

ANEXO 17

MEMÓRIA DE CÁLCULO DA SIMULAÇÃO DO CENÁRIO 02

Intersection

Intersection Delay (sec/veh): 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	259	4	7	505	5	18
Conflicting Peds.(#/hr)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None
Storage Length		0.0	0.0		0.0	0.0
Median Width	0.0			0.0	3.6	
Grade (%)	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2
Movement Flow Rate	282	4	8	549	5	20
Number of Lanes	1	0	0	1	1	0

Major/Minor	Major 1		Major 2			
Conflicting Flow Rate - All	0	0	286	0	849	284
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	565	-
Follow-up Headway	-	-	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	-	1276	-	331	755
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	569	-
Time blocked-Platoon(%)	-	-	0	-	0	0
Mov Capacity-1 Maneuver	-	-	1276	-	328	755
Mov Capacity-2 Maneuver	-	-	-	-	328	-
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	564	-













Approach	EB	WB	NB
HCM Control Delay (s)	0	0.1	11.4
HCM LOS	A	A	B

Lane	NBLn1	EBT	EBR	WBL	WBT
Capacity (vph)	588				
HCM Control Delay (s)	11.4	-	-	7.838	-
HCM Lane VC Ratio	0.043	-	-	0.006	-
HCM Lane LOS	B	-	-	A	-
HCM 95th Percentile Queue (veh)	0.133	-	-	0.018	-

HCM 2010 Signalized Intersection Summary

200: Av. Meaípe & R. La Paloma

30/08/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Volume (vph)	45	2	25	7	0	2	26	271	11	15	360	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Queue, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking, Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow Rate	1863	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863
Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Capacity, veh/h	577	54	258	160	0	0	153	1214	48	113	1237	117
Arriving On Green	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1159.2	26.8	644.0	0.0	0.0	0.0	269.4	2840.1	120.0	125.2	3010.5	293.0
Grp Volume(v), veh/h	78.3	0.0	0.0	9.8	0.0	0.0	167.9	0.0	166.8	232.3	0.0	213.4
Grp Sat Flow(s),veh/h/ln	1854.7	0.0	0.0	0.0	0.0	0.0	1601.1	0.0	1673.9	1783.5	0.0	1643.4
Q Serve(g_s), s	0.0	0.0	0.0	14.9	0.0	0.0	0.0	0.0	2.7	0.0	0.0	3.6
Cycle Q Clear(g_c), s	1.1	0.0	0.0	16.0	0.0	0.0	2.4	0.0	2.7	3.4	0.0	3.6
Proportion In Lane	0.625		0.347	0.778		0.222	0.168		0.072	0.070		0.178
Lane Grp Cap(c), veh/h	888.1	0.0	0.0	160.0	0.0	0.0	745.6	0.0	669.6	809.7	0.0	657.4
V/C Ratio(X)	0.088	0.000	0.000	0.061	0.000	0.000	0.225	0.000	0.249	0.287	0.000	0.325
Avail Cap(c_a), veh/h	888.1	0.0	0.0	160.0	0.0	0.0	745.6	0.0	669.6	809.7	0.0	657.4
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)	1.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	1.000
Uniform Delay (d), s/veh	7.5	0.0	0.0	15.2	0.0	0.0	7.9	0.0	8.0	8.2	0.0	8.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.0	0.0	0.7	0.0	0.9	0.9	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Group Delay (d), s/veh	7.7	0.0	0.0	15.9	0.0	0.0	8.6	0.0	8.9	9.1	0.0	9.6
Lane Group LOS	A			B			A		A	A		A
Approach Volume, veh/h		78			10			335			446	
Approach Delay, s/veh		7.7			15.9			8.7			9.3	
Approach LOS		A			B			A			A	
Timer												
Assigned Phase		4			8			2			6	
Phase Duration (G+Y+Rc), s		20.00			20.00			20.00			20.00	
Change Period (Y+Rc), s		4.00			4.00			4.00			4.00	
Max Green Setting (Gmax), s		16.00			16.00			16.00			16.00	
Max Q Clear Time (g_c+l1), s		3.12			18.00			4.66			5.58	
Green Extension Time (p_c)		0.66			0.00			7.65			7.13	
Intersection Summary												
HCM 2010 Control Delay				9.0								
HCM 2010 Level of Service				A								

Intersection

Intersection Delay (sec/veh): 4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	49	0	55	4	0	10
Conflicting Peds.(#/hr)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None
Storage Length		0.0	0.0		0.0	0.0
Median Width	0.0			0.0	3.6	
Grade (%)	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2
Movement Flow Rate	53	0	60	4	0	11
Number of Lanes	1	0	0	1	1	0

Major/Minor	Major 1		Major 2			
Conflicting Flow Rate - All	0	-	53	0	177	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	124	-
Follow-up Headway	-	0	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	0	1553	-	813	1014
Stage 1	-	0	-	-	970	-
Stage 2	-	0	-	-	902	-
Time blocked-Platoon(%)	-	0	0	-	0	0
Mov Capacity-1 Maneuver	-	-	1553	-	781	1014
Mov Capacity-2 Maneuver	-	-	-	-	781	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	867	-



















Approach	EB	WB	NB
HCM Control Delay (s)	0	6.9	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBT	WBL	WBT
Capacity (vph)	1014			
HCM Control Delay (s)	8.6	-	7.411	-
HCM Lane VC Ratio	0.011	-	0.038	-
HCM Lane LOS	A	-	A	-
HCM 95th Percentile Queue (veh)	0.032	-	0.12	-

HCM 2010 Signalized Intersection Summary

400: Av. Meaípe & Alam. Las Palmas

30/08/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	4	3	1	19	281	23	29	422	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Queue, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking, Bus Adj	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow Rate	0	0	0	1863	1863	1863	1863	1863	1863	1863	1863	0
Lanes	0	0	0	0	1	0	1	1	0	1	1	0
Capacity, veh/h	0	0	0	90	53	8	118	765	63	148	869	0
Arriving On Green	0.00	0.00	0.00	0.27	0.27	0.27	0.07	0.45	0.45	0.08	0.47	0.00
Sat Flow, veh/h		0		113.5	408.6	28.4	1774.0	1699.1	139.1	1774.0	1862.7	0.0
Grp Volume(v), veh/h		0.0		8.7	0.0	0.0	20.7	0.0	330.4	31.5	458.7	0.0
Grp Sat Flow(s),veh/h/ln				226.9	0.0	0.0	1774.0	0.0	1838.2	1774.0	1862.7	0.0
Q Serve(g_s), s				0.0	0.0	0.0	0.7	0.0	7.2	1.0	10.5	0.0
Cycle Q Clear(g_c), s				16.0	0.0	0.0	0.7	0.0	7.2	1.0	10.5	0.0
Proportion In Lane				0.500		0.125	1.000		0.076	1.000		0.000
Lane Grp Cap(c), veh/h				150.5	0.0	0.0	118.3	0.0	827.2	147.8	869.3	0.0
V/C Ratio(X)				0.058	0.000	0.000	0.175	0.000	0.399	0.213	0.528	0.000
Avail Cap(c_a), veh/h				150.5	0.0	0.0	118.3	0.0	827.2	147.8	869.3	0.0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.000	0.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000
Uniform Delay (d), s/veh				16.2	0.0	0.0	26.4	0.0	11.1	25.7	11.3	0.0
Incr Delay (d2), s/veh				0.7	0.0	0.0	3.2	0.0	1.4	3.3	2.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Group Delay (d), s/veh				16.9	0.0	0.0	29.6	0.0	12.5	28.9	13.6	0.0
Lane Group LOS				B			C		B	C	B	
Approach Volume, veh/h					9			351			490	
Approach Delay, s/veh					16.9			13.5			14.6	
Approach LOS					B			B			B	
Timer												
Assigned Phase					8		5	2		1	6	
Phase Duration (G+Y+Rc), s					20.00		8.00	31.00		9.00	32.00	
Change Period (Y+Rc), s					4.00		4.00	4.00		4.00	4.00	
Max Green Setting (Gmax), s					16.00		4.00	27.00		5.00	28.00	
Max Q Clear Time (g_c+l1), s					18.00		2.66	9.23		2.99	12.45	
Green Extension Time (p_c)					0.00		0.01	11.37		0.02	10.25	
Intersection Summary												
HCM 2010 Control Delay				14.2								
HCM 2010 Level of Service				B								

Intersection

Intersection Delay (sec/veh): 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	18	2	5	2	0	3	6	297	1	0	400	17
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Median Width		0.0			0.0			0.0			0.0	
Grade (%)		0%			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
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	20	2	5	2	0	3	7	323	1	0	435	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Major/Minor	Minor 2			Minor 1			Major 1			Major 2		
Conflicting Flow Rate - All	783	782	444	786	791	324	453	0	0	324	0	0
Stage 1	444	444	-	338	338	-	-	-	-	-	-	-
Stage 2	339	338	-	448	453	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	311	326	614	310	322	717	1108	-	-	1236	-	-
Stage 1	593	575	-	676	641	-	-	-	-	-	-	-
Stage 2	676	641	-	590	570	-	-	-	-	-	-	-
Time blocked-Platoon(%)	0	0	0	0	0	0	0	-	-	0	-	-
Mov Capacity-1 Maneuver	308	323	614	304	319	717	1108	-	-	1236	-	-
Mov Capacity-2 Maneuver	308	323	-	304	319	-	-	-	-	-	-	-
Stage 1	588	575	-	671	636	-	-	-	-	-	-	-
Stage 2	668	636	-	583	570	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	16.4	12.8	0.2	0
HCM LOS	C	B	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (vph)				344	465			
HCM Control Delay (s)	8.268	0	-	16.4	12.8	0	-	-
HCM Lane VC Ratio	0.006	-	-	0.079	0.012	-	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th Percentile Queue (veh)	0.018	-	-	0.256	0.035	0	-	-

Intersection

Intersection Delay (sec/veh): 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	464	14	19	356	16	35
Conflicting Peds.(#/hr)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None
Storage Length		0.0	0.0		0.0	0.0
Median Width	0.0			0.0	3.6	
Grade (%)	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2
Movement Flow Rate	504	15	21	387	17	38
Number of Lanes	1	0	0	1	1	0

Major/Minor	Major 1		Major 2			
Conflicting Flow Rate - All	0	0	519	0	941	512
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	429	-
Follow-up Headway	-	-	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	-	1047	-	292	562
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	657	-
Time blocked-Platoon(%)	-	-	0	-	0	0
Mov Capacity-1 Maneuver	-	-	1047	-	284	562
Mov Capacity-2 Maneuver	-	-	-	-	284	-
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	640	-













Approach	EB	WB	NB
HCM Control Delay (s)	0	0.4	14.6
HCM LOS	A	A	B

Lane	NBLn1	EBT	EBR	WBL	WBT
Capacity (vph)	430				
HCM Control Delay (s)	14.6	-	-	8.508	-
HCM Lane VC Ratio	0.129	-	-	0.02	-
HCM Lane LOS	B	-	-	A	-
HCM 95th Percentile Queue (veh)	0.44	-	-	0.06	-

HCM 2010 Signalized Intersection Summary

200: Av. Meaípe & R. La Paloma

04/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Volume (vph)	61	4	32	15	0	35	41	436	15	21	268	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Queue, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking, Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow Rate	1863	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863
Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Capacity, veh/h	581	63	245	117	0	0	156	1224	41	131	1123	169
Arriving On Green	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1166.7	38.9	612.0	0.0	0.0	0.0	270.9	2894.9	101.4	207.9	2579.6	423.1
Grp Volume(v), veh/h	105.4	0.0	0.0	54.3	0.0	0.0	265.0	0.0	269.8	184.9	0.0	174.8
Grp Sat Flow(s),veh/h/ln	1855.2	0.0	0.0	0.0	0.0	0.0	1610.6	0.0	1677.2	1684.4	0.0	1620.4
Q Serve(g_s), s	0.0	0.0	0.0	11.6	0.0	0.0	0.0	0.0	4.6	0.0	0.0	2.9
Cycle Q Clear(g_c), s	1.5	0.0	0.0	16.0	0.0	0.0	4.0	0.0	4.6	2.6	0.0	2.9
Proportion In Lane	0.629		0.330	0.300		0.700	0.168		0.060	0.123		0.261
Lane Grp Cap(c), veh/h	888.7	0.0	0.0	117.0	0.0	0.0	749.4	0.0	670.9	774.9	0.0	648.2
V/C Ratio(X)	0.119	0.000	0.000	0.465	0.000	0.000	0.354	0.000	0.402	0.239	0.000	0.270
Avail Cap(c_a), veh/h	888.7	0.0	0.0	117.0	0.0	0.0	749.4	0.0	670.9	774.9	0.0	648.2
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)	1.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	1.000
Uniform Delay (d), s/veh	7.7	0.0	0.0	15.9	0.0	0.0	8.4	0.0	8.6	8.0	0.0	8.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	12.7	0.0	0.0	1.3	0.0	1.8	0.7	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Group Delay (d), s/veh	7.9	0.0	0.0	28.6	0.0	0.0	9.7	0.0	10.4	8.7	0.0	9.1
Lane Group LOS	A			C			A		B	A		A
Approach Volume, veh/h		105			54			535			360	
Approach Delay, s/veh		7.9			28.6			10.0			8.9	
Approach LOS		A			C			B			A	
Timer												
Assigned Phase		4			8			2			6	
Phase Duration (G+Y+Rc), s		20.00			20.00			20.00			20.00	
Change Period (Y+Rc), s		4.00			4.00			4.00			4.00	
Max Green Setting (Gmax), s		16.00			16.00			16.00			16.00	
Max Q Clear Time (g_c+l1), s		3.51			18.00			6.60			4.90	
Green Extension Time (p_c)		0.88			0.00			7.13			8.24	
Intersection Summary												
HCM 2010 Control Delay				10.4								
HCM 2010 Level of Service				B								

Intersection

Intersection Delay (sec/veh): 4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	68	0	68	10	0	15
Conflicting Peds.(#/hr)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None
Storage Length		0.0	0.0		0.0	0.0
Median Width	0.0			0.0	3.6	
Grade (%)	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2
Movement Flow Rate	74	0	74	11	0	16
Number of Lanes	1	0	0	1	1	0

Major/Minor	Major 1		Major 2			
Conflicting Flow Rate - All	0	-	74	0	233	74
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	159	-
Follow-up Headway	-	0	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	0	1526	-	755	988
Stage 1	-	0	-	-	949	-
Stage 2	-	0	-	-	870	-
Time blocked-Platoon(%)	-	0	0	-	0	0
Mov Capacity-1 Maneuver	-	-	1526	-	718	988
Mov Capacity-2 Maneuver	-	-	-	-	718	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	827	-


















Approach	EB	WB	NB
HCM Control Delay (s)	0	6.5	8.7
HCM LOS	A	A	A

Lane	NBLn1	EBT	WBL	WBT
Capacity (vph)	988			
HCM Control Delay (s)	8.7	-	7.479	-
HCM Lane VC Ratio	0.017	-	0.048	-
HCM Lane LOS	A	-	A	-
HCM 95th Percentile Queue (veh)	0.05	-	0.153	-

HCM 2010 Signalized Intersection Summary

400: Av. Meaípe & Alam. Las Palmas

04/09/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	11	5	4	35	504	7	13	307	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Queue, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking, Bus Adj	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow Rate	0	0	0	1863	1863	1863	1863	1863	1863	1863	1863	0
Lanes	0	0	0	0	1	0	1	1	0	1	1	0
Capacity, veh/h	0	0	0	93	39	10	118	825	11	148	869	0
Arriving On Green	0.00	0.00	0.00	0.27	0.27	0.27	0.07	0.45	0.45	0.08	0.47	0.00
Sat Flow, veh/h		0		101.0	259.9	36.7	1774.0	1832.8	25.5	1774.0	1862.7	0.0
Grp Volume(v), veh/h		0.0		21.7	0.0	0.0	38.0	0.0	555.4	14.1	333.7	0.0
Grp Sat Flow(s),veh/h/ln				183.7	0.0	0.0	1774.0	0.0	1858.3	1774.0	1862.7	0.0
Q Serve(g_s), s				0.0	0.0	0.0	1.2	0.0	14.1	0.4	7.0	0.0
Cycle Q Clear(g_c), s				16.0	0.0	0.0	1.2	0.0	14.1	0.4	7.0	0.0
Proportion In Lane				0.550		0.200	1.000		0.014	1.000		0.000
Lane Grp Cap(c), veh/h				142.0	0.0	0.0	118.3	0.0	836.2	147.8	869.3	0.0
V/C Ratio(X)				0.153	0.000	0.000	0.322	0.000	0.664	0.096	0.384	0.000
Avail Cap(c_a), veh/h				142.0	0.0	0.0	118.3	0.0	836.2	147.8	869.3	0.0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.000	0.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000
Uniform Delay (d), s/veh				16.3	0.0	0.0	26.7	0.0	12.9	25.4	10.4	0.0
Incr Delay (d2), s/veh				2.3	0.0	0.0	7.1	0.0	4.1	1.3	1.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Group Delay (d), s/veh				18.6	0.0	0.0	33.8	0.0	17.1	26.7	11.7	0.0
Lane Group LOS				B			C		B	C	B	
Approach Volume, veh/h					22			593			348	
Approach Delay, s/veh					18.6			18.2			12.3	
Approach LOS					B			B			B	
Timer												
Assigned Phase					8		5	2		1		6
Phase Duration (G+Y+Rc), s					20.00		8.00	31.00		9.00		32.00
Change Period (Y+Rc), s					4.00		4.00	4.00		4.00		4.00
Max Green Setting (Gmax), s					16.00		4.00	27.00		5.00		28.00
Max Q Clear Time (g_c+l1), s					18.00		3.23	16.07		2.44		8.98
Green Extension Time (p_c)					0.00		0.01	8.33		0.01		13.24
Intersection Summary												
HCM 2010 Control Delay				16.0								
HCM 2010 Level of Service				B								

Intersection

Intersection Delay (sec/veh): 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	32	1	10	4	0	1	9	516	2	0	332	21
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Median Width		0.0			0.0			0.0			0.0	
Grade (%)		0%			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
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	35	1	11	4	0	1	10	561	2	0	361	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Major/Minor	Minor 2		Minor 1			Major 1			Major 2			
Conflicting Flow Rate - All	956	956	373	961	966	562	384	0	0	563	0	0
Stage 1	373	373	-	582	582	-	-	-	-	-	-	-
Stage 2	583	583	-	379	384	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	238	258	673	236	255	526	1174	-	-	1008	-	-
Stage 1	648	619	-	499	499	-	-	-	-	-	-	-
Stage 2	498	499	-	643	611	-	-	-	-	-	-	-
Time blocked-Platoon(%)	0	0	0	0	0	0	0	-	-	0	-	-
Mov Capacity-1 Maneuver	235	255	673	229	252	526	1174	-	-	1008	-	-
Mov Capacity-2 Maneuver	235	255	-	229	252	-	-	-	-	-	-	-
Stage 1	640	619	-	493	493	-	-	-	-	-	-	-
Stage 2	491	493	-	632	611	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	20.5	19.3	0.1	0
HCM LOS	C	C	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (vph)				278	258			
HCM Control Delay (s)	8.092	0	-	20.5	19.3	0	-	-
HCM Lane VC Ratio	0.008	-	-	0.168	0.021	-	-	-
HCM Lane LOS	A	A	-	C	C	A	-	-
HCM 95th Percentile Queue (veh)	0.025	-	-	0.594	0.064	0	-	-

Intersection

Intersection Delay (sec/veh): 0.9

Movement	NBL	NBT	SBT	SBR	SEL	SER
Volume (vph)	18	277	392	25	17	26
Conflicting Peds.(#/hr)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None
Storage Length	0.0			0.0	0.0	0.0
Median Width		0.0	0.0		3.6	
Grade (%)		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2
Movement Flow Rate	20	301	426	27	18	28
Number of Lanes	0	1	2	0	1	0

Major/Minor	Major 1		Major 2			
Conflicting Flow Rate - All	453	0	0	0	781	227
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	341	-
Follow-up Headway	2.22	-	-	-	3.52	3.32
Pot Capacity-1 Maneuver	1104	-	-	-	332	776
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	692	-
Time blocked-Platoon(%)	0	-	-	-	0	0
Mov Capacity-1 Maneuver	1104	-	-	-	325	776
Mov Capacity-2 Maneuver	-	-	-	-	325	-
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	677	-

Approach	NB	SB	SE
HCM Control Delay (s)	0.5	0	12.9
HCM LOS	A	A	B

Lane	NBL	NBT	SELn1	SBT	SBR
Capacity (vph)			501		
HCM Control Delay (s)	8.32	-	12.9	-	-
HCM Lane VC Ratio	0.018	-	0.093	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th Percentile Queue (veh)	0.054	-	0.307	-	-

Intersection

Intersection Delay (sec/veh): 0.8

Movement	NBL	NBT	SBT	SBR	SEL	SER
Volume (vph)	18	499	338	25	17	26
Conflicting Peds.(#/hr)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None
Storage Length	0.0			0.0	0.0	0.0
Median Width		0.0	0.0		3.6	
Grade (%)		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2
Movement Flow Rate	20	542	367	27	18	28
Number of Lanes	0	1	2	0	1	0

Major/Minor	Major 1		Major 2			
Conflicting Flow Rate - All	394	0	0	0	963	198
Stage 1	-	-	-	-	381	-
Stage 2	-	-	-	-	582	-
Follow-up Headway	2.22	-	-	-	3.52	3.32
Pot Capacity-1 Maneuver	1161	-	-	-	253	810
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	522	-
Time blocked-Platoon(%)	0	-	-	-	0	0
Mov Capacity-1 Maneuver	1161	-	-	-	247	810
Mov Capacity-2 Maneuver	-	-	-	-	247	-
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	509	-

Approach	NB	SB	SE
HCM Control Delay (s)	0.3	0	14.5
HCM LOS	A	A	B

Lane	NBL	NBT	SELn1	SBT	SBR
Capacity (vph)			426		
HCM Control Delay (s)	8.154	-	14.5	-	-
HCM Lane VC Ratio	0.017	-	0.11	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th Percentile Queue (veh)	0.051	-	0.367	-	-