)		19.5	26.0			73.3
Actuated g/C Ratio		0.17	0.23			0.65
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		452	820			2237
v/s Ratio Prot		0.05	c0.11			c0.41
v/s Ratio Perm						
v/c Ratio		0.29	0.48			0.62
Uniform Delay, d1		40.2	37.1			11.3
Progression Factor		1.00	1.00			0.41
Incremental Delay, d2		0.5	0.4			0.3
Delay (s)		40.7	37.6			4.9
Level of Service		D	D			A
Approach Delay (s)	40.7		37.6			4.9
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	112.0	Sum of lost time (s)	16.8
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

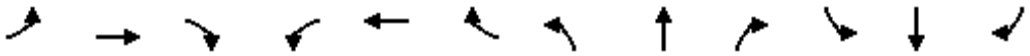
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	688	562	198	206	4
Future Volume (vph)	0	688	562	198	206	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	10	10	12	12	12
Total Lost time (s)		4.4	4.4		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3303	3154		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3303	3154		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	965	788	278	289	6
RTOR Reduction (vph)	0	0	33	0	0	1
Lane Group Flow (vph)	0	965	1033	0	289	5
Confl. Peds. (#/hr)				3	16	
Confl. Bikes (#/hr)				3		
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		27.0	27.0		16.5	16.5
Effective Green, g (s)		27.0	27.0		16.5	16.5
Actuated g/C Ratio		0.46	0.46		0.28	0.28
Clearance Time (s)		4.4	4.4		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1508	1440		494	441
v/s Ratio Prot		0.29	c0.33		c0.16	
v/s Ratio Perm						0.00
v/c Ratio		0.64	0.72		0.59	0.01
Uniform Delay, d1		12.3	13.0		18.4	15.4
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.9	1.7		1.8	0.0
Delay (s)		13.2	14.7		20.1	15.4
Level of Service		B	B		C	B
Approach Delay (s)		13.2	14.7		20.0	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	12.4
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Future Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1217	97	172	1080	1	62	0	282	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1591	127	210	2366	2	412	0	363	0	2	0
Arrive On Green	0.00	0.48	0.48	0.12	0.65	0.65	0.23	0.00	0.23	0.00	0.00	0.00
Sat Flow, veh/h	1781	3326	265	1781	3643	3	1781	0	1569	0	1870	0
Grp Volume(v), veh/h	0	649	665	172	527	554	62	0	282	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1814	1781	1777	1870	1781	0	1569	0	1870	0
Q Serve(g_s), s	0.0	23.0	23.1	7.2	11.3	11.3	2.1	0.0	12.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	23.0	23.1	7.2	11.3	11.3	2.1	0.0	12.9	0.0	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	2	850	868	210	1154	1214	412	0	363	0	2	0
V/C Ratio(X)	0.00	0.76	0.77	0.82	0.46	0.46	0.15	0.00	0.78	0.00	0.00	0.00
Avail Cap(c_a), veh/h	254	1005	1026	254	1154	1214	605	0	533	0	195	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)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	16.4	16.5	33.0	6.7	6.7	23.4	0.0	27.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.4	3.4	13.6	0.4	0.4	0.2	0.0	5.7	0.0	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	0.0	9.2	9.4	3.8	3.6	3.7	0.9	0.0	5.3	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.8	19.8	46.6	7.1	7.1	23.7	0.0	33.2	0.0	0.0	0.0
LnGrp LOS	A	B	B	D	A	A	C	A	C	A	A	A
Approach Vol, veh/h		1314			1253			344			0	
Approach Delay, s/veh		19.8			12.5			31.5			0.0	
Approach LOS		B			B			C				

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	54.7		21.8	13.1	41.6		0.0				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	10.9	43.3		26.0	10.9	43.3		8.0				
Max Q Clear Time (g_c+I1), s	0.0	13.3		14.9	9.2	25.1		0.0				
Green Ext Time (p_c), s	0.0	12.1		2.1	0.0	11.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		18.1	
HCM 6th LOS		B	

Notes

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	980	848	16	7	47
Future Vol, veh/h	82	980	848	16	7	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	1374	1189	17	8	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1206	0	-	0	2063	603
Stage 1	-	-	-	-	1198	-
Stage 2	-	-	-	-	865	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	574	-	-	-	47	442
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	373	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	574	-	-	-	40	442
Mov Cap-2 Maneuver	-	-	-	-	139	-
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	373	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	574	-	-	-	345
HCM Lane V/C Ratio	0.155	-	-	-	0.17
HCM Control Delay (s)	12.4	-	-	-	17.6
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	0.6

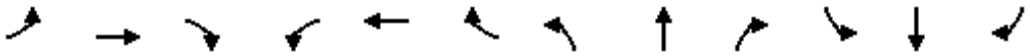
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	920	872	17	6	26
Future Vol, veh/h	37	920	872	17	6	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	1290	1223	18	7	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1241	0	-	0	1957	621
Stage 1	-	-	-	-	1232	-
Stage 2	-	-	-	-	725	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	557	-	-	-	56	430
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	440	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	557	-	-	-	52	430
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	221	-
Stage 2	-	-	-	-	440	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	17.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	557	-	-	-	323
HCM Lane V/C Ratio	0.072	-	-	-	0.108
HCM Control Delay (s)	12	-	-	-	17.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Future Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.93		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	3262		1652	3253		1770	1728		1770	1594	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	3262		1652	3253		1770	1728		1770	1594	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%	100%	100%	100%	129%	129%	129%
Adj. Flow (vph)	128	1066	79	15	1087	90	47	9	7	107	14	95
RTOR Reduction (vph)	0	3	0	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	128	1142	0	15	1173	0	47	16	0	107	109	0
Confl. Peds. (#/hr)			5			11			2			6
Confl. Bikes (#/hr)			1			8			1			
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	11.9	56.8		2.2	47.1		8.6	8.6		13.4	13.4	
Effective Green, g (s)	11.9	56.8		2.2	47.1		8.6	8.6		13.4	13.4	
Actuated g/C Ratio	0.12	0.58		0.02	0.48		0.09	0.09		0.14	0.14	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	207	1890		37	1563		155	151		242	217	
v/s Ratio Prot	c0.07	0.35		0.01	c0.36		c0.03	0.01		0.06	c0.07	
v/s Ratio Perm												
v/c Ratio	0.62	0.60		0.41	0.75		0.30	0.11		0.44	0.50	
Uniform Delay, d1	40.9	13.3		47.3	20.7		41.9	41.2		38.9	39.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.8	0.6		2.6	2.1		0.8	0.2		0.9	1.3	
Delay (s)	44.7	13.9		49.9	22.8		42.7	41.4		39.8	40.5	
Level of Service	D	B		D	C		D	D		D	D	
Approach Delay (s)		17.0			23.1			42.4			40.2	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	98.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	791	794	95	91	77
Future Vol, veh/h	78	791	794	95	91	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	1109	1113	103	99	84

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1216	0	-	0	1890	608
Stage 1	-	-	-	-	1165	-
Stage 2	-	-	-	-	725	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	569	-	-	-	~ 62	439
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	440	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	569	-	-	-	~ 53	439
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	440	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	70.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	569	-	-	-	220
HCM Lane V/C Ratio	0.149	-	-	-	0.83
HCM Control Delay (s)	12.4	-	-	-	70.2
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	6.3

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	829	875	18	14	47
Future Vol, veh/h	24	829	875	18	14	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	1162	1227	20	15	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1247	0	-	0	1870	624
Stage 1	-	-	-	-	1237	-
Stage 2	-	-	-	-	633	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	554	-	-	-	64	428
Stage 1	-	-	-	-	237	-
Stage 2	-	-	-	-	491	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	554	-	-	-	61	428
Mov Cap-2 Maneuver	-	-	-	-	165	-
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	491	-

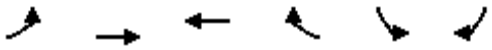
Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	554	-	-	-	313
HCM Lane V/C Ratio	0.047	-	-	-	0.212
HCM Control Delay (s)	11.8	-	-	-	19.6
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	814	17	36	877	11	24
Future Volume (vph)	814	17	36	877	11	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3296		1711	3421	1664	
Flt Permitted	1.00		0.24	1.00	0.98	
Satd. Flow (perm)	3296		435	3421	1664	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	100%	100%	129%	100%	100%
Adj. Flow (vph)	1141	18	39	1230	12	26
RTOR Reduction (vph)	1	0	0	0	25	0
Lane Group Flow (vph)	1158	0	39	1230	13	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	22.7		22.7	22.7	1.0	
Effective Green, g (s)	22.7		22.7	22.7	1.0	
Actuated g/C Ratio	0.70		0.70	0.70	0.03	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2309		304	2396	51	
v/s Ratio Prot	0.35			c0.36		
v/s Ratio Perm			0.09		c0.01	
v/c Ratio	0.50		0.13	0.51	0.25	
Uniform Delay, d1	2.2		1.6	2.3	15.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.3	0.2	2.6	
Delay (s)	2.5		1.9	2.5	17.9	
Level of Service	A		A	A	B	
Approach Delay (s)	2.5			2.5	17.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	2.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	32.4	Sum of lost time (s)	8.7
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	682	898	35	19	82
Future Volume (vph)	92	682	898	35	19	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3421	3403		1764	1552
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3421	3403		1764	1552
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	100%	100%	100%
Adj. Flow (vph)	129	956	1259	38	21	89
RTOR Reduction (vph)	0	0	2	0	0	74
Lane Group Flow (vph)	129	956	1295	0	21	15
Confl. Peds. (#/hr)					5	12
Confl. Bikes (#/hr)				24		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	6.7	44.6	33.3		10.5	10.5
Effective Green, g (s)	6.7	44.6	33.3		10.5	10.5
Actuated g/C Ratio	0.11	0.70	0.52		0.16	0.16
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	179	2391	1776		290	255
v/s Ratio Prot	c0.08	0.28	c0.38			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.72	0.40	0.73		0.07	0.06
Uniform Delay, d1	27.6	4.0	11.8		22.5	22.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	11.4	0.1	1.5		0.0	0.0
Delay (s)	39.1	4.1	13.3		22.6	22.5
Level of Service	D	A	B		C	C
Approach Delay (s)		8.3	13.3		22.5	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	63.8	Sum of lost time (s)	13.3
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

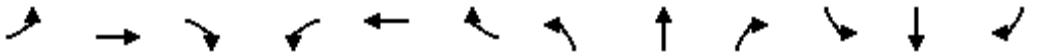
Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	743	0	89	930	20	71
Future Vol, veh/h	743	0	89	930	20	71
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1042	0	125	1304	22	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1042	0	1944	521
Stage 1	-	-	-	-	1042	-
Stage 2	-	-	-	-	902	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	663	-	57	500
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	356	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	663	-	46	500
Mov Cap-2 Maneuver	-	-	-	-	156	-
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	289	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	20.1
HCM LOS			C

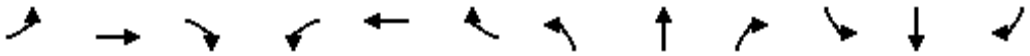
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	337	-	-	663	-
HCM Lane V/C Ratio	0.294	-	-	0.188	-
HCM Control Delay (s)	20.1	-	-	11.7	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	-	-	0.7	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Future Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3300					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3300					3433		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	100%	129%	129%	100%	100%	100%	129%	100%	129%
Adj. Flow (vph)	365	746	0	0	1012	255	0	0	0	195	0	386
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	0	335
Lane Group Flow (vph)	365	746	0	0	1252	0	0	0	0	195	0	51
Confl. Peds. (#/hr)			3			3						1
Confl. Bikes (#/hr)			1			24						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	27.9	75.9			44.0					12.9		12.9
Effective Green, g (s)	27.9	75.9			44.0					12.9		12.9
Actuated g/C Ratio	0.28	0.77			0.45					0.13		0.13
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	486	2552			1478					450		207
v/s Ratio Prot	c0.21	0.23			c0.38					c0.06		0.03
v/s Ratio Perm												
v/c Ratio	0.75	0.29			0.85					0.43		0.24
Uniform Delay, d1	32.0	3.3			24.1					39.3		38.3
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	5.7	0.0			4.5					0.7		0.6
Delay (s)	37.7	3.3			28.6					40.0		38.9
Level of Service	D	A			C					D		D
Approach Delay (s)		14.6			28.6			0.0			39.3	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	98.2	Sum of lost time (s)	17.4
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



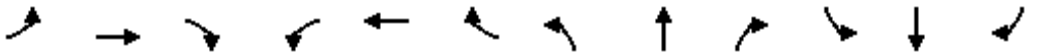
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Future Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	0.99		0.98	0.99		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	489	160	32	965	65	116	11	20	25	16	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	1576	686	39	1363	581	377	131	238	442	57	299
Arrive On Green	0.08	0.44	0.44	0.02	0.38	0.38	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3554	1547	1781	3554	1515	1287	586	1066	1368	255	1340
Grp Volume(v), veh/h	113	489	160	32	965	65	116	0	31	25	0	100
Grp Sat Flow(s),veh/h/ln	1781	1777	1547	1781	1777	1515	1287	0	1652	1368	0	1595
Q Serve(g_s), s	2.9	4.1	2.9	0.8	10.6	1.3	3.8	0.0	0.7	0.7	0.0	2.4
Cycle Q Clear(g_c), s	2.9	4.1	2.9	0.8	10.6	1.3	6.2	0.0	0.7	1.4	0.0	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		0.84
Lane Grp Cap(c), veh/h	146	1576	686	39	1363	581	377	0	369	442	0	356
V/C Ratio(X)	0.78	0.31	0.23	0.82	0.71	0.11	0.31	0.00	0.08	0.06	0.00	0.28
Avail Cap(c_a), veh/h	427	2105	916	427	2105	897	1015	0	1187	1120	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	8.2	7.9	22.4	12.0	9.1	17.3	0.0	14.1	14.7	0.0	14.8
Incr Delay (d2), s/veh	3.3	0.1	0.1	14.4	0.5	0.1	0.5	0.0	0.1	0.1	0.0	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	1.1	1.1	0.7	0.5	3.1	0.3	1.1	0.0	0.2	0.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	8.3	8.1	36.7	12.5	9.2	17.8	0.0	14.2	14.7	0.0	15.2
LnGrp LOS	C	A	A	D	B	A	B	A	B	B	A	B
Approach Vol, veh/h		762			1062			147			125	
Approach Delay, s/veh		10.6			13.0			17.0			15.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	23.0		15.1	5.0	25.8		15.1				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	11.0	27.2		33.0	11.0	27.2		33.0				
Max Q Clear Time (g_c+I1), s	4.9	12.6		4.4	2.8	6.1		8.2				
Green Ext Time (p_c), s	0.1	4.9		0.6	0.0	2.8		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		12.5	
HCM 6th LOS		B	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Future Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	393	25	104	245	547	340	88	261	3	22	351	394
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	453	86	356	275	619	385	159	1279	15	94	548	458
Arrive On Green	0.13	0.28	0.28	0.15	0.30	0.30	0.09	0.36	0.36	0.03	0.29	0.29
Sat Flow, veh/h	3456	310	1289	1781	2067	1283	1781	3598	41	3456	1870	1562
Grp Volume(v), veh/h	393	0	129	245	470	417	88	129	135	22	351	394
Grp Sat Flow(s),veh/h/ln	1728	0	1599	1781	1777	1574	1781	1777	1863	1728	1870	1562
Q Serve(g_s), s	11.5	0.0	6.5	13.9	25.9	26.0	4.9	5.2	5.2	0.6	16.8	24.5
Cycle Q Clear(g_c), s	11.5	0.0	6.5	13.9	25.9	26.0	4.9	5.2	5.2	0.6	16.8	24.5
Prop In Lane	1.00		0.81	1.00		0.82	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	453	0	442	275	533	472	159	631	662	94	548	458
V/C Ratio(X)	0.87	0.00	0.29	0.89	0.88	0.88	0.55	0.20	0.20	0.23	0.64	0.86
Avail Cap(c_a), veh/h	454	0	565	279	672	595	189	639	670	366	673	562
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	43.8	0.0	29.3	42.6	34.3	34.3	44.8	23.0	23.0	49.0	31.6	34.3
Incr Delay (d2), s/veh	16.2	0.0	0.1	26.9	9.6	10.8	2.2	0.1	0.1	0.5	1.9	11.9
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	5.8	0.0	2.4	8.0	12.1	10.9	2.2	2.1	2.2	0.3	7.5	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.0	0.0	29.4	69.6	43.9	45.1	47.1	23.1	23.1	49.4	33.6	46.3
LnGrp LOS	E	A	C	E	D	D	D	C	C	D	C	D
Approach Vol, veh/h		522			1132			352			767	
Approach Delay, s/veh		52.5			49.9			29.1			40.6	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	33.7	13.3	35.8	17.6	36.1	6.9	42.2
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	16.1	36.3	10.9	37.0	13.5	38.9	10.9	37.0
Max Q Clear Time (g_c+I1), s	15.9	8.5	6.9	26.5	13.5	28.0	2.6	7.2
Green Ext Time (p_c), s	0.0	0.4	0.0	3.6	0.0	2.9	0.0	0.9

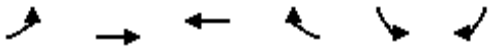
Intersection Summary	
HCM 6th Ctrl Delay	45.2
HCM 6th LOS	D

Notes

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

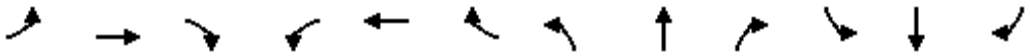
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	579	285	3	442	127
Future Volume (vph)	0	579	285	3	442	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.96
Satd. Flow (prot)		2601	3533			3407
Flt Permitted		1.00	1.00			0.96
Satd. Flow (perm)		2601	3533			3407
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	812	400	4	620	178
RTOR Reduction (vph)	0	658	1	0	0	0
Lane Group Flow (vph)	0	154	403	0	0	798
Confl. Peds. (#/hr)				5		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		20.8	26.5			74.7
Effective Green, g (s)		20.8	26.5			70.2
Actuated g/C Ratio		0.19	0.24			0.64
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		494	855			2186
v/s Ratio Prot		0.06	c0.11			c0.23
v/s Ratio Perm						
v/c Ratio		0.31	0.47			0.37
Uniform Delay, d1		38.1	35.5			9.2
Progression Factor		1.00	1.00			0.44
Incremental Delay, d2		0.5	0.4			0.1
Delay (s)		38.6	35.9			4.1
Level of Service		D	D			A
Approach Delay (s)	38.6		35.9			4.1
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	109.4	Sum of lost time (s)	16.8
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	406	581	355	118	14
Future Volume (vph)	0	406	581	355	118	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)		4.4	4.4	4.4	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1801	1801	1498	1770	1583
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1801	1801	1498	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	569	815	498	165	20
RTOR Reduction (vph)	0	0	0	86	0	9
Lane Group Flow (vph)	0	569	815	412	165	11
Confl. Peds. (#/hr)				1	137	
Turn Type		NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)		47.8	47.8	47.8	13.4	13.4
Effective Green, g (s)		47.8	47.8	47.8	13.4	13.4
Actuated g/C Ratio		0.55	0.55	0.55	0.15	0.15
Clearance Time (s)		4.4	4.4	4.4	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		989	989	823	272	243
v/s Ratio Prot		0.32	c0.45		c0.09	
v/s Ratio Perm				0.28		0.01
v/c Ratio		0.58	0.82	0.50	0.61	0.04
Uniform Delay, d1		12.9	16.1	12.2	34.3	31.3
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.8	5.7	0.5	3.8	0.1
Delay (s)		13.7	21.8	12.7	38.1	31.4
Level of Service		B	C	B	D	C
Approach Delay (s)		13.7	18.3		37.4	
Approach LOS		B	B		D	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	87.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Future Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	745	34	174	1326	24	63	0	199	0	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	1068	49	200	1306	24	269	0	234	0	0	3
Arrive On Green	0.00	0.60	0.60	0.11	0.71	0.71	0.15	0.00	0.15	0.00	0.00	0.00
Sat Flow, veh/h	1781	1772	81	1781	1830	33	1781	0	1554	0	0	1585
Grp Volume(v), veh/h	1	0	779	174	0	1350	63	0	199	0	0	2
Grp Sat Flow(s),veh/h/ln	1781	0	1853	1781	0	1863	1781	0	1554	0	0	1585
Q Serve(g_s), s	0.1	0.0	37.7	12.6	0.0	93.3	4.1	0.0	16.3	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.1	0.0	37.7	12.6	0.0	93.3	4.1	0.0	16.3	0.0	0.0	0.2
Prop In Lane	1.00		0.04	1.00		0.02	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	0	1117	200	0	1330	269	0	234	0	0	3
V/C Ratio(X)	0.69	0.00	0.70	0.87	0.00	1.01	0.23	0.00	0.85	0.00	0.00	0.59
Avail Cap(c_a), veh/h	149	0	1201	266	0	1330	354	0	309	0	0	97
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	65.3	0.0	17.8	57.1	0.0	18.7	48.9	0.0	54.0	0.0	0.0	65.2
Incr Delay (d2), s/veh	117.9	0.0	1.9	17.3	0.0	28.5	0.6	0.0	17.5	0.0	0.0	48.3
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	0.1	0.0	16.1	6.6	0.0	45.4	1.9	0.0	7.6	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	183.2	0.0	19.7	74.4	0.0	47.2	49.5	0.0	71.5	0.0	0.0	113.4
LnGrp LOS	F	A	B	E	A	F	D	A	E	A	A	F
Approach Vol, veh/h		780			1524			262			2	
Approach Delay, s/veh		19.9			50.3			66.2			113.4	
Approach LOS		B			D			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	98.3		23.8	18.7	83.8		4.4				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	10.9	93.3		26.0	19.5	84.7		8.0				
Max Q Clear Time (g_c+I1), s	2.1	95.3		18.3	14.6	39.7		2.2				
Green Ext Time (p_c), s	0.0	0.0		1.1	0.1	10.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		42.7	
HCM 6th LOS		D	

Notes

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

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	603	1033	21	9	67
Future Vol, veh/h	64	603	1033	21	9	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	846	1448	23	10	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1471	0	-	0	2446	1460
Stage 1	-	-	-	-	1460	-
Stage 2	-	-	-	-	986	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	458	-	-	-	34	158
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	361	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	458	-	-	-	29	158
Mov Cap-2 Maneuver	-	-	-	-	121	-
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	361	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	53.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	458	-	-	-	152
HCM Lane V/C Ratio	0.152	-	-	-	0.543
HCM Control Delay (s)	14.3	-	-	-	53.8
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	2.7

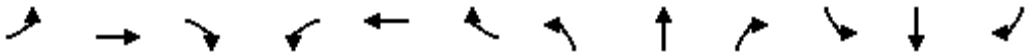
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	603	999	23	18	58
Future Vol, veh/h	14	603	999	23	18	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	846	1401	25	20	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1426	0	-	0	2290	1414
Stage 1	-	-	-	-	1414	-
Stage 2	-	-	-	-	876	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	477	-	-	-	43	169
Stage 1	-	-	-	-	225	-
Stage 2	-	-	-	-	407	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	477	-	-	-	42	169
Mov Cap-2 Maneuver	-	-	-	-	147	-
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	407	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	47.8
HCM LOS			E

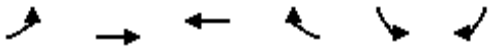
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	477	-	-	-	163
HCM Lane V/C Ratio	0.032	-	-	-	0.507
HCM Control Delay (s)	12.8	-	-	-	47.8
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.1	-	-	-	2.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Future Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.90		1.00	0.88	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.88		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1840		1711	1792		1770	1474		1770	1433	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	1840		1711	1792		1770	1474		1770	1433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%	100%	100%	129%	129%	100%	100%
Adj. Flow (vph)	39	841	31	42	1231	27	101	11	49	111	8	45
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	39	871	0	42	1258	0	101	60	0	111	53	0
Confl. Peds. (#/hr)			38			14			30			34
Confl. Bikes (#/hr)			9			8						2
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	6.9	91.4		7.2	91.7		17.1	17.1		17.3	17.3	
Effective Green, g (s)	6.9	91.4		7.2	91.7		17.1	17.1		17.3	17.3	
Actuated g/C Ratio	0.05	0.61		0.05	0.61		0.11	0.11		0.12	0.12	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	78	1121		82	1095		201	168		204	165	
v/s Ratio Prot	0.02	0.47		c0.02	c0.70		c0.06	0.04		c0.06	0.04	
v/s Ratio Perm												
v/c Ratio	0.50	0.78		0.51	1.15		0.50	0.36		0.54	0.32	
Uniform Delay, d1	69.9	21.7		69.7	29.1		62.5	61.4		62.6	61.0	
Progression Factor	1.00	1.00		0.99	0.91		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	5.3		1.4	74.0		1.4	0.9		2.3	0.8	
Delay (s)	71.7	27.1		70.7	100.5		63.9	62.3		65.0	61.8	
Level of Service	E	C		E	F		E	E		E	E	
Approach Delay (s)		29.0			99.6			63.3			63.9	
Approach LOS		C			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	69.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	35	707	886	30	32	69
Future Volume (vph)	35	707	886	30	32	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)	4.5	4.5	4.5		4.5	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1711	1801	1794		1665	
Flt Permitted	0.16	1.00	1.00		0.98	
Satd. Flow (perm)	281	1801	1794		1665	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	100%	100%
Adj. Flow (vph)	38	991	1242	33	35	75
RTOR Reduction (vph)	0	0	1	0	54	0
Lane Group Flow (vph)	38	991	1274	0	56	0
Turn Type	Perm	NA	NA		Perm	
Protected Phases		2	6			
Permitted Phases	2				4	
Actuated Green, G (s)	130.5	130.5	130.5		10.5	
Effective Green, g (s)	130.5	130.5	130.5		10.5	
Actuated g/C Ratio	0.87	0.87	0.87		0.07	
Clearance Time (s)	4.5	4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	244	1566	1560		116	
v/s Ratio Prot		0.55	c0.71			
v/s Ratio Perm	0.14				c0.03	
v/c Ratio	0.16	0.63	0.82		0.48	
Uniform Delay, d1	1.5	2.8	4.4		67.1	
Progression Factor	0.18	0.50	1.00		1.00	
Incremental Delay, d2	1.1	1.6	4.9		3.2	
Delay (s)	1.3	3.0	9.2		70.3	
Level of Service	A	A	A		E	
Approach Delay (s)		2.9	9.2		70.3	
Approach LOS		A	A		E	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	665	849	28	32	64
Future Vol, veh/h	62	665	849	28	32	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	932	1190	30	35	70

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1220	0	-	0	2271	610
Stage 1	-	-	-	-	1205	-
Stage 2	-	-	-	-	1066	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	569	-	-	-	39	438
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	330	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	569	-	-	-	~ 34	438
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	330	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	29.2
HCM LOS			D

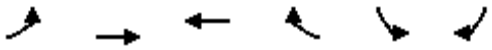
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	569	-	-	-	251
HCM Lane V/C Ratio	0.118	-	-	-	0.416
HCM Control Delay (s)	12.2	-	-	-	29.2
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	1.9

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	683	16	28	840	32	74
Future Volume (vph)	683	16	28	840	32	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	10	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3295		1711	3303	1663	
Flt Permitted	1.00		0.28	1.00	0.99	
Satd. Flow (perm)	3295		509	3303	1663	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	100%	100%	129%	100%	100%
Adj. Flow (vph)	958	17	30	1178	35	80
RTOR Reduction (vph)	1	0	0	0	51	0
Lane Group Flow (vph)	974	0	30	1178	64	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	23.8		23.8	23.8	5.3	
Effective Green, g (s)	23.8		23.8	23.8	5.3	
Actuated g/C Ratio	0.63		0.63	0.63	0.14	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2074		320	2079	233	
v/s Ratio Prot	0.30			c0.36		
v/s Ratio Perm			0.06		c0.04	
v/c Ratio	0.47		0.09	0.57	0.28	
Uniform Delay, d1	3.7		2.8	4.0	14.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.2	0.4	0.6	
Delay (s)	3.9		2.9	4.5	15.2	
Level of Service	A		A	A	B	
Approach Delay (s)	3.9			4.4	15.2	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	37.8	Sum of lost time (s)	8.7
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	750	853	16	16	78
Future Volume (vph)	50	750	853	16	16	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3303	3295		1769	1561
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3303	3295		1769	1561
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	100%	100%
Adj. Flow (vph)	54	1052	1196	17	17	85
RTOR Reduction (vph)	0	0	1	0	0	77
Lane Group Flow (vph)	54	1052	1212	0	17	8
Confl. Peds. (#/hr)				8	1	4
Confl. Bikes (#/hr)				3		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	3.5	38.2	30.1		5.1	5.1
Effective Green, g (s)	3.5	38.2	30.1		5.1	5.1
Actuated g/C Ratio	0.07	0.73	0.58		0.10	0.10
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	115	2426	1907		173	153
v/s Ratio Prot	0.03	c0.32	c0.37			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.47	0.43	0.64		0.10	0.05
Uniform Delay, d1	23.4	2.7	7.3		21.4	21.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	0.1	0.7		0.1	0.1
Delay (s)	24.5	2.8	8.0		21.4	21.3
Level of Service	C	A	A		C	C
Approach Delay (s)		3.9	8.0		21.3	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

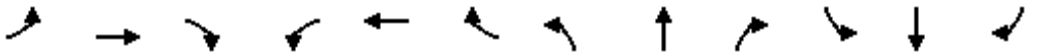
Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	704	30	62	821	39	69
Future Vol, veh/h	704	30	62	821	39	69
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	987	42	87	1151	55	97

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1029	0	1758	515
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	750	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	671	-	76	505
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	427	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	671	-	66	505
Mov Cap-2 Maneuver	-	-	-	-	185	-
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	371	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	27.1
HCM LOS			D

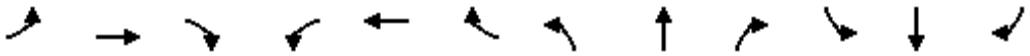
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	311	-	-	671	-
HCM Lane V/C Ratio	0.487	-	-	0.13	-
HCM Control Delay (s)	27.1	-	-	11.2	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	2.5	-	-	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Future Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	11	11	10	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3184					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3184					3433		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	100%	100%	129%	129%	100%	100%	100%	129%	100%	129%
Adj. Flow (vph)	248	819	0	0	867	226	0	0	0	144	0	429
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	0	0	0	362
Lane Group Flow (vph)	248	819	0	0	1073	0	0	0	0	144	0	67
Confl. Peds. (#/hr)						18						1
Confl. Bikes (#/hr)			26			2						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	15.1	50.2			31.1					11.0		11.0
Effective Green, g (s)	15.1	50.2			31.1					11.0		11.0
Actuated g/C Ratio	0.21	0.71			0.44					0.16		0.16
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	365	2348			1402					534		246
v/s Ratio Prot	c0.14	0.25			c0.34					0.04		c0.04
v/s Ratio Perm												
v/c Ratio	0.68	0.35			0.77					0.27		0.27
Uniform Delay, d1	25.5	3.9			16.7					26.3		26.3
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	3.9	0.0			2.3					0.3		0.6
Delay (s)	29.5	4.0			19.0					26.5		26.9
Level of Service	C	A			B					C		C
Approach Delay (s)		9.9			19.0			0.0			26.8	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	17.4
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



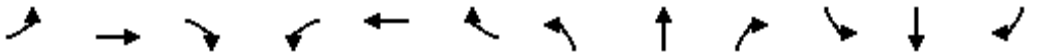
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Future Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	719	72	14	461	27	290	37	32	53	30	219
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1034	443	19	889	387	499	393	340	672	82	599
Arrive On Green	0.05	0.29	0.29	0.01	0.25	0.25	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1781	3554	1521	1781	3554	1545	1127	917	793	1325	191	1397
Grp Volume(v), veh/h	72	719	72	14	461	27	290	0	69	53	0	249
Grp Sat Flow(s),veh/h/ln	1781	1777	1521	1781	1777	1545	1127	0	1710	1325	0	1589
Q Serve(g_s), s	2.1	9.5	1.9	0.4	5.9	0.7	12.4	0.0	1.3	1.3	0.0	5.6
Cycle Q Clear(g_c), s	2.1	9.5	1.9	0.4	5.9	0.7	18.1	0.0	1.3	2.6	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.88
Lane Grp Cap(c), veh/h	91	1034	443	19	889	387	499	0	733	672	0	681
V/C Ratio(X)	0.79	0.70	0.16	0.75	0.52	0.07	0.58	0.00	0.09	0.08	0.00	0.37
Avail Cap(c_a), veh/h	370	1824	781	370	1824	793	718	0	1065	929	0	989
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	24.9	16.7	14.0	26.2	17.1	15.2	16.4	0.0	9.0	9.8	0.0	10.3
Incr Delay (d2), s/veh	5.6	0.6	0.1	19.3	0.3	0.1	1.1	0.0	0.1	0.0	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	0.9	3.3	0.5	0.3	2.1	0.2	3.0	0.0	0.4	0.3	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	17.3	14.1	45.4	17.5	15.2	17.4	0.0	9.1	9.8	0.0	10.6
LnGrp LOS	C	B	B	D	B	B	B	A	A	A	A	B
Approach Vol, veh/h		863			502			359			302	
Approach Delay, s/veh		18.2			18.1			15.8			10.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	18.7		27.6	4.6	20.8		27.6				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	11.0	27.2		33.0	11.0	27.2		33.0				
Max Q Clear Time (g_c+I1), s	4.1	7.9		7.6	2.4	11.5		20.1				
Green Ext Time (p_c), s	0.0	2.3		1.8	0.0	3.6		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		16.6	
HCM 6th LOS		B	

Notes

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



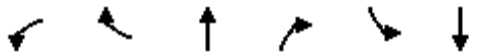
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Future Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	258	464	34	7	15	28	116	229	230	270	249	366
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	533	39	19	334	298	218	558	498	362	554	462
Arrive On Green	0.13	0.31	0.31	0.01	0.19	0.19	0.12	0.31	0.31	0.10	0.30	0.30
Sat Flow, veh/h	3456	1713	126	1781	1777	1585	1781	1777	1585	3456	1870	1560
Grp Volume(v), veh/h	258	0	498	7	15	28	116	229	230	270	249	366
Grp Sat Flow(s),veh/h/ln	1728	0	1839	1781	1777	1585	1781	1777	1585	1728	1870	1560
Q Serve(g_s), s	5.2	0.0	19.0	0.3	0.5	1.1	4.5	7.5	8.6	5.6	8.0	16.0
Cycle Q Clear(g_c), s	5.2	0.0	19.0	0.3	0.5	1.1	4.5	7.5	8.6	5.6	8.0	16.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	0	573	19	334	298	218	558	498	362	554	462
V/C Ratio(X)	0.56	0.00	0.87	0.36	0.04	0.09	0.53	0.41	0.46	0.75	0.45	0.79
Avail Cap(c_a), veh/h	508	0	1079	262	1043	930	264	839	748	508	880	734
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	30.0	0.0	24.1	36.4	24.6	24.9	30.5	20.0	20.4	32.2	21.2	24.0
Incr Delay (d2), s/veh	1.1	0.0	1.6	4.2	0.0	0.1	1.5	0.2	0.2	2.0	0.8	4.4
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	2.1	0.0	7.7	0.1	0.2	0.4	1.9	2.9	2.9	2.3	3.3	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	25.7	40.6	24.7	24.9	32.0	20.2	20.6	34.2	22.0	28.3
LnGrp LOS	C	A	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		756			50			575			885	
Approach Delay, s/veh		27.6			27.0			22.8			28.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	28.4	13.2	27.7	14.1	19.2	11.9	29.0
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	10.9	43.5	11.0	34.9	10.9	43.5	10.9	35.0
Max Q Clear Time (g_c+I1), s	2.3	21.0	6.5	18.0	7.2	3.1	7.6	10.6
Green Ext Time (p_c), s	0.0	1.8	0.1	3.6	0.3	0.1	0.2	1.7

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

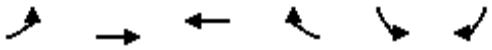
User approved pedestrian interval to be less than phase max green.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	541	277	2	699	294
Future Volume (vph)	0	541	277	2	699	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.97
Satd. Flow (prot)		2601	3536			3419
Flt Permitted		1.00	1.00			0.97
Satd. Flow (perm)		2601	3536			3419
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	129%	129%
Adj. Flow (vph)	0	759	388	2	980	412
RTOR Reduction (vph)	0	627	0	0	0	0
Lane Group Flow (vph)	0	132	390	0	0	1392
Confl. Peds. (#/hr)		4		9		
Confl. Bikes (#/hr)				1		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		19.5	26.0			77.8
Effective Green, g (s)		19.5	26.0			73.3
Actuated g/C Ratio		0.17	0.23			0.65
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		452	820			2237
v/s Ratio Prot		0.05	c0.11			c0.41
v/s Ratio Perm						
v/c Ratio		0.29	0.48			0.62
Uniform Delay, d1		40.2	37.1			11.3
Progression Factor		1.00	1.00			0.41
Incremental Delay, d2		0.5	0.4			0.3
Delay (s)		40.7	37.6			4.9
Level of Service		D	D			A
Approach Delay (s)	40.7		37.6			4.9
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	112.0	Sum of lost time (s)	16.8
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

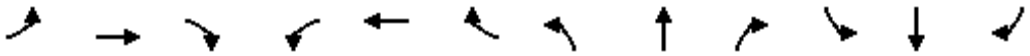
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	688	562	198	206	4
Future Volume (vph)	0	688	562	198	206	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)		4.4	4.4	4.4	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.97	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1801	1801	1491	1770	1583
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1801	1801	1491	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	965	788	278	289	6
RTOR Reduction (vph)	0	0	0	42	0	1
Lane Group Flow (vph)	0	965	788	236	289	5
Confl. Peds. (#/hr)				3	16	
Confl. Bikes (#/hr)				3		
Turn Type		NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)		64.3	64.3	64.3	23.1	23.1
Effective Green, g (s)		64.3	64.3	64.3	23.1	23.1
Actuated g/C Ratio		0.59	0.59	0.59	0.21	0.21
Clearance Time (s)		4.4	4.4	4.4	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1069	1069	885	377	337
v/s Ratio Prot		c0.54	0.44		c0.16	
v/s Ratio Perm				0.16		0.00
v/c Ratio		0.90	0.74	0.27	0.77	0.02
Uniform Delay, d1		19.3	15.9	10.6	40.1	33.6
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		10.6	2.7	0.2	9.0	0.0
Delay (s)		29.8	18.6	10.8	49.1	33.6
Level of Service		C	B	B	D	C
Approach Delay (s)		29.8	16.5		48.8	
Approach LOS		C	B		D	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	108.3	Sum of lost time (s)	12.4
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Future Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1217	97	172	1080	1	62	0	282	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	1153	92	134	1456	1	281	0	244	0	1	0
Arrive On Green	0.00	0.68	0.68	0.08	0.78	0.78	0.16	0.00	0.16	0.00	0.00	0.00
Sat Flow, veh/h	1781	1706	136	1781	1868	2	1781	0	1545	0	1870	0
Grp Volume(v), veh/h	0	0	1314	172	0	1081	62	0	282	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1842	1781	0	1870	1781	0	1545	0	1870	0
Q Serve(g_s), s	0.0	0.0	98.0	10.9	0.0	43.8	4.4	0.0	22.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	98.0	10.9	0.0	43.8	4.4	0.0	22.9	0.0	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	1	0	1245	134	0	1457	281	0	244	0	1	0
V/C Ratio(X)	0.00	0.00	1.06	1.28	0.00	0.74	0.22	0.00	1.16	0.00	0.00	0.00
Avail Cap(c_a), veh/h	134	0	1245	134	0	1457	281	0	244	0	141	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)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	23.5	67.0	0.0	8.4	53.3	0.0	61.1	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	41.5	173.0	0.0	2.2	0.6	0.0	106.2	0.0	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	0.0	0.0	53.4	11.4	0.0	16.2	2.0	0.0	16.2	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	65.0	240.0	0.0	10.6	53.8	0.0	167.3	0.0	0.0	0.0
LnGrp LOS	A	A	F	F	A	B	D	A	F	A	A	A
Approach Vol, veh/h		1314			1253			344			0	
Approach Delay, s/veh		65.0			42.1			146.8			0.0	
Approach LOS		E			D			F				

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	118.0		27.0	15.0	103.0		0.0				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	10.9	98.0		22.9	10.9	98.0		10.9				
Max Q Clear Time (g_c+I1), s	0.0	45.8		24.9	12.9	100.0		0.0				
Green Ext Time (p_c), s	0.0	20.8		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		64.8	
HCM 6th LOS		E	

Notes

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	980	848	16	7	47
Future Vol, veh/h	82	980	848	16	7	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	1374	1189	17	8	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1206	0	-	0	2750	1198
Stage 1	-	-	-	-	1198	-
Stage 2	-	-	-	-	1552	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	579	-	-	-	22	226
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	192	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	579	-	-	-	19	226
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	192	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	30.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	579	-	-	-	197
HCM Lane V/C Ratio	0.154	-	-	-	0.298
HCM Control Delay (s)	12.3	-	-	-	30.8
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.5	-	-	-	1.2

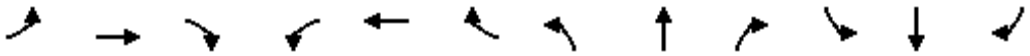
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	920	872	17	6	26
Future Vol, veh/h	37	920	872	17	6	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	1290	1223	18	7	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1241	0	-	0	2602	1232
Stage 1	-	-	-	-	1232	-
Stage 2	-	-	-	-	1370	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	561	-	-	-	27	216
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	236	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	561	-	-	-	25	216
Mov Cap-2 Maneuver	-	-	-	-	123	-
Stage 1	-	-	-	-	255	-
Stage 2	-	-	-	-	236	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	28.3
HCM LOS			D

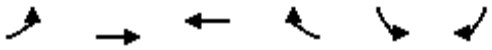
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	561	-	-	-	189
HCM Lane V/C Ratio	0.072	-	-	-	0.184
HCM Control Delay (s)	11.9	-	-	-	28.3
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	0.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Future Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.93		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1838		1711	1770		1770	1716		1770	1563	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	1838		1711	1770		1770	1716		1770	1563	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%	100%	100%	100%	129%	129%	129%
Adj. Flow (vph)	128	1066	79	15	1087	90	47	9	7	107	14	95
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	128	1144	0	15	1175	0	47	16	0	107	109	0
Confl. Peds. (#/hr)			5			11			2			6
Confl. Bikes (#/hr)			1			8			1			
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	20.4	105.0		2.9	87.5		9.7	9.7		15.4	15.4	
Effective Green, g (s)	20.4	105.0		2.9	87.5		9.7	9.7		15.4	15.4	
Actuated g/C Ratio	0.14	0.70		0.02	0.58		0.06	0.06		0.10	0.10	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	232	1286		33	1032		114	110		181	160	
v/s Ratio Prot	c0.07	c0.62		0.01	c0.66		c0.03	0.01		0.06	c0.07	
v/s Ratio Perm												
v/c Ratio	0.55	0.89		0.45	1.14		0.41	0.15		0.59	0.68	
Uniform Delay, d1	60.5	17.9		72.8	31.2		67.4	66.2		64.3	64.9	
Progression Factor	1.00	1.00		0.97	0.85		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	9.5		2.6	71.4		1.8	0.4		4.3	10.4	
Delay (s)	62.1	27.3		73.2	98.2		69.2	66.7		68.6	75.3	
Level of Service	E	C		E	F		E	E		E	E	
Approach Delay (s)		30.8			97.8			68.5			72.0	
Approach LOS		C			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	64.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	78	791	794	95	91	77
Future Volume (vph)	78	791	794	95	91	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)	4.5	4.5	4.5		4.5	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.94	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1711	1801	1780		1701	
Flt Permitted	0.15	1.00	1.00		0.97	
Satd. Flow (perm)	265	1801	1780		1701	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	100%	100%
Adj. Flow (vph)	85	1109	1113	103	99	84
RTOR Reduction (vph)	0	0	2	0	20	0
Lane Group Flow (vph)	85	1109	1214	0	163	0
Turn Type	Perm	NA	NA		Perm	
Protected Phases		2	6			
Permitted Phases	2				4	
Actuated Green, G (s)	124.0	124.0	124.0		17.0	
Effective Green, g (s)	124.0	124.0	124.0		17.0	
Actuated g/C Ratio	0.83	0.83	0.83		0.11	
Clearance Time (s)	4.5	4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	219	1488	1471		192	
v/s Ratio Prot		0.62	c0.68			
v/s Ratio Perm	0.32				c0.10	
v/c Ratio	0.39	0.75	0.83		0.85	
Uniform Delay, d1	3.3	5.9	7.1		65.2	
Progression Factor	0.63	1.15	1.00		1.00	
Incremental Delay, d2	3.7	2.5	5.4		27.6	
Delay (s)	5.8	9.2	12.5		92.8	
Level of Service	A	A	B		F	
Approach Delay (s)		9.0	12.5		92.8	
Approach LOS		A	B		F	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	829	875	18	14	47
Future Vol, veh/h	24	829	875	18	14	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	1162	1227	20	15	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1247	0	-	0	2451	624
Stage 1	-	-	-	-	1237	-
Stage 2	-	-	-	-	1214	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	556	-	-	-	30	429
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	280	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	556	-	-	-	29	429
Mov Cap-2 Maneuver	-	-	-	-	128	-
Stage 1	-	-	-	-	227	-
Stage 2	-	-	-	-	280	-

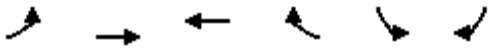
Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	21.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	556	-	-	-	279
HCM Lane V/C Ratio	0.047	-	-	-	0.238
HCM Control Delay (s)	11.8	-	-	-	21.9
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	814	17	36	877	11	24
Future Volume (vph)	814	17	36	877	11	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	10	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3296		1711	3303	1664	
Flt Permitted	1.00		0.24	1.00	0.98	
Satd. Flow (perm)	3296		435	3303	1664	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	100%	100%	129%	100%	100%
Adj. Flow (vph)	1141	18	39	1230	12	26
RTOR Reduction (vph)	1	0	0	0	25	0
Lane Group Flow (vph)	1158	0	39	1230	13	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	23.1		23.1	23.1	1.0	
Effective Green, g (s)	23.1		23.1	23.1	1.0	
Actuated g/C Ratio	0.70		0.70	0.70	0.03	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2321		306	2326	50	
v/s Ratio Prot	0.35			c0.37		
v/s Ratio Perm			0.09		c0.01	
v/c Ratio	0.50		0.13	0.53	0.26	
Uniform Delay, d1	2.2		1.6	2.3	15.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.3	0.3	2.7	
Delay (s)	2.4		1.8	2.6	18.2	
Level of Service	A		A	A	B	
Approach Delay (s)	2.4			2.5	18.2	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	2.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	32.8	Sum of lost time (s)	8.7
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	682	898	35	19	82
Future Volume (vph)	92	682	898	35	19	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3303	3285		1763	1551
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3303	3285		1763	1551
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	100%	100%	100%
Adj. Flow (vph)	129	956	1259	38	21	89
RTOR Reduction (vph)	0	0	2	0	0	75
Lane Group Flow (vph)	129	956	1295	0	21	14
Confl. Peds. (#/hr)					5	12
Confl. Bikes (#/hr)				24		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	7.0	47.2	35.6		10.2	10.2
Effective Green, g (s)	7.0	47.2	35.6		10.2	10.2
Actuated g/C Ratio	0.11	0.71	0.54		0.15	0.15
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	181	2358	1769		272	239
v/s Ratio Prot	c0.08	0.29	c0.39			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.71	0.41	0.73		0.08	0.06
Uniform Delay, d1	28.6	3.8	11.6		23.9	23.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	10.5	0.1	1.6		0.0	0.0
Delay (s)	39.1	3.9	13.2		24.0	23.9
Level of Service	D	A	B		C	C
Approach Delay (s)		8.1	13.2		23.9	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	66.1	Sum of lost time (s)	13.3
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

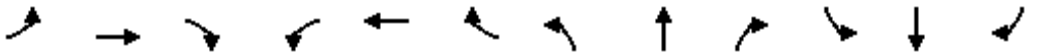
Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	743	0	89	930	20	71
Future Vol, veh/h	743	0	89	930	20	71
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1042	0	125	1304	22	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1042	0	1944	521
Stage 1	-	-	-	-	1042	-
Stage 2	-	-	-	-	902	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	663	-	57	500
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	356	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	663	-	46	500
Mov Cap-2 Maneuver	-	-	-	-	156	-
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	289	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	20.1
HCM LOS			C

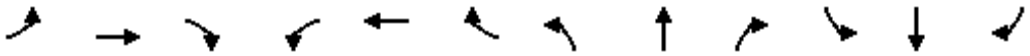
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	337	-	-	663	-
HCM Lane V/C Ratio	0.294	-	-	0.188	-
HCM Control Delay (s)	20.1	-	-	11.7	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	-	-	0.7	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Future Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	11	11	10	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3187					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3187					3433		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	100%	129%	129%	100%	100%	100%	129%	100%	129%
Adj. Flow (vph)	365	746	0	0	1012	255	0	0	0	195	0	386
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	0	336
Lane Group Flow (vph)	365	746	0	0	1252	0	0	0	0	195	0	50
Confl. Peds. (#/hr)			3			3						1
Confl. Bikes (#/hr)			1			24						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	27.8	81.0			49.2					13.3		13.3
Effective Green, g (s)	27.8	81.0			49.2					13.3		13.3
Actuated g/C Ratio	0.27	0.78			0.47					0.13		0.13
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	458	2579			1512					440		203
v/s Ratio Prot	c0.21	0.23			c0.39					c0.06		0.03
v/s Ratio Perm												
v/c Ratio	0.80	0.29			0.83					0.44		0.24
Uniform Delay, d1	35.3	3.2			23.6					41.8		40.7
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	8.7	0.0			3.7					0.7		0.6
Delay (s)	44.1	3.2			27.3					42.5		41.3
Level of Service	D	A			C					D		D
Approach Delay (s)		16.6			27.3			0.0			41.7	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	103.7	Sum of lost time (s)	17.4
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



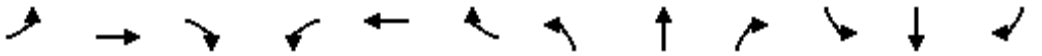
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Future Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	0.99		0.98	0.99		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	489	160	32	965	65	116	11	20	25	16	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	1576	686	39	1363	581	377	131	238	442	57	299
Arrive On Green	0.08	0.44	0.44	0.02	0.38	0.38	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3554	1547	1781	3554	1515	1287	586	1066	1368	255	1340
Grp Volume(v), veh/h	113	489	160	32	965	65	116	0	31	25	0	100
Grp Sat Flow(s),veh/h/ln	1781	1777	1547	1781	1777	1515	1287	0	1652	1368	0	1595
Q Serve(g_s), s	2.9	4.1	2.9	0.8	10.6	1.3	3.8	0.0	0.7	0.7	0.0	2.4
Cycle Q Clear(g_c), s	2.9	4.1	2.9	0.8	10.6	1.3	6.2	0.0	0.7	1.4	0.0	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		0.84
Lane Grp Cap(c), veh/h	146	1576	686	39	1363	581	377	0	369	442	0	356
V/C Ratio(X)	0.78	0.31	0.23	0.82	0.71	0.11	0.31	0.00	0.08	0.06	0.00	0.28
Avail Cap(c_a), veh/h	427	2105	916	427	2105	897	1015	0	1187	1120	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	8.2	7.9	22.4	12.0	9.1	17.3	0.0	14.1	14.7	0.0	14.8
Incr Delay (d2), s/veh	3.3	0.1	0.1	14.4	0.5	0.1	0.5	0.0	0.1	0.1	0.0	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	1.1	1.1	0.7	0.5	3.1	0.3	1.1	0.0	0.2	0.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	8.3	8.1	36.7	12.5	9.2	17.8	0.0	14.2	14.7	0.0	15.2
LnGrp LOS	C	A	A	D	B	A	B	A	B	B	A	B
Approach Vol, veh/h		762			1062			147			125	
Approach Delay, s/veh		10.6			13.0			17.0			15.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	23.0		15.1	5.0	25.8		15.1				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	11.0	27.2		33.0	11.0	27.2		33.0				
Max Q Clear Time (g_c+I1), s	4.9	12.6		4.4	2.8	6.1		8.2				
Green Ext Time (p_c), s	0.1	4.9		0.6	0.0	2.8		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		12.5	
HCM 6th LOS		B	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Future Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	393	25	104	245	547	340	88	261	3	22	351	394
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	455	86	357	275	619	384	159	1278	15	94	548	458
Arrive On Green	0.13	0.28	0.28	0.15	0.30	0.30	0.09	0.36	0.36	0.03	0.29	0.29
Sat Flow, veh/h	3456	310	1289	1781	2067	1283	1781	3598	41	3456	1870	1562
Grp Volume(v), veh/h	393	0	129	245	470	417	88	129	135	22	351	394
Grp Sat Flow(s),veh/h/ln	1728	0	1599	1781	1777	1573	1781	1777	1863	1728	1870	1562
Q Serve(g_s), s	11.5	0.0	6.5	13.9	25.9	26.0	4.9	5.2	5.2	0.6	16.8	24.5
Cycle Q Clear(g_c), s	11.5	0.0	6.5	13.9	25.9	26.0	4.9	5.2	5.2	0.6	16.8	24.5
Prop In Lane	1.00		0.81	1.00		0.82	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	455	0	442	275	532	471	159	631	662	94	548	458
V/C Ratio(X)	0.86	0.00	0.29	0.89	0.88	0.89	0.55	0.20	0.20	0.23	0.64	0.86
Avail Cap(c_a), veh/h	467	0	564	279	665	589	189	639	670	366	673	562
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	43.8	0.0	29.3	42.7	34.3	34.4	44.9	23.1	23.1	49.0	31.6	34.4
Incr Delay (d2), s/veh	15.2	0.0	0.1	27.0	10.0	11.2	2.2	0.1	0.1	0.5	2.0	11.9
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	5.7	0.0	2.4	8.0	12.1	10.9	2.2	2.1	2.2	0.3	7.5	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	0.0	29.4	69.6	44.3	45.6	47.1	23.1	23.1	49.5	33.6	46.3
LnGrp LOS	E	A	C	E	D	D	D	C	C	D	C	D
Approach Vol, veh/h		522			1132			352			767	
Approach Delay, s/veh		51.6			50.3			29.1			40.6	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	33.8	13.3	35.9	17.6	36.1	6.9	42.2
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	16.1	36.3	10.9	37.0	13.9	38.5	10.9	37.0
Max Q Clear Time (g_c+I1), s	15.9	8.5	6.9	26.5	13.5	28.0	2.6	7.2
Green Ext Time (p_c), s	0.0	0.4	0.0	3.6	0.1	2.8	0.0	0.9

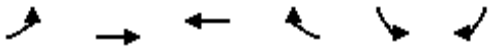
Intersection Summary	
HCM 6th Ctrl Delay	45.2
HCM 6th LOS	D

Notes

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

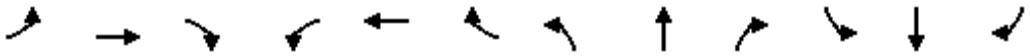
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	579	285	3	442	127
Future Volume (vph)	0	579	285	3	442	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.96
Satd. Flow (prot)		2601	3533			3407
Flt Permitted		1.00	1.00			0.96
Satd. Flow (perm)		2601	3533			3407
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	812	400	4	620	178
RTOR Reduction (vph)	0	658	1	0	0	0
Lane Group Flow (vph)	0	154	403	0	0	798
Confl. Peds. (#/hr)				5		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		20.8	26.5			74.7
Effective Green, g (s)		20.8	26.5			70.2
Actuated g/C Ratio		0.19	0.24			0.64
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		494	855			2186
v/s Ratio Prot		0.06	c0.11			c0.23
v/s Ratio Perm						
v/c Ratio		0.31	0.47			0.37
Uniform Delay, d1		38.1	35.5			9.2
Progression Factor		1.00	1.00			0.44
Incremental Delay, d2		0.5	0.4			0.1
Delay (s)		38.6	35.9			4.1
Level of Service		D	D			A
Approach Delay (s)	38.6		35.9			4.1
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	109.4	Sum of lost time (s)	16.8
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	406	581	355	118	14
Future Volume (vph)	0	406	581	355	118	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	12	12
Total Lost time (s)		4.4	4.4	4.4	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1739	1739	1446	1770	1583
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1739	1739	1446	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	569	815	498	165	20
RTOR Reduction (vph)	0	0	0	84	0	9
Lane Group Flow (vph)	0	569	815	414	165	11
Confl. Peds. (#/hr)				1	137	
Turn Type		NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)		49.7	49.7	49.7	13.3	13.3
Effective Green, g (s)		49.7	49.7	49.7	13.3	13.3
Actuated g/C Ratio		0.56	0.56	0.56	0.15	0.15
Clearance Time (s)		4.4	4.4	4.4	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		968	968	805	263	236
v/s Ratio Prot		0.33	c0.47		c0.09	
v/s Ratio Perm				0.29		0.01
v/c Ratio		0.59	0.84	0.51	0.63	0.05
Uniform Delay, d1		13.0	16.5	12.3	35.6	32.5
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.9	6.7	0.6	4.6	0.1
Delay (s)		13.9	23.2	12.8	40.2	32.6
Level of Service		B	C	B	D	C
Approach Delay (s)		13.9	19.3		39.4	
Approach LOS		B	B		D	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	89.2	Sum of lost time (s)	12.4
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Future Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	745	34	174	1326	24	63	0	199	0	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	1064	49	199	1302	24	273	0	239	0	0	3
Arrive On Green	0.00	0.60	0.60	0.11	0.71	0.71	0.15	0.00	0.15	0.00	0.00	0.00
Sat Flow, veh/h	1781	1772	81	1781	1830	33	1781	0	1554	0	0	1585
Grp Volume(v), veh/h	1	0	779	174	0	1350	63	0	199	0	0	2
Grp Sat Flow(s),veh/h/ln	1781	0	1853	1781	0	1863	1781	0	1554	0	0	1585
Q Serve(g_s), s	0.1	0.0	38.0	12.6	0.0	93.3	4.1	0.0	16.3	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.1	0.0	38.0	12.6	0.0	93.3	4.1	0.0	16.3	0.0	0.0	0.2
Prop In Lane	1.00		0.04	1.00		0.02	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	0	1113	199	0	1326	273	0	239	0	0	3
V/C Ratio(X)	0.69	0.00	0.70	0.87	0.00	1.02	0.23	0.00	0.83	0.00	0.00	0.59
Avail Cap(c_a), veh/h	148	0	1197	265	0	1326	353	0	308	0	0	97
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	65.5	0.0	18.1	57.3	0.0	18.9	48.7	0.0	53.9	0.0	0.0	65.4
Incr Delay (d2), s/veh	118.0	0.0	1.9	17.4	0.0	29.4	0.6	0.0	15.9	0.0	0.0	48.3
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	0.1	0.0	16.3	6.6	0.0	45.9	1.9	0.0	7.5	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	183.4	0.0	20.0	74.7	0.0	48.3	49.3	0.0	69.8	0.0	0.0	113.6
LnGrp LOS	F	A	B	E	A	F	D	A	E	A	A	F
Approach Vol, veh/h		780			1524			262			2	
Approach Delay, s/veh		20.2			51.3			64.9			113.6	
Approach LOS		C			D			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	98.3		24.2	18.8	83.7		4.4				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	10.9	93.3		26.0	19.5	84.7		8.0				
Max Q Clear Time (g_c+I1), s	2.1	95.3		18.3	14.6	40.0		2.2				
Green Ext Time (p_c), s	0.0	0.0		1.1	0.1	10.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	43.3
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	603	1033	21	9	67
Future Vol, veh/h	64	603	1033	21	9	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	846	1448	23	10	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1471	0	-	0	2446	1460
Stage 1	-	-	-	-	1460	-
Stage 2	-	-	-	-	986	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	458	-	-	-	34	158
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	361	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	458	-	-	-	29	158
Mov Cap-2 Maneuver	-	-	-	-	121	-
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	361	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	53.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	458	-	-	-	152
HCM Lane V/C Ratio	0.152	-	-	-	0.543
HCM Control Delay (s)	14.3	-	-	-	53.8
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	2.7

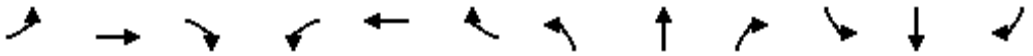
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	603	999	23	18	58
Future Vol, veh/h	14	603	999	23	18	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	846	1401	25	20	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1426	0	-	0	2290	1414
Stage 1	-	-	-	-	1414	-
Stage 2	-	-	-	-	876	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	477	-	-	-	43	169
Stage 1	-	-	-	-	225	-
Stage 2	-	-	-	-	407	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	477	-	-	-	42	169
Mov Cap-2 Maneuver	-	-	-	-	147	-
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	407	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	47.8
HCM LOS			E

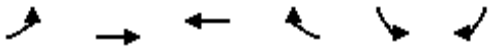
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	477	-	-	-	163
HCM Lane V/C Ratio	0.032	-	-	-	0.507
HCM Control Delay (s)	12.8	-	-	-	47.8
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.1	-	-	-	2.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Future Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.92		1.00	0.90	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.88		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1781		1711	1792		1770	1500		1770	1460	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	1781		1711	1792		1770	1500		1770	1460	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%	100%	100%	129%	129%	100%	100%
Adj. Flow (vph)	39	841	31	42	1231	27	101	11	49	111	8	45
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	39	871	0	42	1258	0	101	60	0	111	53	0
Confl. Peds. (#/hr)			38			14			30			34
Confl. Bikes (#/hr)			9			8						2
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	6.8	86.9		7.0	87.1		24.9	24.9		24.2	24.2	
Effective Green, g (s)	6.8	86.9		7.0	87.1		24.9	24.9		24.2	24.2	
Actuated g/C Ratio	0.04	0.54		0.04	0.54		0.16	0.16		0.15	0.15	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	72	967		74	975		275	233		267	220	
v/s Ratio Prot	0.02	0.49		c0.02	c0.70		c0.06	0.04		c0.06	0.04	
v/s Ratio Perm												
v/c Ratio	0.54	0.90		0.57	1.29		0.37	0.26		0.42	0.24	
Uniform Delay, d1	75.1	32.7		75.0	36.5		60.5	59.4		61.5	59.8	
Progression Factor	1.00	1.00		0.97	0.93		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.4	13.1		3.7	135.4		0.6	0.4		0.8	0.4	
Delay (s)	79.5	45.8		76.8	169.3		61.1	59.8		62.3	60.2	
Level of Service	E	D		E	F		E	E		E	E	
Approach Delay (s)		47.2			166.3			60.6			61.6	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	110.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	35	707	886	30	32	69
Future Volume (vph)	35	707	886	30	32	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	11	11	11	12	12
Total Lost time (s)	4.5	4.5	4.5		4.5	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	1801	1794		1665	
Flt Permitted	0.17	1.00	1.00		0.98	
Satd. Flow (perm)	310	1801	1794		1665	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	100%	100%
Adj. Flow (vph)	38	991	1242	33	35	75
RTOR Reduction (vph)	0	0	1	0	49	0
Lane Group Flow (vph)	38	991	1274	0	61	0
Turn Type	Perm	NA	NA		Perm	
Protected Phases		2	6			
Permitted Phases	2				4	
Actuated Green, G (s)	141.7	141.7	141.7		9.3	
Effective Green, g (s)	141.7	141.7	141.7		9.3	
Actuated g/C Ratio	0.89	0.89	0.89		0.06	
Clearance Time (s)	4.5	4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	274	1595	1588		96	
v/s Ratio Prot		0.55	c0.71			
v/s Ratio Perm	0.12				c0.04	
v/c Ratio	0.14	0.62	0.80		0.64	
Uniform Delay, d1	1.2	2.3	3.6		73.7	
Progression Factor	0.09	0.10	1.00		1.00	
Incremental Delay, d2	0.8	1.5	4.4		13.0	
Delay (s)	1.0	1.7	8.0		86.7	
Level of Service	A	A	A		F	
Approach Delay (s)		1.7	8.0		86.7	
Approach LOS		A	A		F	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	665	849	28	32	64
Future Vol, veh/h	62	665	849	28	32	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	932	1190	30	35	70

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1220	0	-	0	2271	1205
Stage 1	-	-	-	-	1205	-
Stage 2	-	-	-	-	1066	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	571	-	-	-	44	224
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	331	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	571	-	-	-	39	224
Mov Cap-2 Maneuver	-	-	-	-	148	-
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	331	-

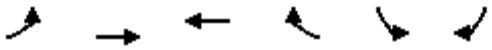
Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	44.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	571	-	-	-	191
HCM Lane V/C Ratio	0.118	-	-	-	0.546
HCM Control Delay (s)	12.1	-	-	-	44.5
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.4	-	-	-	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	683	16	28	840	32	74
Future Volume (vph)	683	16	28	840	32	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	1796		1770	1801	1663	
Flt Permitted	1.00		0.24	1.00	0.99	
Satd. Flow (perm)	1796		443	1801	1663	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	100%	100%	129%	100%	100%
Adj. Flow (vph)	958	17	30	1178	35	80
RTOR Reduction (vph)	0	0	0	0	73	0
Lane Group Flow (vph)	975	0	30	1178	42	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	56.6		56.6	56.6	6.2	
Effective Green, g (s)	56.6		56.6	56.6	6.2	
Actuated g/C Ratio	0.79		0.79	0.79	0.09	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	1421		350	1425	144	
v/s Ratio Prot	0.54			c0.65		
v/s Ratio Perm			0.07		c0.03	
v/c Ratio	0.69		0.09	0.83	0.29	
Uniform Delay, d1	3.4		1.7	4.5	30.6	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.5		0.1	4.3	1.1	
Delay (s)	4.9		1.8	8.8	31.7	
Level of Service	A		A	A	C	
Approach Delay (s)	4.9			8.6	31.7	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	8.7
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	750	853	16	16	78
Future Volume (vph)	50	750	853	16	16	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	1863	1858		1766	1557
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	1863	1858		1766	1557
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	100%	100%
Adj. Flow (vph)	54	1052	1196	17	17	85
RTOR Reduction (vph)	0	0	0	0	0	79
Lane Group Flow (vph)	54	1052	1213	0	17	6
Confl. Peds. (#/hr)				8	1	4
Confl. Bikes (#/hr)				3		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	6.5	95.5	84.4		7.8	7.8
Effective Green, g (s)	6.5	95.5	84.4		7.8	7.8
Actuated g/C Ratio	0.06	0.85	0.75		0.07	0.07
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	99	1588	1400		122	108
v/s Ratio Prot	0.03	c0.56	c0.65			
v/s Ratio Perm					c0.01	0.00
v/c Ratio	0.55	0.66	0.87		0.14	0.05
Uniform Delay, d1	51.3	2.8	9.8		48.9	48.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.3	1.1	5.9		0.2	0.1
Delay (s)	54.6	3.8	15.7		49.1	48.7
Level of Service	D	A	B		D	D
Approach Delay (s)		6.3	15.7		48.8	
Approach LOS		A	B		D	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	112.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	4

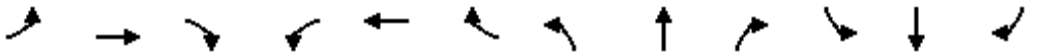
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	704	30	62	821	39	69
Future Vol, veh/h	704	30	62	821	39	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	987	42	87	1151	55	97

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1029	0	2333	1008
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	1325	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	675	-	~ 41	292
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	248	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	675	-	~ 36	292
Mov Cap-2 Maneuver	-	-	-	-	138	-
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	216	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	58.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	208	-	-	675	-
HCM Lane V/C Ratio	0.728	-	-	0.129	-
HCM Control Delay (s)	58.1	-	-	11.1	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	4.8	-	-	0.4	-

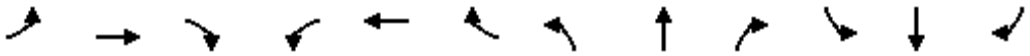
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Future Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4	5.4				4.0		4.0
Lane Util. Factor	1.00	1.00			1.00	1.00				0.97		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.97				1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1770	1863			1863	1483				3433		1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1770	1863			1863	1483				3433		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	100%	100%	129%	129%	100%	100%	100%	129%	100%	129%
Adj. Flow (vph)	248	819	0	0	867	226	0	0	0	144	0	429
RTOR Reduction (vph)	0	0	0	0	0	34	0	0	0	0	0	332
Lane Group Flow (vph)	248	819	0	0	867	192	0	0	0	144	0	97
Confl. Peds. (#/hr)						18						1
Confl. Bikes (#/hr)			26			2						
Turn Type	Prot	NA			NA	Perm				Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases						6						
Actuated Green, G (s)	18.5	78.6			56.1	56.1				12.8		12.8
Effective Green, g (s)	18.5	78.6			56.1	56.1				12.8		12.8
Actuated g/C Ratio	0.18	0.78			0.56	0.56				0.13		0.13
Clearance Time (s)	4.0	5.4			5.4	5.4				4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0	1.0				3.0		3.0
Lane Grp Cap (vph)	324	1452			1036	825				435		201
v/s Ratio Prot	c0.14	0.44			c0.47					0.04		c0.06
v/s Ratio Perm						0.13						
v/c Ratio	0.77	0.56			0.84	0.23				0.33		0.48
Uniform Delay, d1	39.1	4.4			18.6	11.4				40.1		40.9
Progression Factor	1.00	1.00			1.00	1.00				1.00		1.00
Incremental Delay, d2	9.3	0.3			5.7	0.1				0.4		1.8
Delay (s)	48.4	4.7			24.3	11.4				40.5		42.8
Level of Service	D	A			C	B				D		D
Approach Delay (s)		14.8			21.6			0.0			42.2	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	17.4
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



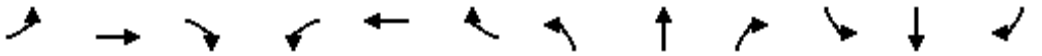
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Future Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.97	0.99		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	1870	1870	1945	1870	1870	1945	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	719	72	14	461	27	290	37	32	53	30	219
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	778	662	18	699	602	407	360	312	578	75	546
Arrive On Green	0.05	0.42	0.42	0.01	0.37	0.37	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1781	1870	1592	1781	1870	1610	1124	911	788	1320	189	1381
Grp Volume(v), veh/h	72	719	72	14	461	27	290	0	69	53	0	249
Grp Sat Flow(s),veh/h/ln	1781	1870	1592	1781	1870	1610	1124	0	1698	1320	0	1570
Q Serve(g_s), s	3.2	29.3	2.2	0.6	16.4	0.9	20.0	0.0	2.1	2.1	0.0	9.1
Cycle Q Clear(g_c), s	3.2	29.3	2.2	0.6	16.4	0.9	29.2	0.0	2.1	4.2	0.0	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.88
Lane Grp Cap(c), veh/h	93	778	662	18	699	602	407	0	672	578	0	621
V/C Ratio(X)	0.78	0.92	0.11	0.78	0.66	0.04	0.71	0.00	0.10	0.09	0.00	0.40
Avail Cap(c_a), veh/h	244	868	739	244	868	747	424	0	699	599	0	646
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	37.5	22.2	14.3	39.6	20.9	16.0	27.9	0.0	15.3	16.6	0.0	17.4
Incr Delay (d2), s/veh	5.1	14.2	0.1	23.6	1.1	0.0	5.3	0.0	0.1	0.1	0.0	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	1.5	14.4	0.7	0.4	6.7	0.3	5.8	0.0	0.8	0.6	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	36.4	14.4	63.2	21.9	16.0	33.2	0.0	15.3	16.6	0.0	17.8
LnGrp LOS	D	D	B	E	C	B	C	A	B	B	A	B
Approach Vol, veh/h		863			502			359			302	
Approach Delay, s/veh		35.1			22.8			29.8			17.6	
Approach LOS		D			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	35.4		36.6	4.8	38.8		36.6				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	11.0	37.2		33.0	11.0	37.2		33.0				
Max Q Clear Time (g_c+I1), s	5.2	18.4		11.1	2.6	31.3		31.2				
Green Ext Time (p_c), s	0.0	2.1		1.8	0.0	2.1		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		28.5	
HCM 6th LOS		C	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Future Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	258	464	34	7	15	28	116	229	230	270	249	366
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	533	39	19	334	298	218	558	498	362	554	462
Arrive On Green	0.13	0.31	0.31	0.01	0.19	0.19	0.12	0.31	0.31	0.10	0.30	0.30
Sat Flow, veh/h	3456	1713	126	1781	1777	1585	1781	1777	1585	3456	1870	1560
Grp Volume(v), veh/h	258	0	498	7	15	28	116	229	230	270	249	366
Grp Sat Flow(s),veh/h/ln	1728	0	1839	1781	1777	1585	1781	1777	1585	1728	1870	1560
Q Serve(g_s), s	5.2	0.0	19.0	0.3	0.5	1.1	4.5	7.5	8.6	5.6	8.0	16.0
Cycle Q Clear(g_c), s	5.2	0.0	19.0	0.3	0.5	1.1	4.5	7.5	8.6	5.6	8.0	16.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	0	573	19	334	298	218	558	498	362	554	462
V/C Ratio(X)	0.56	0.00	0.87	0.36	0.04	0.09	0.53	0.41	0.46	0.75	0.45	0.79
Avail Cap(c_a), veh/h	508	0	1079	262	1043	930	264	839	748	508	880	734
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	30.0	0.0	24.1	36.4	24.6	24.9	30.5	20.0	20.4	32.2	21.2	24.0
Incr Delay (d2), s/veh	1.1	0.0	1.6	4.2	0.0	0.1	1.5	0.2	0.2	2.0	0.8	4.4
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	2.1	0.0	7.7	0.1	0.2	0.4	1.9	2.9	2.9	2.3	3.3	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	25.7	40.6	24.7	24.9	32.0	20.2	20.6	34.2	22.0	28.3
LnGrp LOS	C	A	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		756			50			575			885	
Approach Delay, s/veh		27.6			27.0			22.8			28.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	28.4	13.2	27.7	14.1	19.2	11.9	29.0
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	10.9	43.5	11.0	34.9	10.9	43.5	10.9	35.0
Max Q Clear Time (g_c+I1), s	2.3	21.0	6.5	18.0	7.2	3.1	7.6	10.6
Green Ext Time (p_c), s	0.0	1.8	0.1	3.6	0.3	0.1	0.2	1.7

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

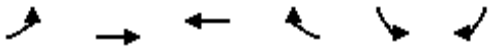
Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	541	277	2	699	294
Future Volume (vph)	0	541	277	2	699	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.97
Satd. Flow (prot)		2601	3536			3419
Flt Permitted		1.00	1.00			0.97
Satd. Flow (perm)		2601	3536			3419
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	129%	129%
Adj. Flow (vph)	0	759	388	2	980	412
RTOR Reduction (vph)	0	627	0	0	0	0
Lane Group Flow (vph)	0	132	390	0	0	1392
Confl. Peds. (#/hr)		4		9		
Confl. Bikes (#/hr)				1		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		19.5	26.0			77.8
Effective Green, g (s)		19.5	26.0			73.3
Actuated g/C Ratio		0.17	0.23			0.65
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		452	820			2237
v/s Ratio Prot		0.05	c0.11			c0.41
v/s Ratio Perm						
v/c Ratio		0.29	0.48			0.62
Uniform Delay, d1		40.2	37.1			11.3
Progression Factor		1.00	1.00			0.41
Incremental Delay, d2		0.5	0.4			0.3
Delay (s)		40.7	37.6			4.9
Level of Service		D	D			A
Approach Delay (s)	40.7		37.6			4.9
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	112.0	Sum of lost time (s)	16.8
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

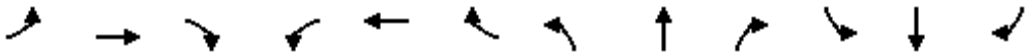
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	688	562	198	206	4
Future Volume (vph)	0	688	562	198	206	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	12	12
Total Lost time (s)		4.4	4.4	4.4	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.97	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1739	1739	1439	1770	1583
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1739	1739	1439	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	965	788	278	289	6
RTOR Reduction (vph)	0	0	0	39	0	1
Lane Group Flow (vph)	0	965	788	239	289	5
Confl. Peds. (#/hr)				3	16	
Confl. Bikes (#/hr)				3		
Turn Type		NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)		71.8	71.8	71.8	25.0	25.0
Effective Green, g (s)		71.8	71.8	71.8	25.0	25.0
Actuated g/C Ratio		0.61	0.61	0.61	0.21	0.21
Clearance Time (s)		4.4	4.4	4.4	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1059	1059	877	375	335
v/s Ratio Prot		c0.56	0.45		c0.16	
v/s Ratio Perm				0.17		0.00
v/c Ratio		0.91	0.74	0.27	0.77	0.02
Uniform Delay, d1		20.2	16.4	10.8	43.7	36.7
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		11.6	2.9	0.2	9.4	0.0
Delay (s)		31.8	19.3	10.9	53.1	36.7
Level of Service		C	B	B	D	D
Approach Delay (s)		31.8	17.1		52.8	
Approach LOS		C	B		D	

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	117.8	Sum of lost time (s)	12.4
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Future Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1217	97	172	1080	1	62	0	282	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	1098	88	148	1411	1	323	0	281	0	1	0
Arrive On Green	0.00	0.64	0.64	0.08	0.76	0.76	0.18	0.00	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1781	1706	136	1781	1868	2	1781	0	1550	0	1870	0
Grp Volume(v), veh/h	0	0	1314	172	0	1081	62	0	282	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1842	1781	0	1870	1781	0	1550	0	1870	0
Q Serve(g_s), s	0.0	0.0	92.3	11.9	0.0	48.1	4.2	0.0	26.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	92.3	11.9	0.0	48.1	4.2	0.0	26.0	0.0	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	1	0	1185	148	0	1412	323	0	281	0	1	0
V/C Ratio(X)	0.00	0.00	1.11	1.16	0.00	0.77	0.19	0.00	1.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	135	0	1185	148	0	1412	323	0	281	0	104	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)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	25.6	65.8	0.0	10.2	49.8	0.0	58.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	61.2	124.7	0.0	2.7	0.4	0.0	54.5	0.0	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	0.0	0.0	57.8	10.5	0.0	18.7	2.0	0.0	14.5	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	86.7	190.5	0.0	12.9	50.2	0.0	113.2	0.0	0.0	0.0
LnGrp LOS	A	A	F	F	A	B	D	A	F	A	A	A
Approach Vol, veh/h		1314			1253			344			0	
Approach Delay, s/veh		86.7			37.3			101.9			0.0	
Approach LOS		F			D			F				

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	113.3		30.1	16.0	97.3		0.0				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	10.9	93.3		26.0	11.9	92.3		8.0				
Max Q Clear Time (g_c+I1), s	0.0	50.1		28.0	13.9	94.3		0.0				
Green Ext Time (p_c), s	0.0	19.3		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		67.2	
HCM 6th LOS		E	

Notes

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	980	848	16	7	47
Future Vol, veh/h	82	980	848	16	7	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	1374	1189	17	8	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1206	0	-	0	2750	1198
Stage 1	-	-	-	-	1198	-
Stage 2	-	-	-	-	1552	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	579	-	-	-	22	226
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	192	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	579	-	-	-	19	226
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	192	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	30.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	579	-	-	-	197
HCM Lane V/C Ratio	0.154	-	-	-	0.298
HCM Control Delay (s)	12.3	-	-	-	30.8
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.5	-	-	-	1.2

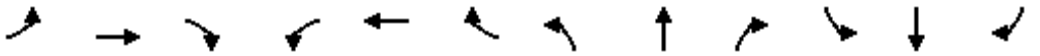
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	920	872	17	6	26
Future Vol, veh/h	37	920	872	17	6	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	1290	1223	18	7	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1241	0	-	0	2602	1232
Stage 1	-	-	-	-	1232	-
Stage 2	-	-	-	-	1370	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	561	-	-	-	27	216
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	236	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	561	-	-	-	25	216
Mov Cap-2 Maneuver	-	-	-	-	123	-
Stage 1	-	-	-	-	255	-
Stage 2	-	-	-	-	236	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	28.3
HCM LOS			D

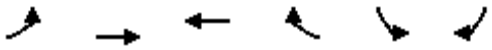
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	561	-	-	-	189
HCM Lane V/C Ratio	0.072	-	-	-	0.184
HCM Control Delay (s)	11.9	-	-	-	28.3
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	0.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Future Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.97	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.93		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1711	1778		1711	1772		1770	1718		1770	1569	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1711	1778		1711	1772		1770	1718		1770	1569	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%	100%	100%	100%	129%	129%	129%
Adj. Flow (vph)	128	1066	79	15	1087	90	47	9	7	107	14	95
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	128	1144	0	15	1175	0	47	16	0	107	109	0
Confl. Peds. (#/hr)			5			11			2			6
Confl. Bikes (#/hr)			1			8			1			
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	18.1	102.4		2.9	87.2		11.1	11.1		16.6	16.6	
Effective Green, g (s)	18.1	102.4		2.9	87.2		11.1	11.1		16.6	16.6	
Actuated g/C Ratio	0.12	0.68		0.02	0.58		0.07	0.07		0.11	0.11	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	206	1213		33	1030		130	127		195	173	
v/s Ratio Prot	c0.07	c0.64		0.01	c0.66		c0.03	0.01		0.06	c0.07	
v/s Ratio Perm												
v/c Ratio	0.62	0.94		0.45	1.14		0.36	0.13		0.55	0.63	
Uniform Delay, d1	62.7	21.2		72.8	31.4		66.1	64.9		63.2	63.8	
Progression Factor	1.00	1.00		0.97	0.89		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.1	15.4		2.6	72.4		1.2	0.3		2.5	6.4	
Delay (s)	66.8	36.6		73.1	100.4		67.3	65.2		65.6	70.1	
Level of Service	E	D		E	F		E	E		E	E	
Approach Delay (s)		39.6			100.0			66.8			67.9	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	68.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	78	791	794	95	91	77
Future Volume (vph)	78	791	794	95	91	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	11	11	11	12	12
Total Lost time (s)	4.5	4.5	4.5		4.5	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.94	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1770	1801	1780		1701	
Flt Permitted	0.18	1.00	1.00		0.97	
Satd. Flow (perm)	331	1801	1780		1701	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	100%	100%
Adj. Flow (vph)	85	1109	1113	103	99	84
RTOR Reduction (vph)	0	0	2	0	20	0
Lane Group Flow (vph)	85	1109	1214	0	163	0
Turn Type	Perm	NA	NA		Perm	
Protected Phases		2	6			
Permitted Phases	2				4	
Actuated Green, G (s)	130.5	130.5	130.5		10.5	
Effective Green, g (s)	130.5	130.5	130.5		10.5	
Actuated g/C Ratio	0.87	0.87	0.87		0.07	
Clearance Time (s)	4.5	4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	287	1566	1548		119	
v/s Ratio Prot		0.62	c0.68			
v/s Ratio Perm	0.26				c0.10	
v/c Ratio	0.30	0.71	0.78		1.37	
Uniform Delay, d1	1.7	3.3	4.0		69.8	
Progression Factor	0.55	0.88	1.00		1.00	
Incremental Delay, d2	1.9	2.0	4.1		209.1	
Delay (s)	2.8	4.9	8.0		278.9	
Level of Service	A	A	A		F	
Approach Delay (s)		4.7	8.0		278.9	
Approach LOS		A	A		F	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	829	875	18	14	47
Future Vol, veh/h	24	829	875	18	14	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	1162	1227	20	15	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1247	0	-	0	2451	1237
Stage 1	-	-	-	-	1237	-
Stage 2	-	-	-	-	1214	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	558	-	-	-	34	215
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	281	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	558	-	-	-	32	215
Mov Cap-2 Maneuver	-	-	-	-	138	-
Stage 1	-	-	-	-	261	-
Stage 2	-	-	-	-	281	-

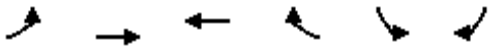
Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	33.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	558	-	-	-	191
HCM Lane V/C Ratio	0.047	-	-	-	0.347
HCM Control Delay (s)	11.8	-	-	-	33.6
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	814	17	36	877	11	24
Future Volume (vph)	814	17	36	877	11	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	1797		1770	1801	1664	
Flt Permitted	1.00		0.19	1.00	0.98	
Satd. Flow (perm)	1797		350	1801	1664	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	100%	100%	129%	100%	100%
Adj. Flow (vph)	1141	18	39	1230	12	26
RTOR Reduction (vph)	0	0	0	0	25	0
Lane Group Flow (vph)	1159	0	39	1230	13	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	66.5		66.5	66.5	4.0	
Effective Green, g (s)	66.5		66.5	66.5	4.0	
Actuated g/C Ratio	0.84		0.84	0.84	0.05	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	1508		293	1512	84	
v/s Ratio Prot	0.64			c0.68		
v/s Ratio Perm			0.11		c0.01	
v/c Ratio	0.77		0.13	0.81	0.16	
Uniform Delay, d1	2.9		1.1	3.2	36.0	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.6		0.3	3.7	0.9	
Delay (s)	5.4		1.4	6.9	36.9	
Level of Service	A		A	A	D	
Approach Delay (s)	5.4			6.7	36.9	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	8.7
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	682	898	35	19	82
Future Volume (vph)	92	682	898	35	19	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00		0.99	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	1863	1854		1747	1536
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	1863	1854		1747	1536
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	100%	100%	100%
Adj. Flow (vph)	129	956	1259	38	21	89
RTOR Reduction (vph)	0	0	1	0	0	80
Lane Group Flow (vph)	129	956	1296	0	21	9
Confl. Peds. (#/hr)					5	12
Confl. Bikes (#/hr)				24		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	12.1	114.0	97.3		13.2	13.2
Effective Green, g (s)	12.1	114.0	97.3		13.2	13.2
Actuated g/C Ratio	0.09	0.84	0.72		0.10	0.10
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	152	1562	1327		169	149
v/s Ratio Prot	c0.08	0.51	c0.70			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.85	0.61	0.98		0.12	0.06
Uniform Delay, d1	61.0	3.6	18.2		56.1	55.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	32.1	0.7	19.2		0.1	0.1
Delay (s)	93.1	4.3	37.4		56.2	55.8
Level of Service	F	A	D		E	E
Approach Delay (s)		14.9	37.4		55.8	
Approach LOS		B	D		E	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	135.9	Sum of lost time (s)	13.3
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

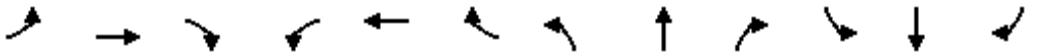
Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	743	0	89	930	20	71
Future Vol, veh/h	743	0	89	930	20	71
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1042	0	125	1304	22	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1042	0	2596	1042
Stage 1	-	-	-	-	1042	-
Stage 2	-	-	-	-	1554	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	667	-	28	279
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	192	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	667	-	23	279
Mov Cap-2 Maneuver	-	-	-	-	107	-
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	156	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	37.6
HCM LOS			E

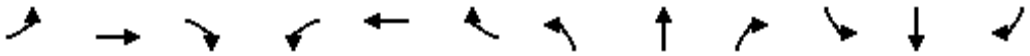
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	206	-	-	667	-
HCM Lane V/C Ratio	0.48	-	-	0.187	-
HCM Control Delay (s)	37.6	-	-	11.6	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	2.4	-	-	0.7	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Future Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4	5.4				4.0		4.0
Lane Util. Factor	1.00	1.00			1.00	1.00				0.97		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.97				1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1770	1863			1863	1492				3433		1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1770	1863			1863	1492				3433		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	100%	129%	129%	100%	100%	100%	129%	100%	129%
Adj. Flow (vph)	365	746	0	0	1012	255	0	0	0	195	0	386
RTOR Reduction (vph)	0	0	0	0	0	28	0	0	0	0	0	342
Lane Group Flow (vph)	365	746	0	0	1012	227	0	0	0	195	0	44
Confl. Peds. (#/hr)			3			3						1
Confl. Bikes (#/hr)			1			24						
Turn Type	Prot	NA			NA	Perm				Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases						6						
Actuated Green, G (s)	27.1	102.9			71.8	71.8				14.4		14.4
Effective Green, g (s)	27.1	102.9			71.8	71.8				14.4		14.4
Actuated g/C Ratio	0.21	0.81			0.57	0.57				0.11		0.11
Clearance Time (s)	4.0	5.4			5.4	5.4				4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0	1.0				3.0		3.0
Lane Grp Cap (vph)	378	1513			1055	845				390		179
v/s Ratio Prot	c0.21	0.40			c0.54					c0.06		0.03
v/s Ratio Perm						0.15						
v/c Ratio	0.97	0.49			0.96	0.27				0.50		0.25
Uniform Delay, d1	49.3	3.7			26.1	14.0				52.8		51.2
Progression Factor	1.00	1.00			1.00	1.00				1.00		1.00
Incremental Delay, d2	36.8	0.1			18.3	0.1				1.0		0.7
Delay (s)	86.1	3.8			44.4	14.1				53.8		51.9
Level of Service	F	A			D	B				D		D
Approach Delay (s)		30.9			38.3			0.0			52.5	
Approach LOS		C			D			A			D	

Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	126.7	Sum of lost time (s)	17.4
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



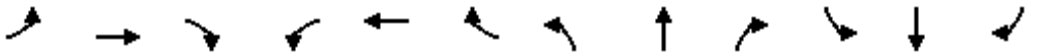
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Future Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	489	160	32	965	65	116	11	20	25	16	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1149	989	39	1040	883	267	115	208	331	50	261
Arrive On Green	0.08	0.61	0.61	0.02	0.56	0.56	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1781	1870	1611	1781	1870	1588	1280	580	1054	1359	252	1321
Grp Volume(v), veh/h	113	489	160	32	965	65	116	0	31	25	0	100
Grp Sat Flow(s),veh/h/ln	1781	1870	1611	1781	1870	1588	1280	0	1633	1359	0	1573
Q Serve(g_s), s	5.4	11.8	3.7	1.5	40.7	1.6	7.4	0.0	1.3	1.3	0.0	4.7
Cycle Q Clear(g_c), s	5.4	11.8	3.7	1.5	40.7	1.6	12.0	0.0	1.3	2.7	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		0.84
Lane Grp Cap(c), veh/h	143	1149	989	39	1040	883	267	0	323	331	0	311
V/C Ratio(X)	0.79	0.43	0.16	0.81	0.93	0.07	0.43	0.00	0.10	0.08	0.00	0.32
Avail Cap(c_a), veh/h	228	1227	1057	228	1227	1042	505	0	626	583	0	603
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	38.9	8.7	7.1	41.9	17.5	8.8	34.8	0.0	28.3	29.3	0.0	29.6
Incr Delay (d2), s/veh	3.7	0.2	0.1	13.9	10.7	0.0	1.1	0.0	0.1	0.1	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	2.4	4.0	1.1	0.8	17.7	0.5	2.4	0.0	0.5	0.4	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	8.9	7.2	55.8	28.2	8.9	35.9	0.0	28.4	29.4	0.0	30.2
LnGrp LOS	D	A	A	E	C	A	D	A	C	C	A	C
Approach Vol, veh/h		762			1062			147			125	
Approach Delay, s/veh		13.5			27.9			34.3			30.0	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	53.3		21.9	5.9	58.3		21.9				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	11.0	56.5		33.0	11.0	56.5		33.0				
Max Q Clear Time (g_c+I1), s	7.4	42.7		6.7	3.5	13.8		14.0				
Green Ext Time (p_c), s	0.0	5.1		0.6	0.0	2.9		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		23.2	
HCM 6th LOS		C	

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Future Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	393	25	104	245	547	340	88	261	3	22	351	394
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	455	86	357	275	619	384	159	1278	15	94	548	458
Arrive On Green	0.13	0.28	0.28	0.15	0.30	0.30	0.09	0.36	0.36	0.03	0.29	0.29
Sat Flow, veh/h	3456	310	1289	1781	2067	1283	1781	3598	41	3456	1870	1562
Grp Volume(v), veh/h	393	0	129	245	470	417	88	129	135	22	351	394
Grp Sat Flow(s),veh/h/ln	1728	0	1599	1781	1777	1573	1781	1777	1863	1728	1870	1562
Q Serve(g_s), s	11.5	0.0	6.5	13.9	25.9	26.0	4.9	5.2	5.2	0.6	16.8	24.5
Cycle Q Clear(g_c), s	11.5	0.0	6.5	13.9	25.9	26.0	4.9	5.2	5.2	0.6	16.8	24.5
Prop In Lane	1.00		0.81	1.00		0.82	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	455	0	442	275	532	471	159	631	662	94	548	458
V/C Ratio(X)	0.86	0.00	0.29	0.89	0.88	0.89	0.55	0.20	0.20	0.23	0.64	0.86
Avail Cap(c_a), veh/h	467	0	564	279	665	589	189	639	670	366	673	562
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	43.8	0.0	29.3	42.7	34.3	34.4	44.9	23.1	23.1	49.0	31.6	34.4
Incr Delay (d2), s/veh	15.2	0.0	0.1	27.0	10.0	11.2	2.2	0.1	0.1	0.5	2.0	11.9
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	5.7	0.0	2.4	8.0	12.1	10.9	2.2	2.1	2.2	0.3	7.5	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	0.0	29.4	69.6	44.3	45.6	47.1	23.1	23.1	49.5	33.6	46.3
LnGrp LOS	E	A	C	E	D	D	D	C	C	D	C	D
Approach Vol, veh/h		522			1132			352			767	
Approach Delay, s/veh		51.6			50.3			29.1			40.6	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	33.8	13.3	35.9	17.6	36.1	6.9	42.2
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	16.1	36.3	10.9	37.0	13.9	38.5	10.9	37.0
Max Q Clear Time (g_c+I1), s	15.9	8.5	6.9	26.5	13.5	28.0	2.6	7.2
Green Ext Time (p_c), s	0.0	0.4	0.0	3.6	0.1	2.8	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	45.2
HCM 6th LOS	D

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	579	285	3	442	127
Future Volume (vph)	0	579	285	3	442	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.96
Satd. Flow (prot)		2787	3533			3407
Flt Permitted		1.00	1.00			0.96
Satd. Flow (perm)		2787	3533			3407
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	812	400	4	620	178
RTOR Reduction (vph)	0	658	1	0	0	0
Lane Group Flow (vph)	0	154	403	0	0	798
Confl. Peds. (#/hr)				5		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		20.8	26.5			74.7
Effective Green, g (s)		20.8	26.5			70.2
Actuated g/C Ratio		0.19	0.24			0.64
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		529	855			2186
v/s Ratio Prot		0.06	c0.11			c0.23
v/s Ratio Perm						
v/c Ratio		0.29	0.47			0.37
Uniform Delay, d1		38.0	35.5			9.2
Progression Factor		1.00	1.00			0.44
Incremental Delay, d2		0.4	0.4			0.1
Delay (s)		38.4	35.9			4.1
Level of Service		D	D			A
Approach Delay (s)	38.4		35.9			4.1
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	109.4	Sum of lost time (s)	16.8
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	445	0	25	577	2	13
Future Vol, veh/h	445	0	25	577	2	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	624	0	27	809	2	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	624	0	1487	624
Stage 1	-	-	-	-	624	-
Stage 2	-	-	-	-	863	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	957	-	137	485
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	413	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	957	-	130	485
Mov Cap-2 Maneuver	-	-	-	-	130	-
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	392	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.3	15.6
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	356	-	-	957	-
HCM Lane V/C Ratio	0.046	-	-	0.028	-
HCM Control Delay (s)	15.6	-	-	8.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

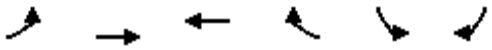
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	406	599	5	0	3
Future Vol, veh/h	52	406	599	5	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	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	569	840	5	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	845	0	-	0	1526	843
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	683	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	792	-	-	-	130	364
Stage 1	-	-	-	-	422	-
Stage 2	-	-	-	-	502	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	792	-	-	-	121	364
Mov Cap-2 Maneuver	-	-	-	-	121	-
Stage 1	-	-	-	-	392	-
Stage 2	-	-	-	-	502	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	792	-	-	-	364
HCM Lane V/C Ratio	0.071	-	-	-	0.009
HCM Control Delay (s)	9.9	-	-	-	15
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	406	581	355	118	14
Future Volume (vph)	0	406	581	355	118	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.4	4.4	4.4	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00	1.00	0.98	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	
Frt		1.00	1.00	0.85	0.99	
Flt Protected		1.00	1.00	1.00	0.96	
Satd. Flow (prot)		1863	1863	1550	1757	
Flt Permitted		1.00	1.00	1.00	0.96	
Satd. Flow (perm)		1863	1863	1550	1757	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	569	815	498	165	20
RTOR Reduction (vph)	0	0	0	207	5	0
Lane Group Flow (vph)	0	569	815	291	180	0
Confl. Peds. (#/hr)				1	137	
Turn Type		NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases				6		
Actuated Green, G (s)		39.8	39.8	39.8	13.2	
Effective Green, g (s)		39.8	39.8	39.8	13.2	
Actuated g/C Ratio		0.50	0.50	0.50	0.17	
Clearance Time (s)		4.4	4.4	4.4	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		939	939	781	293	
v/s Ratio Prot		0.31	c0.44		c0.10	
v/s Ratio Perm				0.19		
v/c Ratio		0.61	0.87	0.37	0.61	
Uniform Delay, d1		14.0	17.2	11.9	30.5	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1	8.5	0.3	3.8	
Delay (s)		15.1	25.8	12.2	34.3	
Level of Service		B	C	B	C	
Approach Delay (s)		15.1	20.6		34.3	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	78.9	Sum of lost time (s)	12.4
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

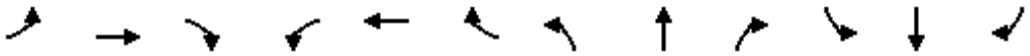
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	658	14	98	1209	0	58
Future Vol, veh/h	658	14	98	1209	0	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	70	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	715	15	107	1314	0	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	730	0	-	723
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.13	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.219	-	-	3.319
Pot Cap-1 Maneuver	-	-	872	-	0	425
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	872	-	-	425
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	425	-	-	872	-
HCM Lane V/C Ratio	0.148	-	-	0.122	-
HCM Control Delay (s)	14.9	-	-	9.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Future Volume (veh/h)	1	531	24	124	946	17	45	0	142	0	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	745	34	174	1326	24	63	0	199	0	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	855	39	212	2143	39	316	0	276	0	0	3
Arrive On Green	0.00	0.48	0.48	0.12	0.60	0.60	0.18	0.00	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1781	1772	81	1781	3569	65	1781	0	1558	0	0	1585
Grp Volume(v), veh/h	1	0	779	174	660	690	63	0	199	0	0	2
Grp Sat Flow(s),veh/h/ln	1781	0	1853	1781	1777	1856	1781	0	1558	0	0	1585
Q Serve(g_s), s	0.0	0.0	29.7	7.5	18.6	18.7	2.4	0.0	9.5	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	29.7	7.5	18.6	18.7	2.4	0.0	9.5	0.0	0.0	0.1
Prop In Lane	1.00		0.04	1.00		0.03	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	2	0	894	212	1067	1115	316	0	276	0	0	3
V/C Ratio(X)	0.44	0.00	0.87	0.82	0.62	0.62	0.20	0.00	0.72	0.00	0.00	0.58
Avail Cap(c_a), veh/h	68	0	1077	273	1237	1292	588	0	515	0	0	80
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	18.2	34.0	10.0	10.0	27.7	0.0	30.6	0.0	0.0	39.4
Incr Delay (d2), s/veh	43.5	0.0	7.4	11.5	1.0	0.9	0.4	0.0	5.0	0.0	0.0	46.5
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	0.0	0.0	13.2	3.9	6.5	6.7	1.0	0.0	3.9	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.9	0.0	25.7	45.5	11.0	11.0	28.1	0.0	35.6	0.0	0.0	85.9
LnGrp LOS	F	A	C	D	B	B	C	A	D	A	A	F
Approach Vol, veh/h		780			1524			262			2	
Approach Delay, s/veh		25.8			14.9			33.8			85.9	
Approach LOS		C			B			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	52.4		18.1	13.5	43.1		4.3				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	3.0	55.0		26.1	12.1	45.9		4.0				
Max Q Clear Time (g_c+I1), s	2.0	20.7		11.5	9.5	31.7		2.1				
Green Ext Time (p_c), s	0.0	17.5		1.7	0.1	6.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		20.2	
HCM 6th LOS		C	

Notes

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

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	603	1033	21	9	67
Future Vol, veh/h	64	603	1033	21	9	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	846	1448	23	10	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1471	0	-	0	2446	736
Stage 1	-	-	-	-	1460	-
Stage 2	-	-	-	-	986	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	456	-	-	-	30	362
Stage 1	-	-	-	-	181	-
Stage 2	-	-	-	-	360	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	456	-	-	-	25	362
Mov Cap-2 Maneuver	-	-	-	-	107	-
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	360	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	23
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	456	-	-	-	282
HCM Lane V/C Ratio	0.153	-	-	-	0.293
HCM Control Delay (s)	14.3	-	-	-	23
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	1.2

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	603	999	23	18	58
Future Vol, veh/h	14	603	999	23	18	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	846	1401	25	20	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1426	0	-	0	2290	713
Stage 1	-	-	-	-	1414	-
Stage 2	-	-	-	-	876	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	475	-	-	-	38	375
Stage 1	-	-	-	-	191	-
Stage 2	-	-	-	-	406	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	475	-	-	-	37	375
Mov Cap-2 Maneuver	-	-	-	-	37	-
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	406	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	85.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	475	-	-	-	119
HCM Lane V/C Ratio	0.032	-	-	-	0.694
HCM Control Delay (s)	12.8	-	-	-	85.5
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Future Volume (vph)	28	600	22	30	878	19	93	10	35	79	7	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.96		1.00	0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.88		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3506		1770	3523		1770	1574		1770	1553	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3506		1770	3523		1770	1574		1770	1553	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%	100%	100%	129%	129%	100%	100%
Adj. Flow (vph)	39	841	31	42	1231	27	101	11	49	111	8	45
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	39	870	0	42	1257	0	101	60	0	111	53	0
Confl. Peds. (#/hr)			38			14			30			34
Confl. Bikes (#/hr)			9			8						2
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	3.2	51.1		3.9	51.8		19.1	19.1		19.4	19.4	
Effective Green, g (s)	3.2	51.1		3.9	51.8		19.1	19.1		19.4	19.4	
Actuated g/C Ratio	0.03	0.46		0.04	0.47		0.17	0.17		0.18	0.18	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	51	1621		62	1651		305	272		310	272	
v/s Ratio Prot	0.02	0.25		c0.02	c0.36		c0.06	0.04		c0.06	0.03	
v/s Ratio Perm												
v/c Ratio	0.76	0.54		0.68	0.76		0.33	0.22		0.36	0.19	
Uniform Delay, d1	53.3	21.2		52.7	24.2		40.1	39.3		40.1	38.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	45.1	0.3		20.6	2.1		0.5	0.3		0.5	0.3	
Delay (s)	98.3	21.6		73.3	26.4		40.6	39.6		40.6	39.1	
Level of Service	F	C		E	C		D	D		D	D	
Approach Delay (s)		24.9			27.9			40.2			40.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.5	Sum of lost time (s)	17.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	723	7	39	918	12	14
Future Vol, veh/h	723	7	39	918	12	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1014	8	42	1287	13	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1022	0	1746	511
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	728	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	675	-	77	508
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	675	-	72	508
Mov Cap-2 Maneuver	-	-	-	-	72	-
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	412	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	38.9
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	134	-	-	675	-
HCM Lane V/C Ratio	0.211	-	-	0.063	-
HCM Control Delay (s)	38.9	-	-	10.7	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	0.8	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	707	886	30	32	69
Future Vol, veh/h	35	707	886	30	32	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	40
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	991	1242	33	35	75

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1275	0	-	0	1831	638
Stage 1	-	-	-	-	1259	-
Stage 2	-	-	-	-	572	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	540	-	-	-	68	419
Stage 1	-	-	-	-	231	-
Stage 2	-	-	-	-	528	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	540	-	-	-	63	419
Mov Cap-2 Maneuver	-	-	-	-	162	-
Stage 1	-	-	-	-	215	-
Stage 2	-	-	-	-	528	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	21.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	540	-	-	-	162	419
HCM Lane V/C Ratio	0.07	-	-	-	0.215	0.179
HCM Control Delay (s)	12.2	-	-	-	33.2	15.5
HCM Lane LOS	B	-	-	-	D	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8	0.6

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	715	21	18	885	41	9
Future Vol, veh/h	715	21	18	885	41	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	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1003	23	20	1241	45	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1026	0	1676	513
Stage 1	-	-	-	-	1015	-
Stage 2	-	-	-	-	661	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	673	-	86	506
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	475	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	673	-	83	506
Mov Cap-2 Maneuver	-	-	-	-	206	-
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	461	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	25.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	231	-	-	673	-
HCM Lane V/C Ratio	0.235	-	-	0.029	-
HCM Control Delay (s)	25.3	-	-	10.5	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	665	849	28	32	64
Future Vol, veh/h	62	665	849	28	32	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	932	1190	30	35	70

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1220	0	-	0	1805	610
Stage 1	-	-	-	-	1205	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	567	-	-	-	71	437
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	511	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	567	-	-	-	63	437
Mov Cap-2 Maneuver	-	-	-	-	163	-
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	511	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	25.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	567	-	-	-	280
HCM Lane V/C Ratio	0.119	-	-	-	0.373
HCM Control Delay (s)	12.2	-	-	-	25.3
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	683	16	28	840	32	74
Future Volume (vph)	683	16	28	840	32	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3295		1711	3421	1663	
Flt Permitted	1.00		0.28	1.00	0.99	
Satd. Flow (perm)	3295		509	3421	1663	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	100%	100%	129%	100%	100%
Adj. Flow (vph)	958	17	30	1178	35	80
RTOR Reduction (vph)	1	0	0	0	51	0
Lane Group Flow (vph)	974	0	30	1178	64	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	23.5		23.5	23.5	5.3	
Effective Green, g (s)	23.5		23.5	23.5	5.3	
Actuated g/C Ratio	0.63		0.63	0.63	0.14	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2064		318	2143	235	
v/s Ratio Prot	0.30			c0.34		
v/s Ratio Perm			0.06		c0.04	
v/c Ratio	0.47		0.09	0.55	0.27	
Uniform Delay, d1	3.7		2.8	4.0	14.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.2	0.4	0.6	
Delay (s)	3.9		3.0	4.4	15.0	
Level of Service	A		A	A	B	
Approach Delay (s)	3.9			4.3	15.0	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	37.5	Sum of lost time (s)	8.7
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	751	5	0	863	5	0	0	9	0	0	0
Future Vol, veh/h	0	751	5	0	863	5	0	0	9	0	0	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	-	-	-	60	-	-	-	-	-	-	-	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1053	5	0	1210	5	0	0	10	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1058	0	0	1661	2271	529	-	-	608
Stage 1	-	-	-	-	-	-	1056	1056	-	-	-	-
Stage 2	-	-	-	-	-	-	605	1215	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	7.54	6.54	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	3.52	4.02	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	654	-	-	64	40	494	0	0	439
Stage 1	0	-	-	-	-	-	241	300	-	0	0	-
Stage 2	0	-	-	-	-	-	451	252	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	654	-	-	64	40	494	-	-	439
Mov Cap-2 Maneuver	-	-	-	-	-	-	169	143	-	-	-	-
Stage 1	-	-	-	-	-	-	241	300	-	-	-	-
Stage 2	-	-	-	-	-	-	451	252	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.4	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	494	-	-	654	-	-	-
HCM Lane V/C Ratio	0.02	-	-	-	-	-	-
HCM Control Delay (s)	12.4	-	-	0	-	-	0
HCM Lane LOS	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	3.7

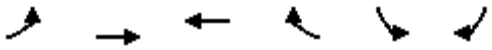
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	700	87	145	805	62	99
Future Vol, veh/h	700	87	145	805	62	99
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	982	95	158	1129	67	108

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1077	0	1911	539
Stage 1	-	-	-	-	1030	-
Stage 2	-	-	-	-	881	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	643	-	~ 60	487
Stage 1	-	-	-	-	305	-
Stage 2	-	-	-	-	365	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	643	-	~ 45	487
Mov Cap-2 Maneuver	-	-	-	-	152	-
Stage 1	-	-	-	-	305	-
Stage 2	-	-	-	-	275	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	42.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	263	-	-	643	-
HCM Lane V/C Ratio	0.665	-	-	0.245	-
HCM Control Delay (s)	42.2	-	-	12.4	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	4.3	-	-	1	-

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	750	853	16	16	78
Future Volume (vph)	50	750	853	16	16	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3421	3413		1769	1561
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3421	3413		1769	1561
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	100%	100%
Adj. Flow (vph)	54	1052	1196	17	17	85
RTOR Reduction (vph)	0	0	1	0	0	76
Lane Group Flow (vph)	54	1052	1212	0	17	9
Confl. Peds. (#/hr)				8	1	4
Confl. Bikes (#/hr)				3		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	3.6	38.2	30.0		5.4	5.4
Effective Green, g (s)	3.6	38.2	30.0		5.4	5.4
Actuated g/C Ratio	0.07	0.73	0.57		0.10	0.10
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	117	2498	1957		182	161
v/s Ratio Prot	0.03	c0.31	c0.36			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.46	0.42	0.62		0.09	0.05
Uniform Delay, d1	23.4	2.7	7.4		21.2	21.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	0.1	0.6		0.1	0.1
Delay (s)	24.5	2.9	8.0		21.3	21.2
Level of Service	C	A	A		C	C
Approach Delay (s)		3.9	8.0		21.2	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	52.3	Sum of lost time (s)	13.3
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	704	30	62	821	39	69
Future Vol, veh/h	704	30	62	821	39	69
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	987	42	87	1151	55	97

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1029	0	1758	515
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	750	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	671	-	76	505
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	427	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	671	-	66	505
Mov Cap-2 Maneuver	-	-	-	-	185	-
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	371	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	27.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	311	-	-	671	-
HCM Lane V/C Ratio	0.487	-	-	0.13	-
HCM Control Delay (s)	27.1	-	-	11.2	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	2.5	-	-	0.4	-

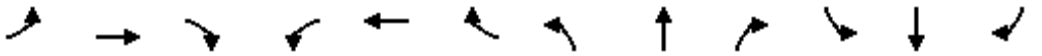
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	754	21	41	883	0	2
Future Vol, veh/h	754	21	41	883	0	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	-	-	25	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1057	23	45	1238	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1080	0	1778	540
Stage 1	-	-	-	-	1069	-
Stage 2	-	-	-	-	709	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	641	-	74	486
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	449	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	641	-	69	486
Mov Cap-2 Maneuver	-	-	-	-	187	-
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	418	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	486	-	-	641	-
HCM Lane V/C Ratio	0.004	-	-	0.07	-
HCM Control Delay (s)	12.4	-	-	11	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Future Volume (vph)	177	584	0	0	618	161	0	0	0	103	0	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3298					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3298					3433		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	100%	100%	129%	129%	100%	100%	100%	129%	100%	129%
Adj. Flow (vph)	248	819	0	0	867	226	0	0	0	144	0	429
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	0	0	0	361
Lane Group Flow (vph)	248	819	0	0	1073	0	0	0	0	144	0	68
Confl. Peds. (#/hr)						18						1
Confl. Bikes (#/hr)			26			2						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	15.2	47.0			27.8					10.6		10.6
Effective Green, g (s)	15.2	47.0			27.8					10.6		10.6
Actuated g/C Ratio	0.23	0.70			0.41					0.16		0.16
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	388	2317			1368					543		250
v/s Ratio Prot	c0.14	0.25			c0.33					0.04		c0.04
v/s Ratio Perm												
v/c Ratio	0.64	0.35			0.78					0.27		0.27
Uniform Delay, d1	23.4	4.0			17.0					24.8		24.8
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	2.5	0.0			2.8					0.3		0.6
Delay (s)	26.0	4.0			19.8					25.0		25.4
Level of Service	C	A			B					C		C
Approach Delay (s)		9.1			19.8			0.0			25.3	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	17.4
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

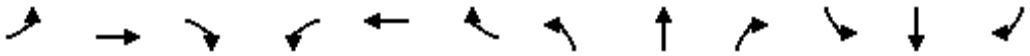
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	659	717	2	7	62
Future Vol, veh/h	28	659	717	2	7	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	924	1005	2	8	67

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1007	0	-	0	1528	504
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	522	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	684	-	-	-	108	513
Stage 1	-	-	-	-	314	-
Stage 2	-	-	-	-	560	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	684	-	-	-	103	513
Mov Cap-2 Maneuver	-	-	-	-	103	-
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	560	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	684	-	-	-	365
HCM Lane V/C Ratio	0.044	-	-	-	0.205
HCM Control Delay (s)	10.5	-	-	-	17.4
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Future Volume (veh/h)	66	513	66	13	329	25	207	34	29	49	28	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	719	72	14	461	27	290	37	32	53	30	219
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1034	443	19	889	387	499	393	340	672	82	599
Arrive On Green	0.05	0.29	0.29	0.01	0.25	0.25	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1781	3554	1521	1781	3554	1545	1127	917	793	1325	191	1397
Grp Volume(v), veh/h	72	719	72	14	461	27	290	0	69	53	0	249
Grp Sat Flow(s),veh/h/ln	1781	1777	1521	1781	1777	1545	1127	0	1710	1325	0	1589
Q Serve(g_s), s	2.1	9.5	1.9	0.4	5.9	0.7	12.4	0.0	1.3	1.3	0.0	5.6
Cycle Q Clear(g_c), s	2.1	9.5	1.9	0.4	5.9	0.7	18.1	0.0	1.3	2.6	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.88
Lane Grp Cap(c), veh/h	91	1034	443	19	889	387	499	0	733	672	0	681
V/C Ratio(X)	0.79	0.70	0.16	0.75	0.52	0.07	0.58	0.00	0.09	0.08	0.00	0.37
Avail Cap(c_a), veh/h	370	1824	781	370	1824	793	718	0	1065	929	0	989
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	24.9	16.7	14.0	26.2	17.1	15.2	16.4	0.0	9.0	9.8	0.0	10.3
Incr Delay (d2), s/veh	5.6	0.6	0.1	19.3	0.3	0.1	1.1	0.0	0.1	0.0	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	0.9	3.3	0.5	0.3	2.1	0.2	3.0	0.0	0.4	0.3	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	17.3	14.1	45.4	17.5	15.2	17.4	0.0	9.1	9.8	0.0	10.6
LnGrp LOS	C	B	B	D	B	B	B	A	A	A	A	B
Approach Vol, veh/h		863			502			359			302	
Approach Delay, s/veh		18.2			18.1			15.8			10.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	18.7		27.6	4.6	20.8		27.6				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	11.0	27.2		33.0	11.0	27.2		33.0				
Max Q Clear Time (g_c+I1), s	4.1	7.9		7.6	2.4	11.5		20.1				
Green Ext Time (p_c), s	0.0	2.3		1.8	0.0	3.6		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		16.6	
HCM 6th LOS		B	

Notes

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

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	7	545	48	76	294	5	48	0	16	7	0	14
Future Vol, veh/h	7	545	48	76	294	5	48	0	16	7	0	14
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	100	-	-	25	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	764	52	83	412	5	52	0	17	8	0	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	417	0	0	816	0	0	1178	1389	408	979	1413	209
Stage 1	-	-	-	-	-	-	806	806	-	581	581	-
Stage 2	-	-	-	-	-	-	372	583	-	398	832	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1138	-	-	807	-	-	146	141	593	204	137	797
Stage 1	-	-	-	-	-	-	342	393	-	467	498	-
Stage 2	-	-	-	-	-	-	621	497	-	599	382	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1138	-	-	807	-	-	131	126	593	182	122	797
Mov Cap-2 Maneuver	-	-	-	-	-	-	131	126	-	182	122	-
Stage 1	-	-	-	-	-	-	340	390	-	464	447	-
Stage 2	-	-	-	-	-	-	546	446	-	577	379	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.6	42.6	15.2
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	163	1138	-	-	807	-	-	375
HCM Lane V/C Ratio	0.427	0.007	-	-	0.102	-	-	0.061
HCM Control Delay (s)	42.6	8.2	-	-	10	-	-	15.2
HCM Lane LOS	E	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.9	0	-	-	0.3	-	-	0.2

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	566	350	9	12	25
Future Vol, veh/h	9	566	350	9	12	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	794	491	10	13	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	501	0	-	0	913	251
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	417	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1059	-	-	-	273	749
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	633	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1059	-	-	-	271	749
Mov Cap-2 Maneuver	-	-	-	-	271	-
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	633	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1059	-	-	-	476
HCM Lane V/C Ratio	0.009	-	-	-	0.084
HCM Control Delay (s)	8.4	-	-	-	13.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

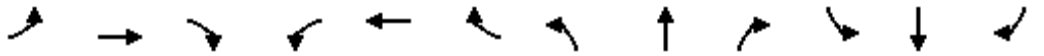
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	573	2	0	358	0	5
Future Vol, veh/h	573	2	0	358	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, %	2	2	2	2	2	2
Mvmt Flow	803	2	0	502	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	403
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	597
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	597
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	597	-	-	-
HCM Lane V/C Ratio	0.009	-	-	-
HCM Control Delay (s)	11.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Future Volume (veh/h)	184	331	24	6	14	26	83	211	212	248	229	261
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	258	464	34	7	15	28	116	229	230	270	249	366
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	533	39	19	334	298	218	558	498	362	554	462
Arrive On Green	0.13	0.31	0.31	0.01	0.19	0.19	0.12	0.31	0.31	0.10	0.30	0.30
Sat Flow, veh/h	3456	1713	126	1781	1777	1585	1781	1777	1585	3456	1870	1560
Grp Volume(v), veh/h	258	0	498	7	15	28	116	229	230	270	249	366
Grp Sat Flow(s),veh/h/ln	1728	0	1839	1781	1777	1585	1781	1777	1585	1728	1870	1560
Q Serve(g_s), s	5.2	0.0	19.0	0.3	0.5	1.1	4.5	7.5	8.6	5.6	8.0	16.0
Cycle Q Clear(g_c), s	5.2	0.0	19.0	0.3	0.5	1.1	4.5	7.5	8.6	5.6	8.0	16.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	0	573	19	334	298	218	558	498	362	554	462
V/C Ratio(X)	0.56	0.00	0.87	0.36	0.04	0.09	0.53	0.41	0.46	0.75	0.45	0.79
Avail Cap(c_a), veh/h	508	0	1079	262	1043	930	264	839	748	508	880	734
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	30.0	0.0	24.1	36.4	24.6	24.9	30.5	20.0	20.4	32.2	21.2	24.0
Incr Delay (d2), s/veh	1.1	0.0	1.6	4.2	0.0	0.1	1.5	0.2	0.2	2.0	0.8	4.4
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	2.1	0.0	7.7	0.1	0.2	0.4	1.9	2.9	2.9	2.3	3.3	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	25.7	40.6	24.7	24.9	32.0	20.2	20.6	34.2	22.0	28.3
LnGrp LOS	C	A	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		756			50			575			885	
Approach Delay, s/veh		27.6			27.0			22.8			28.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	28.4	13.2	27.7	14.1	19.2	11.9	29.0
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	10.9	43.5	11.0	34.9	10.9	43.5	10.9	35.0
Max Q Clear Time (g_c+I1), s	2.3	21.0	6.5	18.0	7.2	3.1	7.6	10.6
Green Ext Time (p_c), s	0.0	1.8	0.1	3.6	0.3	0.1	0.2	1.7

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	541	277	2	699	294
Future Volume (vph)	0	541	277	2	699	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.1	4.1			4.1
Lane Util. Factor		0.88	0.95			0.95
Frpb, ped/bikes		1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			0.97
Satd. Flow (prot)		2787	3536			3419
Flt Permitted		1.00	1.00			0.97
Satd. Flow (perm)		2787	3536			3419
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	100%	129%	129%
Adj. Flow (vph)	0	759	388	2	980	412
RTOR Reduction (vph)	0	627	0	0	0	0
Lane Group Flow (vph)	0	132	390	0	0	1392
Confl. Peds. (#/hr)		4		9		
Confl. Bikes (#/hr)				1		
Turn Type		Prot	NA		Split	NA
Protected Phases		2	4		1 2 8	1 2 8
Permitted Phases						
Actuated Green, G (s)		19.5	26.0			77.8
Effective Green, g (s)		19.5	26.0			73.3
Actuated g/C Ratio		0.17	0.23			0.65
Clearance Time (s)		4.1	4.1			
Vehicle Extension (s)		4.0	3.0			
Lane Grp Cap (vph)		485	820			2237
v/s Ratio Prot		0.05	c0.11			c0.41
v/s Ratio Perm						
v/c Ratio		0.27	0.48			0.62
Uniform Delay, d1		40.1	37.1			11.3
Progression Factor		1.00	1.00			0.41
Incremental Delay, d2		0.4	0.4			0.3
Delay (s)		40.5	37.6			4.9
Level of Service		D	D			A
Approach Delay (s)	40.5		37.6			4.9
Approach LOS	D		D			A

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	112.0	Sum of lost time (s)	16.8
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	698	3	16	540	1	28
Future Vol, veh/h	698	3	16	540	1	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	979	3	17	757	1	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	982	0	1772	981
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	791	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	703	-	91	303
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	447	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	703	-	87	303
Mov Cap-2 Maneuver	-	-	-	-	87	-
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	428	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.2	19.5
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	279	-	-	703	-
HCM Lane V/C Ratio	0.113	-	-	0.025	-
HCM Control Delay (s)	19.5	-	-	10.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

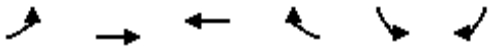
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	700	562	6	0	9
Future Vol, veh/h	14	700	562	6	0	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	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	982	788	7	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	795	0	-	0	1804	792
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	1012	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	826	-	-	-	87	389
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	351	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	826	-	-	-	85	389
Mov Cap-2 Maneuver	-	-	-	-	85	-
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	351	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	826	-	-	-	389
HCM Lane V/C Ratio	0.018	-	-	-	0.025
HCM Control Delay (s)	9.4	-	-	-	14.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	688	562	198	206	4
Future Volume (vph)	0	688	562	198	206	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.4	4.4	4.4	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00	1.00	0.98	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	
Frt		1.00	1.00	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		1863	1863	1547	1771	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		1863	1863	1547	1771	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	129%	129%	129%	129%	129%
Adj. Flow (vph)	0	965	788	278	289	6
RTOR Reduction (vph)	0	0	0	111	1	0
Lane Group Flow (vph)	0	965	788	167	294	0
Confl. Peds. (#/hr)				3	16	
Turn Type		NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases				6		
Actuated Green, G (s)		38.3	38.3	38.3	16.4	
Effective Green, g (s)		38.3	38.3	38.3	16.4	
Actuated g/C Ratio		0.54	0.54	0.54	0.23	
Clearance Time (s)		4.4	4.4	4.4	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1004	1004	834	409	
v/s Ratio Prot		c0.52	0.42		c0.17	
v/s Ratio Perm				0.11		
v/c Ratio		0.96	0.78	0.20	0.72	
Uniform Delay, d1		15.6	13.1	8.4	25.2	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		19.6	4.1	0.1	6.0	
Delay (s)		35.2	17.2	8.6	31.1	
Level of Service		D	B	A	C	
Approach Delay (s)		35.2	14.9		31.1	
Approach LOS		D	B		C	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	71.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

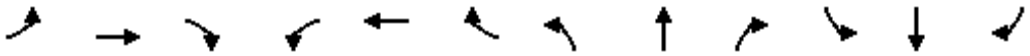
Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	866	28	55	770	0	51
Future Vol, veh/h	866	28	55	770	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	70	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1214	39	77	1080	0	72

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1253	0	-	1234
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.13	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.219	-	-	3.319
Pot Cap-1 Maneuver	-	-	553	-	0	215
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	553	-	-	215
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	29.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	215	-	-	553	-
HCM Lane V/C Ratio	0.333	-	-	0.139	-
HCM Control Delay (s)	29.9	-	-	12.6	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	1.4	-	-	0.5	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Future Volume (veh/h)	0	868	69	123	770	1	44	0	201	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1217	97	172	1080	1	62	0	282	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	1128	90	112	2742	3	326	0	284	0	1	0
Arrive On Green	0.00	0.66	0.66	0.06	0.75	0.75	0.18	0.00	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1781	1706	136	1781	3643	3	1781	0	1550	0	1870	0
Grp Volume(v), veh/h	0	0	1314	172	527	554	62	0	282	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1842	1781	1777	1870	1781	0	1550	0	1870	0
Q Serve(g_s), s	0.0	0.0	93.8	8.9	14.8	14.8	4.2	0.0	25.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	93.8	8.9	14.8	14.8	4.2	0.0	25.8	0.0	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	1	0	1217	112	1337	1407	326	0	284	0	1	0
V/C Ratio(X)	0.00	0.00	1.08	1.54	0.39	0.39	0.19	0.00	0.99	0.00	0.00	0.00
Avail Cap(c_a), veh/h	38	0	1217	112	1337	1407	326	0	284	0	53	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)	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	24.1	66.5	6.2	6.2	49.0	0.0	57.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	50.0	282.3	0.3	0.3	0.4	0.0	51.3	0.0	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	0.0	0.0	54.6	12.8	5.3	5.5	1.9	0.0	14.2	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	74.1	348.8	6.4	6.4	49.4	0.0	109.2	0.0	0.0	0.0
LnGrp LOS	A	A	F	F	A	A	D	A	F	A	A	A
Approach Vol, veh/h		1314			1253			344			0	
Approach Delay, s/veh		74.1			53.4			98.4			0.0	
Approach LOS		E			D			F				

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	111.8		30.1	13.0	98.8		0.0				
Change Period (Y+Rc), s	4.1	5.0		4.1	4.1	5.0		4.1				
Max Green Setting (Gmax), s	3.0	99.7		26.0	8.9	93.8		4.0				
Max Q Clear Time (g_c+I1), s	0.0	16.8		27.8	10.9	95.8		0.0				
Green Ext Time (p_c), s	0.0	15.3		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		68.1	
HCM 6th LOS		E	

Notes

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

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	980	848	16	7	47
Future Vol, veh/h	82	980	848	16	7	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	1374	1189	17	8	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1206	0	-	0	2750	603
Stage 1	-	-	-	-	1198	-
Stage 2	-	-	-	-	1552	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	576	-	-	-	19	443
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	191	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	576	-	-	-	16	443
Mov Cap-2 Maneuver	-	-	-	-	99	-
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	191	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	576	-	-	-	305
HCM Lane V/C Ratio	0.155	-	-	-	0.192
HCM Control Delay (s)	12.4	-	-	-	19.6
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	0.7

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	920	872	17	6	26
Future Vol, veh/h	37	920	872	17	6	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	1290	1223	18	7	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1241	0	-	0	2602	621
Stage 1	-	-	-	-	1232	-
Stage 2	-	-	-	-	1370	-
Critical Hdwy	4.13	-	-	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.219	-	-	-	3.519	3.319
Pot Cap-1 Maneuver	559	-	-	-	23	431
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	235	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	559	-	-	-	21	431
Mov Cap-2 Maneuver	-	-	-	-	21	-
Stage 1	-	-	-	-	222	-
Stage 2	-	-	-	-	235	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	66.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	559	-	-	-	92
HCM Lane V/C Ratio	0.072	-	-	-	0.378
HCM Control Delay (s)	11.9	-	-	-	66.2
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Future Volume (vph)	91	760	56	11	775	64	43	8	6	76	10	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.93		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3495		1770	3486		1770	1728		1770	1594	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3495		1770	3486		1770	1728		1770	1594	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	129%	129%	129%	100%	100%	100%	129%	129%	129%
Adj. Flow (vph)	128	1066	79	15	1087	90	47	9	7	107	14	95
RTOR Reduction (vph)	0	3	0	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	128	1142	0	15	1173	0	47	16	0	107	109	0
Confl. Peds. (#/hr)			5			11			2			6
Confl. Bikes (#/hr)			1			8			1			
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases												
Actuated Green, G (s)	12.1	57.2		1.2	46.3		8.5	8.5		13.5	13.5	
Effective Green, g (s)	12.1	57.2		1.2	46.3		8.5	8.5		13.5	13.5	
Actuated g/C Ratio	0.12	0.59		0.01	0.48		0.09	0.09		0.14	0.14	
Clearance Time (s)	4.1	4.7		4.1	4.7		4.1	4.1		4.1	4.1	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	219	2052		21	1657		154	150		245	220	
v/s Ratio Prot	c0.07	0.33		0.01	c0.34		c0.03	0.01		0.06	c0.07	
v/s Ratio Perm												
v/c Ratio	0.58	0.56		0.71	0.71		0.31	0.11		0.44	0.50	
Uniform Delay, d1	40.3	12.3		47.9	20.2		41.7	41.0		38.5	38.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.6	0.3		65.4	1.4		0.8	0.2		0.9	1.3	
Delay (s)	42.8	12.7		113.3	21.6		42.5	41.2		39.4	40.1	
Level of Service	D	B		F	C		D	D		D	D	
Approach Delay (s)		15.7			22.8			42.2			39.7	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	97.4	Sum of lost time (s)	17.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	843	7	27	853	11	4
Future Vol, veh/h	843	7	27	853	11	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	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1182	8	29	1196	12	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1190	0	1842	595
Stage 1	-	-	-	-	1186	-
Stage 2	-	-	-	-	656	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	582	-	67	447
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	582	-	64	447
Mov Cap-2 Maneuver	-	-	-	-	64	-
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	454	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	58.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	83	-	-	582	-
HCM Lane V/C Ratio	0.196	-	-	0.05	-
HCM Control Delay (s)	58.7	-	-	11.5	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	0.7	-	-	0.2	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	791	794	95	91	77
Future Vol, veh/h	78	791	794	95	91	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	40
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	1109	1113	103	99	84

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1216	0	-	0	1890	608
Stage 1	-	-	-	-	1165	-
Stage 2	-	-	-	-	725	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	569	-	-	-	~ 62	439
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	440	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	569	-	-	-	~ 53	439
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	440	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	40.6
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	569	-	-	-	155	439
HCM Lane V/C Ratio	0.149	-	-	-	0.638	0.191
HCM Control Delay (s)	12.4	-	-	-	62.1	15.1
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.5	-	-	-	3.5	0.7

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

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	842	28	11	911	16	14
Future Vol, veh/h	842	28	11	911	16	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1181	30	12	1277	17	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1211	0	1859	606
Stage 1	-	-	-	-	1196	-
Stage 2	-	-	-	-	663	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	572	-	65	440
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	474	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	572	-	64	440
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	464	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	22.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	242	-	-	572	-
HCM Lane V/C Ratio	0.135	-	-	0.021	-
HCM Control Delay (s)	22.2	-	-	11.4	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	829	875	18	14	47
Future Vol, veh/h	24	829	875	18	14	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	1162	1227	20	15	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1247	0	-	0	1870	624
Stage 1	-	-	-	-	1237	-
Stage 2	-	-	-	-	633	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	554	-	-	-	64	428
Stage 1	-	-	-	-	237	-
Stage 2	-	-	-	-	491	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	554	-	-	-	61	428
Mov Cap-2 Maneuver	-	-	-	-	165	-
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	491	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	554	-	-	-	313
HCM Lane V/C Ratio	0.047	-	-	-	0.212
HCM Control Delay (s)	11.8	-	-	-	19.6
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	814	17	36	877	11	24
Future Volume (vph)	814	17	36	877	11	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	4.7		4.7	4.7	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3296		1711	3421	1664	
Flt Permitted	1.00		0.24	1.00	0.98	
Satd. Flow (perm)	3296		435	3421	1664	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	100%	100%	129%	100%	100%
Adj. Flow (vph)	1141	18	39	1230	12	26
RTOR Reduction (vph)	1	0	0	0	25	0
Lane Group Flow (vph)	1158	0	39	1230	13	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	2			6		
Permitted Phases			6		4	
Actuated Green, G (s)	22.7		22.7	22.7	1.0	
Effective Green, g (s)	22.7		22.7	22.7	1.0	
Actuated g/C Ratio	0.70		0.70	0.70	0.03	
Clearance Time (s)	4.7		4.7	4.7	4.0	
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Lane Grp Cap (vph)	2309		304	2396	51	
v/s Ratio Prot	0.35			c0.36		
v/s Ratio Perm			0.09		c0.01	
v/c Ratio	0.50		0.13	0.51	0.25	
Uniform Delay, d1	2.2		1.6	2.3	15.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.3	0.2	2.6	
Delay (s)	2.5		1.9	2.5	17.9	
Level of Service	A		A	A	B	
Approach Delay (s)	2.5			2.5	17.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	2.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	32.4	Sum of lost time (s)	8.7
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	798	10	4	911	0	4	0	4	3	0	3
Future Vol, veh/h	0	798	10	4	911	0	4	0	4	3	0	3
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	-	-	-	60	-	-	-	-	-	-	-	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1119	11	4	1277	0	4	0	4	3	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1130	0	0	1772	2410	565	1845	-	639
Stage 1	-	-	-	-	-	-	1125	1125	-	1285	-	-
Stage 2	-	-	-	-	-	-	647	1285	-	560	-	-
Critical Hdwy	-	-	-	4.14	-	-	7.54	6.54	6.94	7.54	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	3.52	4.02	3.32	3.52	-	3.32
Pot Cap-1 Maneuver	0	-	-	614	-	-	53	32	468	46	0	419
Stage 1	0	-	-	-	-	-	218	278	-	174	0	-
Stage 2	0	-	-	-	-	-	426	233	-	480	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	614	-	-	52	32	468	45	-	419
Mov Cap-2 Maneuver	-	-	-	-	-	-	152	130	-	132	-	-
Stage 1	-	-	-	-	-	-	218	278	-	174	-	-
Stage 2	-	-	-	-	-	-	420	231	-	476	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	21.3	13.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	229	-	-	614	-	-	419
HCM Lane V/C Ratio	0.038	-	-	0.007	-	-	0.008
HCM Control Delay (s)	21.3	-	-	10.9	-	-	13.7
HCM Lane LOS	C	-	-	B	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	2.2

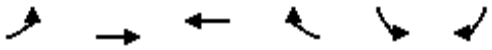
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	737	33	47	900	64	81
Future Vol, veh/h	737	33	47	900	64	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1033	46	51	1262	70	88

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1079	0	1789	540
Stage 1	-	-	-	-	1056	-
Stage 2	-	-	-	-	733	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	642	-	72	486
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	436	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	642	-	~ 66	486
Mov Cap-2 Maneuver	-	-	-	-	185	-
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	402	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	32.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	283	-	-	642	-
HCM Lane V/C Ratio	0.557	-	-	0.08	-
HCM Control Delay (s)	32.6	-	-	11.1	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	3.1	-	-	0.3	-

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	92	682	898	35	19	82
Future Volume (vph)	92	682	898	35	19	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12
Total Lost time (s)	4.0	4.7	5.3		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1711	3421	3403		1764	1552
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1711	3421	3403		1764	1552
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	100%	100%	100%
Adj. Flow (vph)	129	956	1259	38	21	89
RTOR Reduction (vph)	0	0	2	0	0	74
Lane Group Flow (vph)	129	956	1295	0	21	15
Confl. Peds. (#/hr)					5	12
Confl. Bikes (#/hr)				24		
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases					4	4
Actuated Green, G (s)	6.7	44.6	33.3		10.5	10.5
Effective Green, g (s)	6.7	44.6	33.3		10.5	10.5
Actuated g/C Ratio	0.11	0.70	0.52		0.16	0.16
Clearance Time (s)	4.0	4.7	5.3		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	179	2391	1776		290	255
v/s Ratio Prot	c0.08	0.28	c0.38			
v/s Ratio Perm					c0.01	0.01
v/c Ratio	0.72	0.40	0.73		0.07	0.06
Uniform Delay, d1	27.6	4.0	11.8		22.5	22.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	11.4	0.1	1.5		0.0	0.0
Delay (s)	39.1	4.1	13.3		22.6	22.5
Level of Service	D	A	B		C	C
Approach Delay (s)		8.3	13.3		22.5	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	63.8	Sum of lost time (s)	13.3
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	743	0	89	930	20	71
Future Vol, veh/h	743	0	89	930	20	71
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1042	0	125	1304	22	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1042	0	1944	521
Stage 1	-	-	-	-	1042	-
Stage 2	-	-	-	-	902	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	663	-	57	500
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	356	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	663	-	46	500
Mov Cap-2 Maneuver	-	-	-	-	156	-
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	289	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	20.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	337	-	-	663	-
HCM Lane V/C Ratio	0.294	-	-	0.188	-
HCM Control Delay (s)	20.1	-	-	11.7	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	-	-	0.7	-

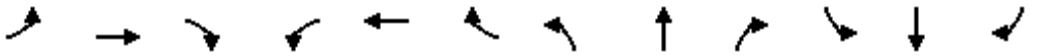
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	811	3	9	1018	9	1
Future Vol, veh/h	811	3	9	1018	9	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	-	-	25	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1137	3	10	1427	10	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1140	0	1873	570
Stage 1	-	-	-	-	1139	-
Stage 2	-	-	-	-	734	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	609	-	64	465
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	436	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	609	-	63	465
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	429	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	25.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	189	-	-	609	-
HCM Lane V/C Ratio	0.058	-	-	0.016	-
HCM Control Delay (s)	25.2	-	-	11	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Future Volume (vph)	260	532	0	0	722	182	0	0	0	139	0	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	11	11	11	12	12	12	12	12	12
Total Lost time (s)	4.0	5.4			5.4					4.0		4.0
Lane Util. Factor	1.00	0.95			0.95					0.97		1.00
Frpb, ped/bikes	1.00	1.00			0.99					1.00		1.00
Flpb, ped/bikes	1.00	1.00			1.00					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1711	3303			3300					3433		1583
Flt Permitted	0.95	1.00			1.00					0.95		1.00
Satd. Flow (perm)	1711	3303			3300					3433		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	129%	129%	129%	100%	129%	129%	100%	100%	100%	129%	100%	129%
Adj. Flow (vph)	365	746	0	0	1012	255	0	0	0	195	0	386
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	0	335
Lane Group Flow (vph)	365	746	0	0	1252	0	0	0	0	195	0	51
Confl. Peds. (#/hr)			3			3						1
Confl. Bikes (#/hr)			1			24						
Turn Type	Prot	NA			NA					Prot		Prot
Protected Phases	5	2			6		8	8		4		4
Permitted Phases												
Actuated Green, G (s)	27.9	75.9			44.0					12.9		12.9
Effective Green, g (s)	27.9	75.9			44.0					12.9		12.9
Actuated g/C Ratio	0.28	0.77			0.45					0.13		0.13
Clearance Time (s)	4.0	5.4			5.4					4.0		4.0
Vehicle Extension (s)	2.0	1.0			1.0					3.0		3.0
Lane Grp Cap (vph)	486	2552			1478					450		207
v/s Ratio Prot	c0.21	0.23			c0.38					c0.06		0.03
v/s Ratio Perm												
v/c Ratio	0.75	0.29			0.85					0.43		0.24
Uniform Delay, d1	32.0	3.3			24.1					39.3		38.3
Progression Factor	1.00	1.00			1.00					1.00		1.00
Incremental Delay, d2	5.7	0.0			4.5					0.7		0.6
Delay (s)	37.7	3.3			28.6					40.0		38.9
Level of Service	D	A			C					D		D
Approach Delay (s)		14.6			28.6			0.0			39.3	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	98.2	Sum of lost time (s)	17.4
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

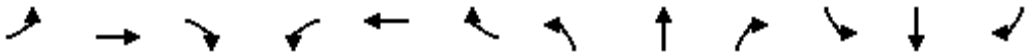
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	583	830	17	6	43
Future Vol, veh/h	82	583	830	17	6	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	817	1164	18	7	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1182	0	-	0	1760	591
Stage 1	-	-	-	-	1173	-
Stage 2	-	-	-	-	587	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	587	-	-	-	76	450
Stage 1	-	-	-	-	256	-
Stage 2	-	-	-	-	519	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	587	-	-	-	64	450
Mov Cap-2 Maneuver	-	-	-	-	64	-
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	519	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	22.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	587	-	-	-	259
HCM Lane V/C Ratio	0.152	-	-	-	0.206
HCM Control Delay (s)	12.2	-	-	-	22.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	0.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Future Volume (veh/h)	104	349	147	29	688	60	107	10	18	23	15	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	0.99		0.98	0.99		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	489	160	32	965	65	116	11	20	25	16	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	1576	686	39	1363	581	377	131	238	442	57	299
Arrive On Green	0.08	0.44	0.44	0.02	0.38	0.38	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3554	1547	1781	3554	1515	1287	586	1066	1368	255	1340
Grp Volume(v), veh/h	113	489	160	32	965	65	116	0	31	25	0	100
Grp Sat Flow(s),veh/h/ln	1781	1777	1547	1781	1777	1515	1287	0	1652	1368	0	1595
Q Serve(g_s), s	2.9	4.1	2.9	0.8	10.6	1.3	3.8	0.0	0.7	0.7	0.0	2.4
Cycle Q Clear(g_c), s	2.9	4.1	2.9	0.8	10.6	1.3	6.2	0.0	0.7	1.4	0.0	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		0.84
Lane Grp Cap(c), veh/h	146	1576	686	39	1363	581	377	0	369	442	0	356
V/C Ratio(X)	0.78	0.31	0.23	0.82	0.71	0.11	0.31	0.00	0.08	0.06	0.00	0.28
Avail Cap(c_a), veh/h	427	2105	916	427	2105	897	1015	0	1187	1120	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	8.2	7.9	22.4	12.0	9.1	17.3	0.0	14.1	14.7	0.0	14.8
Incr Delay (d2), s/veh	3.3	0.1	0.1	14.4	0.5	0.1	0.5	0.0	0.1	0.1	0.0	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	1.1	1.1	0.7	0.5	3.1	0.3	1.1	0.0	0.2	0.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	8.3	8.1	36.7	12.5	9.2	17.8	0.0	14.2	14.7	0.0	15.2
LnGrp LOS	C	A	A	D	B	A	B	A	B	B	A	B
Approach Vol, veh/h		762			1062			147			125	
Approach Delay, s/veh		10.6			13.0			17.0			15.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	23.0		15.1	5.0	25.8		15.1				
Change Period (Y+Rc), s	4.0	5.4		4.9	4.0	5.4		4.9				
Max Green Setting (Gmax), s	11.0	27.2		33.0	11.0	27.2		33.0				
Max Q Clear Time (g_c+I1), s	4.9	12.6		4.4	2.8	6.1		8.2				
Green Ext Time (p_c), s	0.1	4.9		0.6	0.0	2.8		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		12.5	
HCM 6th LOS		B	

Notes

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

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	16	385	31	9	701	14	34	0	33	3	0	11
Future Vol, veh/h	16	385	31	9	701	14	34	0	33	3	0	11
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	100	-	-	25	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	540	34	10	983	15	37	0	36	3	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	998	0	0	574	0	0	1103	1609	287	1315	1619	499
Stage 1	-	-	-	-	-	-	591	591	-	1011	1011	-
Stage 2	-	-	-	-	-	-	512	1018	-	304	608	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	689	-	-	995	-	-	166	104	710	116	102	517
Stage 1	-	-	-	-	-	-	460	493	-	257	315	-
Stage 2	-	-	-	-	-	-	513	313	-	681	484	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	689	-	-	995	-	-	158	100	710	107	98	517
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	100	-	107	98	-
Stage 1	-	-	-	-	-	-	449	481	-	251	312	-
Stage 2	-	-	-	-	-	-	496	310	-	631	472	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	24.6	18.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	256	689	-	-	995	-	-	284
HCM Lane V/C Ratio	0.284	0.025	-	-	0.01	-	-	0.054
HCM Control Delay (s)	24.6	10.4	-	-	8.7	-	-	18.4
HCM Lane LOS	C	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.1	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	395	725	9	7	14
Future Vol, veh/h	16	395	725	9	7	14
Conflicting Peds, #/hr	0	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	554	1017	10	8	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1029	0	-	0	1335	516
Stage 1	-	-	-	-	1024	-
Stage 2	-	-	-	-	311	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	671	-	-	-	145	504
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	716	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	670	-	-	-	141	503
Mov Cap-2 Maneuver	-	-	-	-	141	-
Stage 1	-	-	-	-	299	-
Stage 2	-	-	-	-	715	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	19.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	670	-	-	-	271
HCM Lane V/C Ratio	0.026	-	-	-	0.084
HCM Control Delay (s)	10.5	-	-	-	19.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

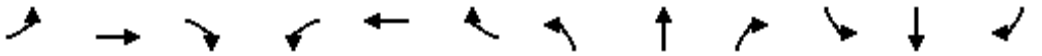
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	393	11	0	738	0	3
Future Vol, veh/h	393	11	0	738	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, %	2	2	2	2	2	2
Mvmt Flow	551	12	0	1035	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	282
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	715
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	715
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	715	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-
HCM Control Delay (s)	10.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Future Volume (veh/h)	280	18	74	225	390	313	63	240	3	20	323	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	393	25	104	245	547	340	88	261	3	22	351	394
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	453	86	356	275	619	385	159	1279	15	94	548	458
Arrive On Green	0.13	0.28	0.28	0.15	0.30	0.30	0.09	0.36	0.36	0.03	0.29	0.29
Sat Flow, veh/h	3456	310	1289	1781	2067	1283	1781	3598	41	3456	1870	1562
Grp Volume(v), veh/h	393	0	129	245	470	417	88	129	135	22	351	394
Grp Sat Flow(s),veh/h/ln	1728	0	1599	1781	1777	1574	1781	1777	1863	1728	1870	1562
Q Serve(g_s), s	11.5	0.0	6.5	13.9	25.9	26.0	4.9	5.2	5.2	0.6	16.8	24.5
Cycle Q Clear(g_c), s	11.5	0.0	6.5	13.9	25.9	26.0	4.9	5.2	5.2	0.6	16.8	24.5
Prop In Lane	1.00		0.81	1.00		0.82	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	453	0	442	275	533	472	159	631	662	94	548	458
V/C Ratio(X)	0.87	0.00	0.29	0.89	0.88	0.88	0.55	0.20	0.20	0.23	0.64	0.86
Avail Cap(c_a), veh/h	454	0	565	279	672	595	189	639	670	366	673	562
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	43.8	0.0	29.3	42.6	34.3	34.3	44.8	23.0	23.0	49.0	31.6	34.3
Incr Delay (d2), s/veh	16.2	0.0	0.1	26.9	9.6	10.8	2.2	0.1	0.1	0.5	1.9	11.9
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	5.8	0.0	2.4	8.0	12.1	10.9	2.2	2.1	2.2	0.3	7.5	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.0	0.0	29.4	69.6	43.9	45.1	47.1	23.1	23.1	49.4	33.6	46.3
LnGrp LOS	E	A	C	E	D	D	D	C	C	D	C	D
Approach Vol, veh/h		522			1132			352			767	
Approach Delay, s/veh		52.5			49.9			29.1			40.6	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	33.7	13.3	35.8	17.6	36.1	6.9	42.2
Change Period (Y+Rc), s	4.1	5.3	4.1	5.7	4.1	5.3	4.1	5.7
Max Green Setting (Gmax), s	16.1	36.3	10.9	37.0	13.5	38.9	10.9	37.0
Max Q Clear Time (g_c+I1), s	15.9	8.5	6.9	26.5	13.5	28.0	2.6	7.2
Green Ext Time (p_c), s	0.0	0.4	0.0	3.6	0.0	2.9	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	45.2
HCM 6th LOS	D

Notes

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