APPENDIX

Trip Generation Worksheets
Trip Distribution Worksheets
Capacity Analysis Worksheets
Sight Distance Work Sheets
GAP Traffic Counts

Trip Generation Worksheets

BAYSIDE ENGINEERING

PROPOSED TRAFFIC GENERATION SUMMARY SHEET

DAILY

Project Component	Size	Trip Rates		ITE Vehicle Trips	Pass-By Rate (%)	Pass-By Trips	**Total New Vehicle Trips**
Apartments	12	8.17	In	98	-	-	98
ITE LUC 220	Units	8.17	Out	98	-	-	98
		16.33	Total	196	-	-	196
Commercial	4850	21.44	In	104	25	26	78
ITE LUC 820	sf	21.44	Out	104	25	26	78
		42.89	Total	208	25	52	156
Total			In	202		26	176
			Out	202		26	176
			Total	404		52	352

BAYSIDE ENGINEERING

PROPOSED TRAFFIC GENERATION SUMMARY SHEET

AM PEAK HOUR

Project Component	Size	Trip Rates		ITE Vehicle Trips	Pass-By Rate (%)	Pass-By Trips	**Total New Vehicle Trips**
Apartments	12	0.17	In	2	-	-	2
ITE LUC 220	Units	0.67	Out	8	-	-	8
		0.83	Total	10	-	-	10
Commercial	4850	0.64	In	3	25	1	2
ITE LUC 820	sf	0.39	Out	2	25	1	1
		1.03	Total	5	25	2	3
Total			In	5		1	4
			Out	10		1	9
			Total	15		2	13

BAYSIDE ENGINEERING

PROPOSED TRAFFIC GENERATION SUMMARY SHEET

AM PEAK HOUR OF GENERATOR

Project Component	Size	Trip Rates		ITE Vehicle Trips	Pass-By Rate (%)	Pass-By Trips	**Total New Vehicle Trips**
Apartments	12	0.25	In	3	-	-	3
ITE LUC 220	Units	0.50	Out	6	-	-	6
		0.75	Total	9	-	-	9
Commercial	4850	0.64	In	3	25	1	2
ITE LUC 820	sf	0.39	Out	2	25	1	1
		1.03	Total	5	25	2	3
Total			In	6		1	5
			Out	8		1	7
			Total	14		2	12

BAYSIDE ENGINEERING

PROPOSED TRAFFIC GENERATION SUMMARY SHEET

PM PEAK HOUR

Project Component	Size	Trip Rates		ITE Vehicle Trips	Pass-By Rate (%)	Pass-By Trips	**Total New Vehicle Trips**
Apartments	12	1.33	In	16	-	-	16
ITE LUC 220	Units	0.67	Out	8	-	-	8
		2.00	Total	24	-	-	24
Commercial	4850	1.78	In	9	25	2	7
ITE LUC 820	sf	1.93	Out	9	25	2	7
		3.71	Total	18	25	4	14
Total			In	25		2	23
			Out	17		2	15
			Total	42		4	38

BAYSIDE ENGINEERING

PROPOSED TRAFFIC GENERATION SUMMARY SHEET

PM PEAK HOUR OF GENERATOR

Project Component	Size	Trip Rates		ITE Vehicle Trips	Pass-By Rate (%)	Pass-By Trips	**Total New Vehicle Trips**
Apartments	12	1.08	In	13	-	-	13
ITE LUC 220	Units	0.75	Out	9	-	-	9
		1.83	Total	22	-	-	22
Commercial	4,850	1.78	In	9	25	2	7
ITE LUC 820	sf	1.93	Out	9	25	2	7
		3.71	Total	18	25	4	14
Total			In	22		2	20
			Out	18		2	16
			Total	40		4	36

BAYSIDE ENGINEERING

PROPOSED TRAFFIC GENERATION SUMMARY SHEET

SATURDAY

Project Component	Size	Trip Rates		ITE Vehicle Trips	Pass-By Rate (%)	Pass-By Trips	**Total New Vehicle Trips**
Apartments	12	3.17	In	38	-	-	38
ITE LUC 220	Units	3.17	Out	38	-	-	38
		6.33	Total	76	-	-	76
Commercial	4,850	24.95	In	121	25	30	91
ITE LUC 820	sf	24.95	Out	121	25	30	91
		49.90	Total	242	25	60	182
Total			In	159		30	129
			Out	159		30	129
			Total	318		60	258

BAYSIDE ENGINEERING

PROPOSED TRAFFIC GENERATION SUMMARY SHEET

SATURDAY PEAK HOUR OF GENERATOR

Project Component	Size	Trip Rates		ITE Vehicle Trips	Pass-By Rate (%)	Pass-By Trips	**Total New Vehicle Trips**
Apartments	12	1.08	In	13	-	-	13
ITE LUC 220	Units	0.92	Out	11	-	-	11
		2.00	Total	24	-	-	24
Commercial	4,850	2.47	In	12	25	3	9
ITE LUC 820	sf	2.28	Out	11	25	3	8
		4.74	Total	23	25	6	17
Total			In	25		3	22
			Out	22		3	19
			Total	47		6	41

Trip Distribution Worksheets

Residence MCD/County to Workplace MCD/County Flows for Massachusetts: 2000
Sorted by Workplace State-County, or State-County-County Subdivision (in 12 states)

Res State	Res County	Res MCD	Res (C)MSA	Res PMSA	Residence State-County-MCD Name	Work State	Work County	Work MCD	Work (C)MSA	Work PMSA	Workplace State-County-MCD Name	Count	Rt 1A N	East Stree	Rt 1A S				Rt 1A N	East Stree	Rt 1A S			
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	025	07000	1122	1120	Boston city Suffolk Co. MA	1886	50	50	0			100	943	943	0	0	0	1886
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	78690	1122	1120	Westwood town Norfolk Co. MA	1037	100					100	1037	0	0	0	0	1037
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	50250	1122	1120	Norwood town Norfolk Co. MA	498			100			100	0	0	498	0	0	498
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	017	45560	1122	1120	Newton city Middlesex Co. MA	265	50	50				100	133	133	0	0	0	266
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	16495	1122	1120	Dedham town Norfolk Co. MA	256	50	50				100	128	128	0	0	0	256
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	44105	1122	1120	Needham town Norfolk Co. MA	231	50	50				100	116	116	0	0	0	232
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	55745	1122	1120	Quincy city Norfolk Co. MA	135	50	50				100	68	68	0	0	0	136
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	017	72600	1122	1120	Waltham city Middlesex Co. MA	134	50	50				100	67	67	0	0	0	134
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	11315	1122	1120	Canton town Norfolk Co. MA	134		50	50			100	0	67	67	0	0	134
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	74175	1122	1120	Wellesley town Norfolk Co. MA	117	50	50				100	59	59	0	0	0	118
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	67945	1122	1120	Stoughton town Norfolk Co. MA	115		50	50			100	0	58	58	0	0	116
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	017	11000	1122	1120	Cambridge city Middlesex Co. MA	108	50	50				100	54	54	0	0	0	108
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	09175	1122	1120	Brookline town Norfolk Co. MA	108	50	50				100	54	54	0	0	0	108
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	07665	1122	1120	Braintree town Norfolk Co. MA	97		50	50			100	0	49	49	0	0	98
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	39765	1122	1120	Medfield town Norfolk Co. MA	85			100			100	0	0	85	0	0	85
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	017	04615	1122	1120	Bedford town Middlesex Co. MA	66	50	50				100	33	33	0	0	0	66
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	017	24925	1122	1120	Framingham town Middlesex C	59	50	50				100	30	30	0	0	0	60
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	017	43895	1122	1120	Natick town Middlesex Co. MA	58	50	50				100	29	29	0	0	0	58
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	017	09840	1122	1120	Burlington town Middlesex Co.	55	50	50				100	28	28	0	0	0	56
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	72495	1122	1120	Walpole town Norfolk Co. MA	55		50	50			100	0	28	28	0	0	56
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	41690	1122	1120	Milton town Norfolk Co. MA	47		50	50			100	0	24	24	0	0	48
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	78865	1122	1120	Weymouth town Norfolk Co. MA	44		50	50			100	0	22	22	0	0	44
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	023	09000	1122	1200	Brockton city Plymouth Co. MA	42		50	50			100	0	21	21	0	0	42
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	021	25100	1122	1120	Franklin city Norfolk Co. MA	38		50	50			100	0	19	19	0	0	38
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	017	73440	1122	1120	Watertown city Middlesex Co. MA	36	50	50				100	18	18	0	0	0	36
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	017	38715	1122	1120	Marlbor. city Middlesex Co. MA	35	50	50				100	18	18	0	0	0	36
25	021	78690	1122	1120	Westwood town Norfolk Co. MA	025	023	57775	1122	1120	Rockland town Plymouth Co. MA	31		50	50			100	0	16	16	0	0	32
Notes:												5772							2,815	2,082	887	0	0	5,784
																			48.7	36.0	15.3	0.0	0.0	100.0
																			49	36	15			100.0

Res State	FIPS State Code of Residence
Res County	FIPS County Code of Residence
Res MCD	FIPS County Subdivision Code of Residence
Res (C)MSA	FIPS Metropolitan Statistical Area (MSA) or Consolidated Metropolitan Statistical Area (CMSA) Code of Residence This field contains the 4-digit code for the MSAs and CMSAs designated June 30, 1999. 9999 Appears for nonmetropolitan areas
Res PMSA	FIPS Primary Metropolitan Statistical Area (PMSA) Code of Residence This field contains the 4-digit code for the PMSAs designated June 30, 1999. 9999 Not in a PMSA
Residence State-County-MCD Name	Residence County Subdivision and County names and State abbreviation
Work State	Modified FIPS State Code or Foreign Country/Area Code of Workplace FIPS State codes have been extended to three characters by adding a leading zero.
Work County	FIPS County Code of Workplace 000 Appears in conjunction with codes for workplaces in a Foreign Country/Area.
Work MCD	FIPS County Subdivision Code of Workplace
Work (C)MSA	FIPS Metropolitan Statistical Area (MSA) or Consolidated Metropolitan Statistical Area (CMSA) Code of Residence This field contains the 4-digit code for the MSAs and CMSAs designated June 30, 1999. 9999 Appears for nonmetropolitan areas bbbb This field is blank for workplaces outside the U.S. such as Puerto Rico or a foreign country.
Work PMSA	FIPS Primary Metropolitan Statistical Area (PMSA) Code of Residence This field contains the 4-digit code for the PMSAs designated June 30, 1999. 9999 Not in a PMSA bbbb This field is blank for workplaces in U.S. Island Areas or foreign countries.
Workplace State-County-MCD Name	Workplace County Subdivision and County names and State abbreviation
Count	Number of Workers 16 years old and over in the commuter flow

Source: U.S. Census Bureau
Internet Release date: July 25, 2003

Capacity Analysis Worksheets

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	406	8	2	135	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	80	80	32	32
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	456	9	2	169	9	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	465	0	635	461
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	174	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1107	-	446	605
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1107	-	445	605
Mov Cap-2 Maneuver	-	-	-	-	445	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	858	-

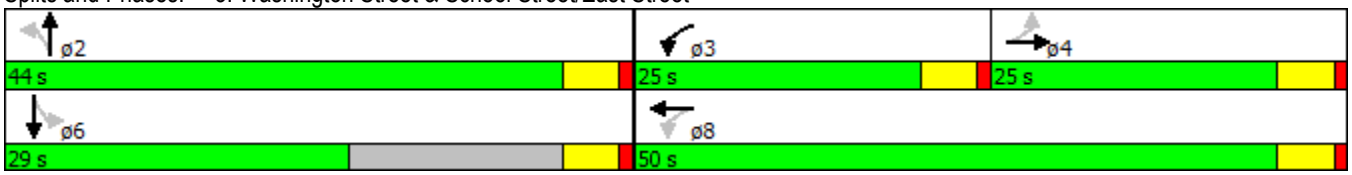
Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12
HCM LOS			B

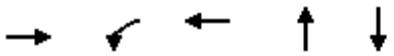
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	540	-	-	1107	-
HCM Lane V/C Ratio	0.052	-	-	0.002	-
HCM Control Delay (s)	12	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	13	380	481	118	11	1220	28	313
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	25.0	25.0	25.0	50.0	44.0	44.0	29.0	29.0
Total Split (%)	26.6%	26.6%	26.6%	53.2%	46.8%	46.8%	30.9%	30.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		20.0	45.0	45.0		39.0		39.0
Actuated g/C Ratio		0.21	0.48	0.48		0.41		0.41
v/c Ratio		1.21	1.15	0.24		1.52		0.43
Control Delay		151.7	115.0	15.4		260.7		21.5
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		151.7	115.0	15.4		260.7		21.5
LOS		F	F	B		F		C
Approach Delay		151.7		87.4		260.7		21.5
Approach LOS		F		F		F		C

Intersection Summary	
Cycle Length: 94	
Actuated Cycle Length: 94	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.52	
Intersection Signal Delay: 188.5	Intersection LOS: F
Intersection Capacity Utilization 125.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: Washington Street & School Street/East Street





Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	463	517	199	2115	379
v/c Ratio	1.21	1.15	0.24	1.52	0.43
Control Delay	151.7	115.0	15.4	260.7	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	151.7	115.0	15.4	260.7	21.5
Queue Length 50th (ft)	~340	~315	67	~915	82
Queue Length 95th (ft)	#520	#514	113	#1056	123
Internal Link Dist (ft)	107		827	130	229
Turn Bay Length (ft)		300			
Base Capacity (vph)	382	451	822	1394	880
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.21	1.15	0.24	1.52	0.43

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	380	19	481	118	67	11	1220	693	28	313	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1833	1900	1845	1817	1900	1900	1847	1900	1900	1783	1900
Adj Flow Rate, veh/h	15	427	21	517	127	72	12	1341	762	30	340	9
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.93	0.93	0.93	0.91	0.91	0.91	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	6	6	4	4	4	6	6	6
Cap, veh/h	45	360	17	450	522	296	42	910	465	77	653	17
Arrive On Green	0.21	0.21	0.21	0.21	0.48	0.48	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	28	1693	82	1757	1090	618	7	2194	1121	0	1574	42
Grp Volume(v), veh/h	463	0	0	517	0	199	1108	0	1007	30	0	349
Grp Sat Flow(s),veh/h/ln	1802	0	0	1757	0	1708	1841	0	1482	0	0	1615
Q Serve(g_s), s	9.6	0.0	0.0	20.0	0.0	6.5	14.4	0.0	39.0	0.0	0.0	15.2
Cycle Q Clear(g_c), s	20.0	0.0	0.0	20.0	0.0	6.5	39.0	0.0	39.0	39.0	0.0	15.2
Prop In Lane	0.03		0.05	1.00		0.36	0.01		0.76	1.00		0.03
Lane Grp Cap(c), veh/h	423	0	0	450	0	818	802	0	615	77	0	670
V/C Ratio(X)	1.09	0.00	0.00	1.15	0.00	0.24	1.38	0.00	1.64	0.39	0.00	0.52
Avail Cap(c_a), veh/h	423	0	0	450	0	818	802	0	615	77	0	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	0.0	26.5	0.0	14.5	28.4	0.0	27.5	47.0	0.0	20.5
Incr Delay (d2), s/veh	71.8	0.0	0.0	89.6	0.0	0.2	179.0	0.0	294.4	14.4	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.4	0.0	0.0	22.8	0.0	3.1	60.6	0.0	66.2	1.1	0.0	7.2
LnGrp Delay(d),s/veh	109.7	0.0	0.0	116.1	0.0	14.6	207.4	0.0	321.9	61.4	0.0	23.4
LnGrp LOS	F			F		B	F		F	E		C
Approach Vol, veh/h		463			716			2115			379	
Approach Delay, s/veh		109.7			87.9			261.9			26.4	
Approach LOS		F			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		44.0	25.0	25.0		44.0		50.0
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s		39.0	20.0	20.0		24.0		45.0
Max Q Clear Time (g_c+I1), s		41.0	22.0	22.0		41.0		8.5
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		4.8

Intersection Summary	
HCM 2010 Ctrl Delay	184.5
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	9	3	1924	810	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	92	92	90	90
Heavy Vehicles, %	0	11	33	3	4	0
Mvmt Flow	0	12	3	2091	900	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1954	452	903	0	-	0
Stage 1	902	-	-	-	-	-
Stage 2	1052	-	-	-	-	-
Critical Hdwy	6.8	7.12	4.76	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.41	2.53	-	-	-
Pot Cap-1 Maneuver	57	531	582	-	-	-
Stage 1	361	-	-	-	-	-
Stage 2	302	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	57	531	582	-	-	-
Mov Cap-2 Maneuver	57	-	-	-	-	-
Stage 1	361	-	-	-	-	-
Stage 2	302	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	582	-	531	-	-
HCM Lane V/C Ratio	0.006	-	0.023	-	-
HCM Control Delay (s)	11.2	0	11.9	-	-
HCM Lane LOS	B	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	0	0	0	0	20	0	1906	0	0	817	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	56	56	56	93	93	93	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	4	0
Mvmt Flow	4	0	0	0	0	36	0	2049	0	0	908	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1934	2958	455	2503	2959	1025	910	0	0	2049	0	0
Stage 1	909	909	-	2049	2049	-	-	-	-	-	-	-
Stage 2	1025	2049	-	454	910	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	41	15	558	15	15	236	757	-	-	278	-	-
Stage 1	300	357	-	59	100	-	-	-	-	-	-	-
Stage 2	255	100	-	560	356	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	35	15	558	15	15	236	757	-	-	278	-	-
Mov Cap-2 Maneuver	35	15	-	15	15	-	-	-	-	-	-	-
Stage 1	300	357	-	59	100	-	-	-	-	-	-	-
Stage 2	216	100	-	560	356	-	-	-	-	-	-	-

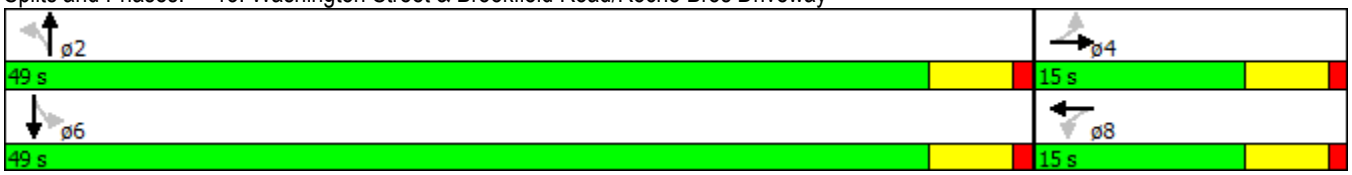
Approach	EB	WB	NB	SB
HCM Control Delay, s	120.7	23	0	0
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	757	-	-	35	236	278	-	-
HCM Lane V/C Ratio	-	-	-	0.114	0.151	-	-	-
HCM Control Delay (s)	0	-	-	120.7	23	0	-	-
HCM Lane LOS	A	-	-	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.5	0	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	11	1	28	1	3	1890	35	779
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	12.0	12.0	12.0	21.0	21.0	21.0	21.0
Total Split (s)	15.0	15.0	15.0	15.0	49.0	49.0	49.0	49.0
Total Split (%)	23.4%	23.4%	23.4%	23.4%	76.6%	76.6%	76.6%	76.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		7.1	7.4	7.4		53.3		53.3
Actuated g/C Ratio		0.12	0.12	0.12		0.88		0.88
v/c Ratio		0.17	0.18	0.04		0.70		0.38
Control Delay		17.9	25.4	16.3		6.6		2.9
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		17.9	25.4	16.3		6.6		2.9
LOS		B	C	B		A		A
Approach Delay		17.9		23.8		6.6		2.9
Approach LOS		B		C		A		A

Intersection Summary	
Cycle Length: 64	
Actuated Cycle Length: 60.7	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 5.8	Intersection LOS: A
Intersection Capacity Utilization 72.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: Washington Street & Brookfield Road/Roche Bros Driveway



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	31	33	7	2055	917
v/c Ratio	0.17	0.18	0.04	0.70	0.38
Control Delay	17.9	25.4	16.3	6.6	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	25.4	16.3	6.6	2.9
Queue Length 50th (ft)	4	9	0	0	0
Queue Length 95th (ft)	22	31	10	#457	101
Internal Link Dist (ft)	152		134	481	368
Turn Bay Length (ft)					
Base Capacity (vph)	251	253	240	2927	2424
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.12	0.13	0.03	0.70	0.38

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	1	13	28	1	5	3	1890	39	35	779	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1807	1900	1520	1622	1900	1900	1843	1900	1900	1834	1900
Adj Flow Rate, veh/h	14	1	16	33	1	6	3	2011	41	39	875	3
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.79	0.79	0.79	0.85	0.85	0.85	0.94	0.94	0.94	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	25	0	0	3	3	3	3	3	3
Cap, veh/h	125	7	44	169	12	69	64	2639	54	113	2203	7
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.77	0.77	0.77	0.77	0.77	0.77
Sat Flow, veh/h	587	129	764	1134	201	1208	1	3436	70	57	2868	10
Grp Volume(v), veh/h	31	0	0	33	0	7	1076	0	979	398	0	519
Grp Sat Flow(s),veh/h/ln	1479	0	0	1134	0	1409	1842	0	1665	1267	0	1667
Q Serve(g_s), s	0.8	0.0	0.0	1.7	0.0	0.3	0.0	0.0	19.0	1.6	0.0	6.0
Cycle Q Clear(g_c), s	1.1	0.0	0.0	2.8	0.0	0.3	18.6	0.0	19.0	20.6	0.0	6.0
Prop In Lane	0.45		0.52	1.00		0.86	0.00		0.04	0.10		0.01
Lane Grp Cap(c), veh/h	176	0	0	169	0	81	1477	0	1279	1042	0	1280
V/C Ratio(X)	0.18	0.00	0.00	0.20	0.00	0.09	0.73	0.00	0.77	0.38	0.00	0.41
Avail Cap(c_a), veh/h	347	0	0	301	0	246	1477	0	1279	1042	0	1280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.0	0.0	0.0	27.3	0.0	25.6	3.7	0.0	3.7	2.1	0.0	2.2
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.6	0.0	0.5	3.2	0.0	4.4	1.1	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
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.5	0.0	0.1	10.3	0.0	9.7	2.1	0.0	2.9
LnGrp Delay(d),s/veh	26.4	0.0	0.0	27.9	0.0	26.0	6.9	0.0	8.2	3.1	0.0	3.2
LnGrp LOS	C			C		C	A		A	A		A
Approach Vol, veh/h		31			40			2055			917	
Approach Delay, s/veh		26.4			27.6			7.5			3.2	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.0		8.3		49.0		8.3
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		44.0		10.0		44.0		10.0
Max Q Clear Time (g_c+I1), s		21.0		3.1		22.6		4.8
Green Ext Time (p_c), s		21.2		0.1		19.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	414	0	0	135	3	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.884	
Flt Protected					0.993	
Satd. Flow (prot)	1863	0	0	1863	1668	0
Flt Permitted					0.993	
Satd. Flow (perm)	1863	0	0	1863	1668	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	270			187	194	
Travel Time (s)	6.1			4.3	4.4	
Peak Hour Factor	0.89	0.89	0.80	0.80	0.32	0.32
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Adj. Flow (vph)	465	0	0	169	9	56
Shared Lane Traffic (%)						
Lane Group Flow (vph)	465	0	0	169	65	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	414	0	0	135	3	18
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	89	89	80	80	32	32
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	465	0	0	169	9	56

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	465	0	634	465
Stage 1	-	-	-	-	465	-
Stage 2	-	-	-	-	169	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1107	-	446	602
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	866	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1107	-	446	602
Mov Cap-2 Maneuver	-	-	-	-	446	-
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	866	-

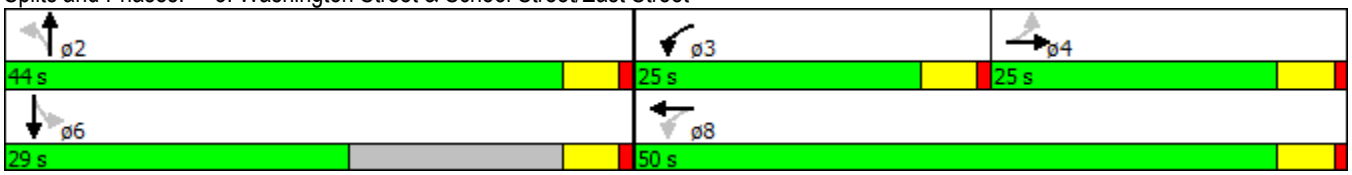
Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	573	-	-	1107	-
HCM Lane V/C Ratio	0.115	-	-	-	-
HCM Control Delay (s)	12.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	14	380	490	116	11	1249	28	318
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	25.0	25.0	25.0	50.0	44.0	44.0	29.0	29.0
Total Split (%)	26.6%	26.6%	26.6%	53.2%	46.8%	46.8%	30.9%	30.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		20.0	45.0	45.0		39.0		39.0
Actuated g/C Ratio		0.21	0.48	0.48		0.41		0.41
v/c Ratio		1.29	1.17	0.24		1.55		0.44
Control Delay		180.3	123.3	15.4		276.4		21.6
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		180.3	123.3	15.4		276.4		21.6
LOS		F	F	B		F		C
Approach Delay		180.3		94.0		276.4		21.6
Approach LOS		F		F		F		C

Intersection Summary	
Cycle Length: 94	
Actuated Cycle Length: 94	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.55	
Intersection Signal Delay: 202.8	Intersection LOS: F
Intersection Capacity Utilization 128.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: Washington Street & School Street/East Street



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	486	527	197	2165	385
v/c Ratio	1.29	1.17	0.24	1.55	0.44
Control Delay	180.3	123.3	15.4	276.4	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	180.3	123.3	15.4	276.4	21.6
Queue Length 50th (ft)	~371	~328	66	~948	84
Queue Length 95th (ft)	#554	#530	111	#1090	125
Internal Link Dist (ft)	107		827	130	229
Turn Bay Length (ft)		300			
Base Capacity (vph)	378	451	822	1394	880
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.29	1.17	0.24	1.55	0.44

Intersection Summary

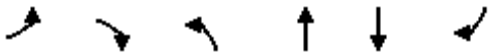
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	380	38	490	116	67	11	1249	710	28	318	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1825	1900	1845	1818	1900	1900	1847	1900	1900	1783	1900
Adj Flow Rate, veh/h	16	427	43	527	125	72	12	1373	780	30	346	9
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.93	0.93	0.93	0.91	0.91	0.91	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	6	6	4	4	4	6	6	6
Cap, veh/h	46	339	34	527	519	299	42	911	465	49	751	22
Arrive On Green	0.21	0.21	0.21	0.21	0.48	0.48	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	29	1595	158	1757	1083	624	7	2195	1121	0	1809	53
Grp Volume(v), veh/h	486	0	0	527	0	197	1134	0	1031	112	0	273
Grp Sat Flow(s),veh/h/ln	1781	0	0	1757	0	1707	1841	0	1482	249	0	1613
Q Serve(g_s), s	9.8	0.0	0.0	20.0	0.0	6.4	14.4	0.0	39.0	0.0	0.0	11.2
Cycle Q Clear(g_c), s	20.0	0.0	0.0	20.0	0.0	6.4	39.0	0.0	39.0	39.0	0.0	11.2
Prop In Lane	0.03		0.09	1.00		0.37	0.01		0.76	0.27		0.03
Lane Grp Cap(c), veh/h	418	0	0	527	0	817	802	0	615	152	0	669
V/C Ratio(X)	1.16	0.00	0.00	1.00	0.00	0.24	1.41	0.00	1.68	0.74	0.00	0.41
Avail Cap(c_a), veh/h	418	0	0	527	0	817	802	0	615	152	0	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	0.0	22.7	0.0	14.4	28.4	0.0	27.5	23.2	0.0	19.4
Incr Delay (d2), s/veh	96.1	0.0	0.0	39.1	0.0	0.2	193.3	0.0	311.6	27.0	0.0	1.8
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(-26165%),veh/ln	22.0	0.0	0.0	16.0	0.0	3.0	63.8	0.0	69.1	2.9	0.0	5.3
LnGrp Delay(d),s/veh	134.0	0.0	0.0	61.8	0.0	14.6	221.7	0.0	339.1	50.1	0.0	21.2
LnGrp LOS	F			E		B	F		F	D		C
Approach Vol, veh/h		486			724			2165			385	
Approach Delay, s/veh		134.0			48.9			277.6			29.6	
Approach LOS		F			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		44.0	25.0	25.0		44.0		50.0
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s		39.0	20.0	20.0		24.0		45.0
Max Q Clear Time (g_c+I1), s		41.0	22.0	22.0		41.0		8.4
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		5.0

Intersection Summary	
HCM 2010 Ctrl Delay	189.6
HCM 2010 LOS	F



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	4	1940	832	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt					0.997	
Flt Protected						
Satd. Flow (prot)	1900	0	0	3503	3463	0
Flt Permitted						
Satd. Flow (perm)	1900	0	0	3503	3463	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	133			170	210	
Travel Time (s)	3.0			3.9	4.8	
Peak Hour Factor	0.75	0.75	0.92	0.92	0.90	0.90
Heavy Vehicles (%)	0%	11%	33%	3%	4%	0%
Adj. Flow (vph)	0	0	4	2109	924	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	2113	940	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.7%		ICU Level of Service B	
Analysis Period (min) 15			

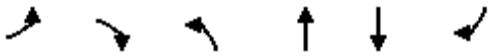
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	4	1940	832	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	92	92	90	90
Heavy Vehicles, %	0	11	33	3	4	0
Mvmt Flow	0	0	4	2109	924	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1995	470	940	0	-	0
Stage 1	932	-	-	-	-	-
Stage 2	1063	-	-	-	-	-
Critical Hdwy	6.8	7.12	4.76	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.41	2.53	-	-	-
Pot Cap-1 Maneuver	54	516	561	-	-	-
Stage 1	348	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	54	516	561	-	-	-
Mov Cap-2 Maneuver	54	-	-	-	-	-
Stage 1	348	-	-	-	-	-
Stage 2	298	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	561	-	-	-	-
HCM Lane V/C Ratio	0.008	-	-	-	-
HCM Control Delay (s)	11.5	0	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	7	1	1	1967	830	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.985					
Flt Protected	0.957					
Satd. Flow (prot)	1791	0	0	3471	3471	0
Flt Permitted	0.957					
Satd. Flow (perm)	1791	0	0	3471	3471	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	107			87	83	
Travel Time (s)	2.4			2.0	1.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	4%	4%	0%
Adj. Flow (vph)	8	1	1	2138	922	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	2139	924	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 65.1%		ICU Level of Service C	
Analysis Period (min) 15			

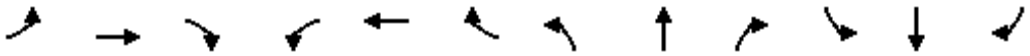
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	1	1	1967	830	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	90	90
Heavy Vehicles, %	0	0	0	4	4	0
Mvmt Flow	8	1	1	2138	922	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1994	462	924	0	-	0
Stage 1	923	-	-	-	-	-
Stage 2	1071	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	54	552	748	-	-	-
Stage 1	352	-	-	-	-	-
Stage 2	295	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	54	552	748	-	-	-
Mov Cap-2 Maneuver	54	-	-	-	-	-
Stage 1	352	-	-	-	-	-
Stage 2	295	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	73.6	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	748	-	61	-	-
HCM Lane V/C Ratio	0.001	-	0.143	-	-
HCM Control Delay (s)	9.8	0	73.6	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	0	0	0	20	0	1970	0	0	829	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.95
Frt						0.865						
Flt Protected		0.950										
Satd. Flow (prot)	0	1805	0	0	0	1644	0	3505	0	0	3471	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1805	0	0	0	1644	0	3505	0	0	3471	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		96			205			448			87	
Travel Time (s)		2.2			4.7			10.2			2.0	
Peak Hour Factor	0.25	0.25	0.25	0.56	0.56	0.56	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	4%	0%
Adj. Flow (vph)	4	0	0	0	0	36	0	2118	0	0	921	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	0	36	0	2118	0	0	923	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	0	0	0	0	20	0	1970	0	0	829	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	56	56	56	93	93	93	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	4	0
Mvmt Flow	4	0	0	0	0	36	0	2118	0	0	921	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1981	3040	462	2579	3041	1059	923	0	0	2118	0	0
Stage 1	922	922	-	2118	2118	-	-	-	-	-	-	-
Stage 2	1059	2118	-	461	923	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	37	13	552	13	13	224	748	-	-	261	-	-
Stage 1	295	352	-	53	92	-	-	-	-	-	-	-
Stage 2	243	92	-	555	351	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	31	13	552	13	13	224	748	-	-	261	-	-
Mov Cap-2 Maneuver	31	13	-	13	13	-	-	-	-	-	-	-
Stage 1	295	352	-	53	92	-	-	-	-	-	-	-
Stage 2	204	92	-	555	351	-	-	-	-	-	-	-

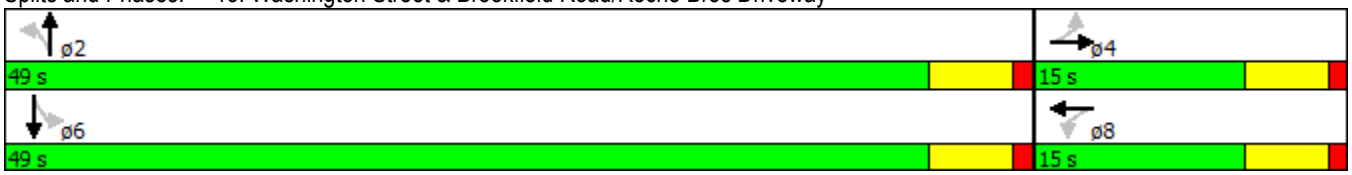
Approach	EB	WB	NB	SB
HCM Control Delay, s	137.6	24.1	0	0
HCM LOS	F	C		

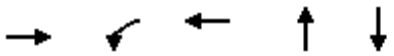
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	748	-	-	31	224	261	-	-
HCM Lane V/C Ratio	-	-	-	0.129	0.159	-	-	-
HCM Control Delay (s)	0	-	-	137.6	24.1	0	-	-
HCM Lane LOS	A	-	-	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.6	0	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	11	1	28	1	3	1932	35	791
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	12.0	12.0	12.0	21.0	21.0	21.0	21.0
Total Split (s)	15.0	15.0	15.0	15.0	49.0	49.0	49.0	49.0
Total Split (%)	23.4%	23.4%	23.4%	23.4%	76.6%	76.6%	76.6%	76.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		7.1	7.4	7.4		53.3		53.3
Actuated g/C Ratio		0.12	0.12	0.12		0.88		0.88
v/c Ratio		0.17	0.18	0.04		0.72		0.39
Control Delay		17.9	25.4	16.3		7.0		2.9
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		17.9	25.4	16.3		7.0		2.9
LOS		B	C	B		A		A
Approach Delay		17.9		23.8		7.0		2.9
Approach LOS		B		C		A		A

Intersection Summary	
Cycle Length: 64	
Actuated Cycle Length: 60.7	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 6.1	Intersection LOS: A
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: Washington Street & Brookfield Road/Roche Bros Driveway





Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	31	33	7	2099	931
v/c Ratio	0.17	0.18	0.04	0.72	0.39
Control Delay	17.9	25.4	16.3	7.0	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	25.4	16.3	7.0	2.9
Queue Length 50th (ft)	4	9	0	0	0
Queue Length 95th (ft)	22	31	10	#550	103
Internal Link Dist (ft)	152		134	481	368
Turn Bay Length (ft)					
Base Capacity (vph)	251	253	240	2927	2415
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.12	0.13	0.03	0.72	0.39

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	1	13	28	1	5	3	1932	39	35	791	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1807	1900	1520	1622	1900	1900	1843	1900	1900	1834	1900
Adj Flow Rate, veh/h	14	1	16	33	1	6	3	2055	41	39	889	3
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.79	0.79	0.79	0.85	0.85	0.85	0.94	0.94	0.94	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	25	0	0	3	3	3	3	3	3
Cap, veh/h	120	2	32	189	10	57	64	2668	53	111	2245	8
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.78	0.78	0.78	0.78	0.78	0.78
Sat Flow, veh/h	593	42	677	1134	201	1208	1	3438	68	54	2892	10
Grp Volume(v), veh/h	31	0	0	33	0	7	1099	0	1000	415	0	516
Grp Sat Flow(s),veh/h/ln	1312	0	0	1134	0	1409	1842	0	1665	1289	0	1667
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	0.3	0.0	0.0	19.1	1.4	0.0	5.7
Cycle Q Clear(g_c), s	1.4	0.0	0.0	1.3	0.0	0.3	18.7	0.0	19.1	20.5	0.0	5.7
Prop In Lane	0.45		0.52	1.00		0.86	0.00		0.04	0.09		0.01
Lane Grp Cap(c), veh/h	154	0	0	189	0	67	1493	0	1292	1070	0	1294
V/C Ratio(X)	0.20	0.00	0.00	0.17	0.00	0.10	0.74	0.00	0.77	0.39	0.00	0.40
Avail Cap(c_a), veh/h	342	0	0	335	0	249	1493	0	1292	1070	0	1294
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	0.0	26.3	0.0	25.8	3.5	0.0	3.6	1.9	0.0	2.1
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.4	0.0	0.7	3.3	0.0	4.6	1.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.5	0.0	0.0	0.5	0.0	0.1	10.2	0.0	10.0	2.2	0.0	2.8
LnGrp Delay(d),s/veh	27.2	0.0	0.0	26.8	0.0	26.5	6.8	0.0	8.1	3.0	0.0	3.0
LnGrp LOS	C			C		C	A		A	A		A
Approach Vol, veh/h		31			40			2099			931	
Approach Delay, s/veh		27.2			26.7			7.4			3.0	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.0		7.7		49.0		7.7
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		44.0		10.0		44.0		10.0
Max Q Clear Time (g_c+I1), s		21.1		3.4		22.5		3.3
Green Ext Time (p_c), s		21.3		0.1		20.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.5
HCM 2010 LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	212	12	6	284	14	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993				0.936	
Flt Protected				0.999	0.974	
Satd. Flow (prot)	1869	0	0	1898	1669	0
Flt Permitted				0.999	0.974	
Satd. Flow (perm)	1869	0	0	1898	1669	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	270			187	194	
Travel Time (s)	6.1			4.3	4.4	
Peak Hour Factor	0.89	0.89	0.86	0.86	0.68	0.68
Heavy Vehicles (%)	1%	0%	0%	0%	0%	8%
Adj. Flow (vph)	238	13	7	330	21	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	251	0	0	337	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	212	12	6	284	14	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	89	89	86	86	68	68
Heavy Vehicles, %	1	0	0	0	0	8
Mvmt Flow	238	13	7	330	21	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	252	0	589	245
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	344	-
Critical Hdwy	-	-	4.1	-	6.4	6.28
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.372
Pot Cap-1 Maneuver	-	-	1325	-	474	779
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	722	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1325	-	471	779
Mov Cap-2 Maneuver	-	-	-	-	471	-
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	718	-

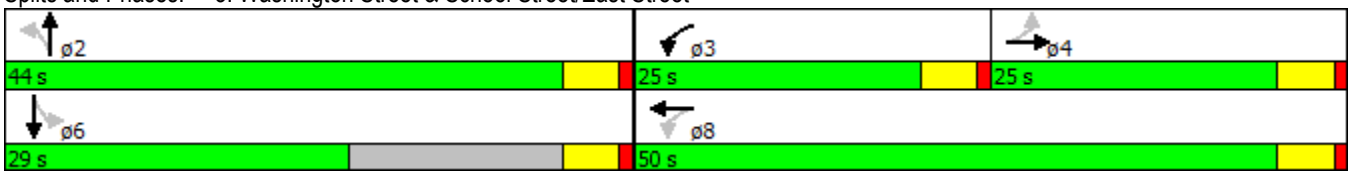
Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	582	-	-	1325	-
HCM Lane V/C Ratio	0.068	-	-	0.005	-
HCM Control Delay (s)	11.6	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	14	147	648	233	39	603	76	1046
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	25.0	25.0	25.0	50.0	44.0	44.0	29.0	29.0
Total Split (%)	26.6%	26.6%	26.6%	53.2%	46.8%	46.8%	30.9%	30.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		17.8	42.8	42.8		39.0		39.0
Actuated g/C Ratio		0.19	0.47	0.47		0.42		0.42
v/c Ratio		0.80	1.34	0.34		1.21		1.55
Control Delay		54.2	188.4	16.7		125.3		279.4
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		54.2	188.4	16.7		125.3		279.4
LOS		D	F	B		F		F
Approach Delay		54.2		137.7		125.3		279.4
Approach LOS		D		F		F		F

Intersection Summary	
Cycle Length: 94	
Actuated Cycle Length: 91.9	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.55	
Intersection Signal Delay: 172.4	Intersection LOS: F
Intersection Capacity Utilization 133.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: Washington Street & School Street/East Street



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	271	689	289	1414	1240
v/c Ratio	0.80	1.34	0.34	1.21	1.55
Control Delay	54.2	188.4	16.7	125.3	279.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	188.4	16.7	125.3	279.4
Queue Length 50th (ft)	152	~460	102	~496	~559
Queue Length 95th (ft)	217	#679	160	#596	#690
Internal Link Dist (ft)	107		827	130	229
Turn Bay Length (ft)		300			
Base Capacity (vph)	379	514	903	1168	799
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.72	1.34	0.32	1.21	1.55

Intersection Summary

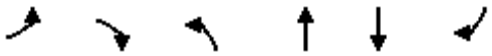
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	147	64	648	233	39	39	603	588	76	1046	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1876	1900	1900	1884	1900	1900	1882	1900	1900	1861	1900
Adj Flow Rate, veh/h	17	177	77	689	248	41	45	693	676	83	1137	20
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.87	0.87	0.87	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	1	1	1	1	1	2	2	2
Cap, veh/h	52	222	92	604	727	120	44	314	602	46	840	20
Arrive On Green	0.19	0.19	0.19	0.22	0.46	0.46	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	55	1196	497	1810	1577	261	3	733	1403	0	1958	48
Grp Volume(v), veh/h	271	0	0	689	0	289	708	0	706	531	0	709
Grp Sat Flow(s),veh/h/ln	1748	0	0	1810	0	1838	674	0	1465	320	0	1685
Q Serve(g_s), s	5.3	0.0	0.0	20.0	0.0	9.1	1.3	0.0	39.0	0.0	0.0	37.7
Cycle Q Clear(g_c), s	13.5	0.0	0.0	20.0	0.0	9.1	39.0	0.0	39.0	39.0	0.0	37.7
Prop In Lane	0.06		0.28	1.00		0.14	0.06		0.96	0.16		0.03
Lane Grp Cap(c), veh/h	367	0	0	604	0	847	331	0	628	183	0	723
V/C Ratio(X)	0.74	0.00	0.00	1.14	0.00	0.34	2.14	0.00	1.12	2.90	0.00	0.98
Avail Cap(c_a), veh/h	426	0	0	604	0	910	331	0	628	183	0	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	0.0	24.7	0.0	15.7	27.4	0.0	26.0	28.3	0.0	25.6
Incr Delay (d2), s/veh	5.7	0.0	0.0	82.2	0.0	0.2	521.6	0.0	74.9	870.5	0.0	28.9
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(-26165%),veh/ln	7.1	0.0	0.0	25.5	0.0	4.6	54.6	0.0	28.6	47.7	0.0	23.1
LnGrp Delay(d),s/veh	41.2	0.0	0.0	106.9	0.0	15.9	548.9	0.0	100.8	898.8	0.0	54.5
LnGrp LOS	D			F		B	F		F	F		D
Approach Vol, veh/h		271			978			1414			1240	
Approach Delay, s/veh		41.2			80.0			325.2			416.3	
Approach LOS		D			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		44.0	25.0	21.9		44.0		46.9
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s		39.0	20.0	20.0		24.0		45.0
Max Q Clear Time (g_c+I1), s		41.0	22.0	15.5		41.0		11.1
Green Ext Time (p_c), s		0.0	0.0	1.4		0.0		3.8

Intersection Summary	
HCM 2010 Ctrl Delay	273.0
HCM 2010 LOS	F



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	1	14	10	1229	1751	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.875				0.999	
Flt Protected	0.996					
Satd. Flow (prot)	1656	0	0	3575	3571	0
Flt Permitted	0.996					
Satd. Flow (perm)	1656	0	0	3575	3571	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	133			170	210	
Travel Time (s)	3.0			3.9	4.8	
Peak Hour Factor	0.54	0.54	0.87	0.87	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Adj. Flow (vph)	2	26	11	1413	1863	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	1424	1870	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.6%		ICU Level of Service B	
Analysis Period (min) 15			

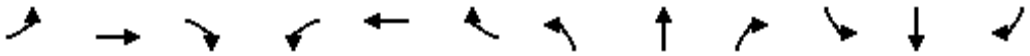
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	14	10	1229	1751	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	54	87	87	94	94
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	2	26	11	1413	1863	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2595	935	1870	0	-	0
Stage 1	1866	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	21	271	326	-	-	-
Stage 1	110	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	18	271	326	-	-	-
Mov Cap-2 Maneuver	18	-	-	-	-	-
Stage 1	110	-	-	-	-	-
Stage 2	374	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37	1.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	326	-	140	-	-
HCM Lane V/C Ratio	0.035	-	0.198	-	-
HCM Control Delay (s)	16.4	1.3	37	-	-
HCM Lane LOS	C	A	E	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	112	0	1127	0	0	1765	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.95
Frt						0.865						
Flt Protected												
Satd. Flow (prot)	0	1900	0	0	0	1627	0	3574	0	0	3574	0
Flt Permitted												
Satd. Flow (perm)	0	1900	0	0	0	1627	0	3574	0	0	3574	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		96			205			448			170	
Travel Time (s)		2.2			4.7			10.2			3.9	
Peak Hour Factor	0.25	0.25	0.25	0.76	0.76	0.76	0.83	0.83	0.83	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	0	0	0	0	0	147	0	1358	0	0	1878	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	147	0	1358	0	0	1878	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	112	0	1127	0	0	1765	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	76	76	76	83	83	83	94	94	94
Heavy Vehicles, %	0	0	0	0	0	1	0	1	0	0	1	0
Mvmt Flow	0	0	0	0	0	147	0	1358	0	0	1878	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2557	3236	939	2297	3236	679	1878	0	0	1358	0	0
Stage 1	1878	1878	-	1358	1358	-	-	-	-	-	-	-
Stage 2	679	1358	-	939	1878	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.92	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.31	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	14	10	269	21	10	396	324	-	-	513	-	-
Stage 1	75	122	-	160	219	-	-	-	-	-	-	-
Stage 2	412	219	-	288	122	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	9	10	269	21	10	396	324	-	-	513	-	-
Mov Cap-2 Maneuver	9	10	-	21	10	-	-	-	-	-	-	-
Stage 1	75	122	-	160	219	-	-	-	-	-	-	-
Stage 2	259	219	-	288	122	-	-	-	-	-	-	-

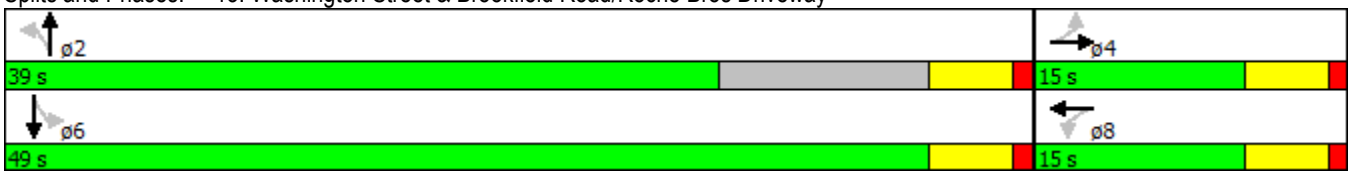
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	19.4	0	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	324	-	-	-	396	513	-	-
HCM Lane V/C Ratio	-	-	-	-	0.372	-	-	-
HCM Control Delay (s)	0	-	-	0	19.4	0	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1.7	0	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	8	0	143	2	9	1095	144	1612
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	12.0	12.0	12.0	21.0	21.0	21.0	21.0
Total Split (s)	15.0	15.0	15.0	15.0	39.0	39.0	49.0	49.0
Total Split (%)	23.4%	23.4%	23.4%	23.4%	60.9%	60.9%	76.6%	76.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		9.8	9.8	9.8		45.6		45.6
Actuated g/C Ratio		0.15	0.15	0.15		0.70		0.70
v/c Ratio		0.14	0.81	0.11		0.61		1.23
Control Delay		11.5	57.4	11.8		6.5		123.4
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		11.5	57.4	11.8		6.5		123.4
LOS		B	E	B		A		F
Approach Delay		11.5		50.5		6.5		123.4
Approach LOS		B		D		A		F

Intersection Summary	
Cycle Length: 64	
Actuated Cycle Length: 65.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 71.8	Intersection LOS: E
Intersection Capacity Utilization 110.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: Washington Street & Brookfield Road/Roche Bros Driveway



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	37	168	30	1406	1904
v/c Ratio	0.14	0.81	0.11	0.61	1.23
Control Delay	11.5	57.4	11.8	6.5	123.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	57.4	11.8	6.5	123.4
Queue Length 50th (ft)	1	64	1	121	~504
Queue Length 95th (ft)	14	#142	19	156	#637
Internal Link Dist (ft)	152		134	481	368
Turn Bay Length (ft)					
Base Capacity (vph)	267	213	273	2306	1554
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.14	0.79	0.11	0.61	1.23

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	0	17	143	2	24	9	1095	106	144	1612	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1880	1900	1900	1883	1900
Adj Flow Rate, veh/h	12	0	25	168	2	28	10	1273	123	153	1715	36
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.68	0.68	0.68	0.85	0.85	0.85	0.86	0.86	0.86	0.94	0.94	0.25
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	119	30	153	321	15	215	62	2231	214	163	1782	43
Arrive On Green	0.14	0.00	0.14	0.14	0.14	0.14	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	306	213	1081	1408	109	1523	6	3187	306	138	2546	61
Grp Volume(v), veh/h	37	0	0	168	0	30	740	0	666	902	0	1002
Grp Sat Flow(s),veh/h/ln	1600	0	0	1408	0	1631	1843	0	1657	1042	0	1703
Q Serve(g_s), s	0.0	0.0	0.0	5.7	0.0	1.0	0.0	0.0	12.7	31.3	0.0	27.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	6.9	0.0	1.0	12.2	0.0	12.7	44.0	0.0	27.0
Prop In Lane	0.32		0.68	1.00		0.93	0.01		0.18	0.17		0.04
Lane Grp Cap(c), veh/h	302	0	0	321	0	230	1348	0	1159	796	0	1192
V/C Ratio(X)	0.12	0.00	0.00	0.52	0.00	0.13	0.55	0.00	0.57	1.13	0.00	0.84
Avail Cap(c_a), veh/h	329	0	0	346	0	259	1348	0	1159	796	0	1192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	0.0	26.0	0.0	23.6	4.7	0.0	4.7	11.9	0.0	6.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.3	0.0	0.3	1.6	0.0	2.1	75.1	0.0	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.6	0.0	0.0	2.9	0.0	0.5	6.8	0.0	6.2	30.1	0.0	14.6
LnGrp Delay(d),s/veh	23.9	0.0	0.0	27.4	0.0	23.9	6.3	0.0	6.8	87.0	0.0	14.1
LnGrp LOS	C			C		C	A		A	F		B
Approach Vol, veh/h		37			198			1406			1904	
Approach Delay, s/veh		23.9			26.8			6.5			48.7	
Approach LOS		C			C			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.0		13.9		49.0		13.9
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		34.0		10.0		44.0		10.0
Max Q Clear Time (g_c+I1), s		14.7		3.2		46.0		8.9
Green Ext Time (p_c), s		18.6		0.4		0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.5
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	225	0	0	284	15	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.905	
Flt Protected					0.986	
Satd. Flow (prot)	1881	0	0	1900	1605	0
Flt Permitted					0.986	
Satd. Flow (perm)	1881	0	0	1900	1605	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	270			187	194	
Travel Time (s)	6.1			4.3	4.4	
Peak Hour Factor	0.89	0.89	0.86	0.86	0.68	0.68
Heavy Vehicles (%)	1%	0%	0%	0%	0%	8%
Adj. Flow (vph)	253	0	0	330	22	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	253	0	0	330	75	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	225	0	0	284	15	36
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	89	89	86	86	68	68
Heavy Vehicles, %	1	0	0	0	0	8
Mvmt Flow	253	0	0	330	22	53

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	253	0	583	253
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	330	-
Critical Hdwy	-	-	4.1	-	6.4	6.28
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.372
Pot Cap-1 Maneuver	-	-	1324	-	478	771
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	733	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1324	-	478	771
Mov Cap-2 Maneuver	-	-	-	-	478	-
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	733	-

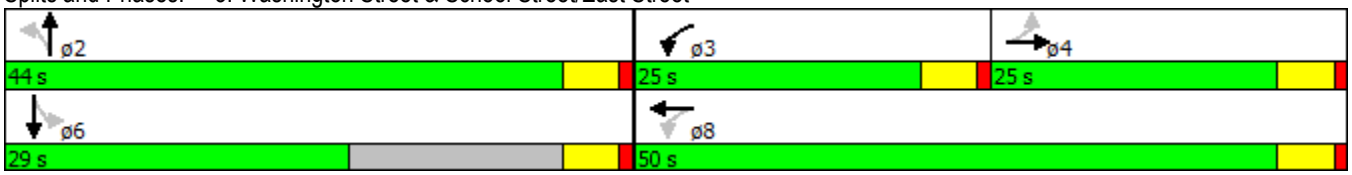
Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	653	-	-	1324	-
HCM Lane V/C Ratio	0.115	-	-	-	-
HCM Control Delay (s)	11.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	17	149	662	227	39	605	76	1055
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	25.0	25.0	25.0	50.0	44.0	44.0	29.0	29.0
Total Split (%)	26.6%	26.6%	26.6%	53.2%	46.8%	46.8%	30.9%	30.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		19.2	44.2	44.2		39.0		39.0
Actuated g/C Ratio		0.21	0.47	0.47		0.42		0.42
v/c Ratio		0.89	1.41	0.32		1.25		1.61
Control Delay		63.8	218.5	16.4		142.3		306.3
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		63.8	218.5	16.4		142.3		306.3
LOS		E	F	B		F		F
Approach Delay		63.8		160.7		142.3		306.3
Approach LOS		E		F		F		F

Intersection Summary	
Cycle Length: 94	
Actuated Cycle Length: 93.2	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.61	
Intersection Signal Delay: 192.3	Intersection LOS: F
Intersection Capacity Utilization 136.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: Washington Street & School Street/East Street



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	314	704	282	1419	1250
v/c Ratio	0.89	1.41	0.32	1.25	1.61
Control Delay	63.8	218.5	16.4	142.3	306.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	63.8	218.5	16.4	142.3	306.3
Queue Length 50th (ft)	182	~499	99	~506	~570
Queue Length 95th (ft)	#284	#720	157	#606	#700
Internal Link Dist (ft)	107		827	130	229
Turn Bay Length (ft)		300			
Base Capacity (vph)	369	500	889	1135	775
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.85	1.41	0.32	1.25	1.61

Intersection Summary

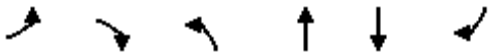
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	17	149	95	662	227	39	39	605	591	76	1055	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1878	1900	1900	1884	1900	1900	1882	1900	1900	1861	1900
Adj Flow Rate, veh/h	20	180	114	704	241	41	45	695	679	83	1147	20
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.87	0.87	0.87	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	0	1	1	1	1	1	2	2	2
Cap, veh/h	53	213	128	581	743	126	41	285	585	45	817	20
Arrive On Green	0.20	0.20	0.20	0.22	0.47	0.47	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	58	1042	627	1810	1570	267	0	680	1394	0	1948	47
Grp Volume(v), veh/h	314	0	0	704	0	282	705	0	714	534	0	716
Grp Sat Flow(s),veh/h/ln	1727	0	0	1810	0	1837	608	0	1466	310	0	1685
Q Serve(g_s), s	7.6	0.0	0.0	20.0	0.0	8.9	0.0	0.0	39.0	0.0	0.0	39.0
Cycle Q Clear(g_c), s	16.4	0.0	0.0	20.0	0.0	8.9	39.0	0.0	39.0	39.0	0.0	39.0
Prop In Lane	0.06		0.36	1.00		0.15	0.06		0.95	0.16		0.03
Lane Grp Cap(c), veh/h	394	0	0	581	0	869	296	0	615	175	0	707
V/C Ratio(X)	0.80	0.00	0.00	1.21	0.00	0.32	2.38	0.00	1.16	3.05	0.00	1.01
Avail Cap(c_a), veh/h	412	0	0	581	0	889	296	0	615	175	0	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	0.0	24.0	0.0	15.2	31.8	0.0	27.0	28.6	0.0	27.0
Incr Delay (d2), s/veh	10.1	0.0	0.0	110.2	0.0	0.2	631.6	0.0	89.7	939.4	0.0	37.3
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(-26165%),veh/ln	9.0	0.0	0.0	29.1	0.0	4.5	58.5	0.0	31.0	48.9	0.0	25.4
LnGrp Delay(d),s/veh	46.0	0.0	0.0	134.2	0.0	15.5	663.4	0.0	116.7	968.0	0.0	64.3
LnGrp LOS	D			F		B	F		F	F		F
Approach Vol, veh/h		314			986			1419			1250	
Approach Delay, s/veh		46.0			100.2			388.3			450.1	
Approach LOS		D			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		44.0	25.0	24.0		44.0		49.0
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s		39.0	20.0	20.0		24.0		45.0
Max Q Clear Time (g_c+I1), s		41.0	22.0	18.4		41.0		10.9
Green Ext Time (p_c), s		0.0	0.0	0.6		0.0		4.2

Intersection Summary	
HCM 2010 Ctrl Delay	309.1
HCM 2010 LOS	F



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	14	1235	1782	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt					0.998	
Flt Protected				0.999		
Satd. Flow (prot)	1900	0	0	3571	3568	0
Flt Permitted				0.999		
Satd. Flow (perm)	1900	0	0	3571	3568	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	133			170	210	
Travel Time (s)	3.0			3.9	4.8	
Peak Hour Factor	0.54	0.54	0.87	0.87	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Adj. Flow (vph)	0	0	16	1420	1896	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1436	1928	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			

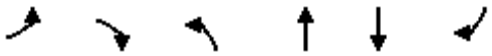
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	14	1235	1782	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	54	87	87	94	94
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	0	0	16	1420	1896	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2654	964	1928	0	-	0
Stage 1	1912	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	19	259	310	-	-	-
Stage 1	104	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	14	259	310	-	-	-
Mov Cap-2 Maneuver	14	-	-	-	-	-
Stage 1	104	-	-	-	-	-
Stage 2	330	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	2.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	310	-	-	-	-
HCM Lane V/C Ratio	0.052	-	-	-	-
HCM Control Delay (s)	17.2	2.1	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	7	1	2	1242	1768	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.985				0.999	
Flt Protected	0.957					
Satd. Flow (prot)	1791	0	0	3574	3571	0
Flt Permitted	0.957					
Satd. Flow (perm)	1791	0	0	3574	3571	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	95			97	73	
Travel Time (s)	2.2			2.2	1.7	
Peak Hour Factor	0.92	0.92	0.87	0.87	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Adj. Flow (vph)	8	1	2	1428	1881	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	1430	1896	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.3%		ICU Level of Service B	
Analysis Period (min) 15			

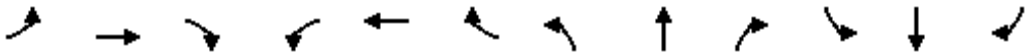
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	1	2	1242	1768	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	87	87	94	94
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	8	1	2	1428	1881	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2606	948	1896	0	-	0
Stage 1	1888	-	-	-	-	-
Stage 2	718	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	21	265	319	-	-	-
Stage 1	107	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	20	265	319	-	-	-
Mov Cap-2 Maneuver	20	-	-	-	-	-
Stage 1	107	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	236.6	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	319	-	23	-	-
HCM Lane V/C Ratio	0.007	-	0.378	-	-
HCM Control Delay (s)	16.4	0.2	236.6	-	-
HCM Lane LOS	C	A	F	-	-
HCM 95th %tile Q(veh)	0	-	1.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	112	0	1132	0	0	1769	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.95
Frt						0.865						
Flt Protected												
Satd. Flow (prot)	0	1900	0	0	0	1627	0	3574	0	0	3574	0
Flt Permitted												
Satd. Flow (perm)	0	1900	0	0	0	1627	0	3574	0	0	3574	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		96			205			448			97	
Travel Time (s)		2.2			4.7			10.2			2.2	
Peak Hour Factor	0.25	0.25	0.25	0.76	0.76	0.76	0.83	0.83	0.83	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	0	0	0	0	0	147	0	1364	0	0	1882	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	147	0	1364	0	0	1882	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	112	0	1132	0	0	1769	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	76	76	76	83	83	83	94	94	94
Heavy Vehicles, %	0	0	0	0	0	1	0	1	0	0	1	0
Mvmt Flow	0	0	0	0	0	147	0	1364	0	0	1882	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2564	3246	941	2305	3246	682	1882	0	0	1364	0	0
Stage 1	1882	1882	-	1364	1364	-	-	-	-	-	-	-
Stage 2	682	1364	-	941	1882	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.92	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.31	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	13	10	268	21	10	395	323	-	-	510	-	-
Stage 1	75	121	-	158	218	-	-	-	-	-	-	-
Stage 2	411	218	-	287	121	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	8	10	268	21	10	395	323	-	-	510	-	-
Mov Cap-2 Maneuver	8	10	-	21	10	-	-	-	-	-	-	-
Stage 1	75	121	-	158	218	-	-	-	-	-	-	-
Stage 2	258	218	-	287	121	-	-	-	-	-	-	-

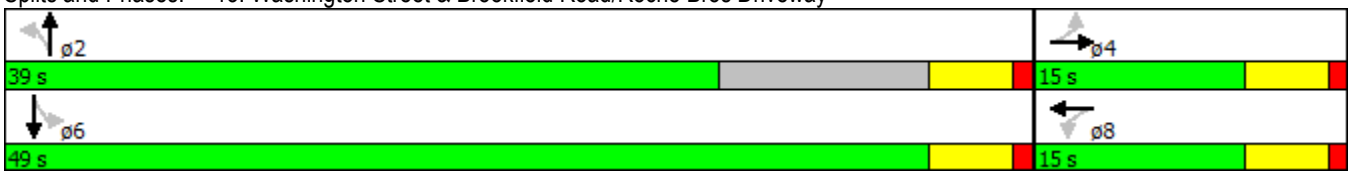
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	19.4	0	0
HCM LOS	A	C		

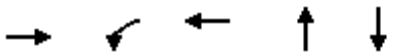
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	323	-	-	-	395	510	-	-
HCM Lane V/C Ratio	-	-	-	-	0.373	-	-	-
HCM Control Delay (s)	0	-	-	0	19.4	0	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1.7	0	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	8	0	143	2	9	1100	144	1616
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	12.0	12.0	12.0	21.0	21.0	21.0	21.0
Total Split (s)	15.0	15.0	15.0	15.0	39.0	39.0	49.0	49.0
Total Split (%)	23.4%	23.4%	23.4%	23.4%	60.9%	60.9%	76.6%	76.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		9.8	9.8	9.8		45.6		45.6
Actuated g/C Ratio		0.15	0.15	0.15		0.70		0.70
v/c Ratio		0.14	0.81	0.11		0.61		1.23
Control Delay		11.5	57.4	11.8		6.6		125.6
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		11.5	57.4	11.8		6.6		125.6
LOS		B	E	B		A		F
Approach Delay		11.5		50.5		6.6		125.6
Approach LOS		B		D		A		F

Intersection Summary	
Cycle Length: 64	
Actuated Cycle Length: 65.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 73.0	Intersection LOS: E
Intersection Capacity Utilization 110.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: Washington Street & Brookfield Road/Roche Bros Driveway





Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	37	168	30	1412	1908
v/c Ratio	0.14	0.81	0.11	0.61	1.23
Control Delay	11.5	57.4	11.8	6.6	125.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	57.4	11.8	6.6	125.6
Queue Length 50th (ft)	1	64	1	122	~506
Queue Length 95th (ft)	14	#142	19	156	#640
Internal Link Dist (ft)	152		134	481	368
Turn Bay Length (ft)					
Base Capacity (vph)	267	213	273	2306	1551
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.14	0.79	0.11	0.61	1.23

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	0	17	143	2	24	9	1100	106	144	1616	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1880	1900	1900	1883	1900
Adj Flow Rate, veh/h	12	0	25	168	2	28	10	1279	123	153	1719	36
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.68	0.68	0.68	0.85	0.85	0.85	0.86	0.86	0.86	0.94	0.94	0.25
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	119	30	153	321	15	215	62	2232	213	163	1780	43
Arrive On Green	0.14	0.00	0.14	0.14	0.14	0.14	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	306	213	1081	1408	109	1523	6	3189	305	137	2543	61
Grp Volume(v), veh/h	37	0	0	168	0	30	743	0	669	904	0	1004
Grp Sat Flow(s),veh/h/ln	1600	0	0	1408	0	1631	1843	0	1657	1038	0	1703
Q Serve(g_s), s	0.0	0.0	0.0	5.7	0.0	1.0	0.0	0.0	12.8	31.2	0.0	27.1
Cycle Q Clear(g_c), s	1.2	0.0	0.0	6.9	0.0	1.0	12.3	0.0	12.8	44.0	0.0	27.1
Prop In Lane	0.32		0.68	1.00		0.93	0.01		0.18	0.17		0.04
Lane Grp Cap(c), veh/h	302	0	0	321	0	230	1348	0	1159	793	0	1192
V/C Ratio(X)	0.12	0.00	0.00	0.52	0.00	0.13	0.55	0.00	0.58	1.14	0.00	0.84
Avail Cap(c_a), veh/h	329	0	0	346	0	259	1348	0	1159	793	0	1192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	0.0	26.0	0.0	23.6	4.7	0.0	4.8	11.9	0.0	6.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.3	0.0	0.3	1.6	0.0	2.1	77.6	0.0	7.3
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(-26165%),veh/ln	0.6	0.0	0.0	2.9	0.0	0.5	6.8	0.0	6.4	30.6	0.0	14.7
LnGrp Delay(d),s/veh	23.9	0.0	0.0	27.4	0.0	23.9	6.3	0.0	6.8	89.6	0.0	14.2
LnGrp LOS	C			C		C	A		A	F		B
Approach Vol, veh/h		37			198			1412			1908	
Approach Delay, s/veh		23.9			26.8			6.6			49.9	
Approach LOS		C			C			A			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.0		13.9		49.0		13.9
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		34.0		10.0		44.0		10.0
Max Q Clear Time (g_c+I1), s		14.8		3.2		46.0		8.9
Green Ext Time (p_c), s		18.5		0.4		0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	176	6	5	153	8	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995				0.918	
Flt Protected				0.998	0.981	
Satd. Flow (prot)	1872	0	0	1896	1632	0
Flt Permitted				0.998	0.981	
Satd. Flow (perm)	1872	0	0	1896	1632	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	270			187	194	
Travel Time (s)	6.1			4.3	4.4	
Peak Hour Factor	0.80	0.80	0.89	0.89	0.75	0.75
Heavy Vehicles (%)	1%	0%	0%	0%	0%	8%
Adj. Flow (vph)	220	8	6	172	11	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	228	0	0	178	28	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	176	6	5	153	8	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	80	80	89	89	75	75
Heavy Vehicles, %	1	0	0	0	0	8
Mvmt Flow	220	8	6	172	11	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	228	0	407	224
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	183	-
Critical Hdwy	-	-	4.1	-	6.4	6.28
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.372
Pot Cap-1 Maneuver	-	-	1352	-	604	801
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	853	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1352	-	601	801
Mov Cap-2 Maneuver	-	-	-	-	601	-
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	849	-

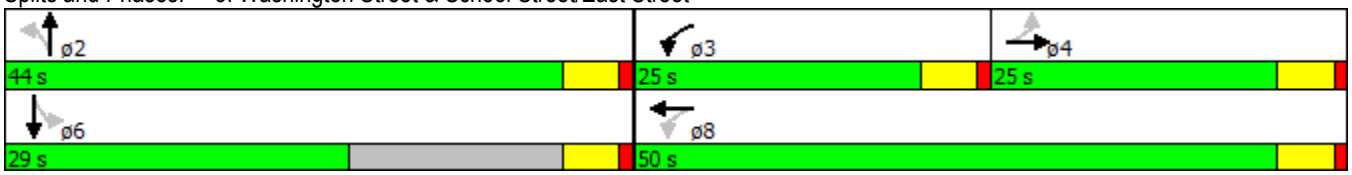
Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	711	-	-	1352	-
HCM Lane V/C Ratio	0.039	-	-	0.004	-
HCM Control Delay (s)	10.3	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	18	115	445	92	52	624	63	510
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	25.0	25.0	25.0	50.0	44.0	44.0	29.0	29.0
Total Split (%)	26.6%	26.6%	26.6%	53.2%	46.8%	46.8%	30.9%	30.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		15.5	40.5	40.5		39.1		39.1
Actuated g/C Ratio		0.17	0.45	0.45		0.44		0.44
v/c Ratio		0.70	1.00	0.21		0.91		0.72
Control Delay		48.1	62.4	15.4		30.3		27.0
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		48.1	62.4	15.4		30.3		27.0
LOS		D	E	B		C		C
Approach Delay		48.1		50.9		30.3		27.0
Approach LOS		D		D		C		C

Intersection Summary	
Cycle Length: 94	
Actuated Cycle Length: 89.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 35.8	Intersection LOS: D
Intersection Capacity Utilization 103.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 3: Washington Street & School Street/East Street



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	210	517	169	1303	644
v/c Ratio	0.70	1.00	0.21	0.91	0.72
Control Delay	48.1	62.4	15.4	30.3	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	62.4	15.4	30.3	27.0
Queue Length 50th (ft)	113	221	56	298	154
Queue Length 95th (ft)	187	#381	90	#486	240
Internal Link Dist (ft)	107		827	130	229
Turn Bay Length (ft)		300			
Base Capacity (vph)	385	517	899	1435	898
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	1.00	0.19	0.91	0.72

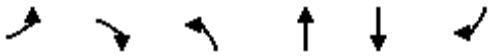
Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	115	56	445	92	53	52	624	523	63	510	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1877	1900	1810	1893	1900	1900	1882	1900	1900	1864	1900
Adj Flow Rate, veh/h	20	128	62	517	107	62	57	678	568	69	560	15
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.90	0.90	0.90	0.86	0.86	0.86	0.92	0.92	0.92	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	5	0	0	1	1	1	2	2	2
Cap, veh/h	59	174	79	604	495	287	83	706	622	70	885	29
Arrive On Green	0.15	0.15	0.15	0.23	0.44	0.44	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	92	1132	513	1723	1126	652	87	1583	1394	39	1985	65
Grp Volume(v), veh/h	210	0	0	517	0	169	706	0	597	256	0	388
Grp Sat Flow(s),veh/h/ln	1737	0	0	1723	0	1778	1597	0	1467	405	0	1684
Q Serve(g_s), s	4.3	0.0	0.0	20.0	0.0	5.1	23.9	0.0	33.3	5.7	0.0	14.5
Cycle Q Clear(g_c), s	10.1	0.0	0.0	20.0	0.0	5.1	38.4	0.0	33.3	39.0	0.0	14.5
Prop In Lane	0.10		0.30	1.00		0.37	0.08		0.95	0.27		0.04
Lane Grp Cap(c), veh/h	313	0	0	604	0	782	757	0	654	233	0	751
V/C Ratio(X)	0.67	0.00	0.00	0.86	0.00	0.22	0.93	0.00	0.91	1.10	0.00	0.52
Avail Cap(c_a), veh/h	440	0	0	604	0	915	757	0	654	233	0	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	0.0	22.7	0.0	15.2	24.3	0.0	22.7	24.9	0.0	17.4
Incr Delay (d2), s/veh	2.5	0.0	0.0	11.6	0.0	0.1	19.9	0.0	19.4	88.7	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	5.1	0.0	0.0	12.1	0.0	2.6	21.0	0.0	17.0	11.3	0.0	7.2
LnGrp Delay(d),s/veh	38.0	0.0	0.0	34.2	0.0	15.3	44.2	0.0	42.1	113.6	0.0	20.0
LnGrp LOS	D			C		B	D		D	F		B
Approach Vol, veh/h		210			686			1303			644	
Approach Delay, s/veh		38.0			29.6			43.2			57.3	
Approach LOS		D			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		44.0	25.0	18.5		44.0		43.5
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s		39.0	20.0	20.0		24.0		45.0
Max Q Clear Time (g_c+I1), s		40.4	22.0	12.1		41.0		7.1
Green Ext Time (p_c), s		0.0	0.0	1.4		0.0		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	42.7
HCM 2010 LOS	D



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	10	9	1199	1004	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.865				0.999	
Flt Protected						
Satd. Flow (prot)	1644	0	0	3575	3571	0
Flt Permitted						
Satd. Flow (perm)	1644	0	0	3575	3571	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	133			170	210	
Travel Time (s)	3.0			3.9	4.8	
Peak Hour Factor	0.50	0.50	0.94	0.94	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Adj. Flow (vph)	0	20	10	1276	1091	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	0	1286	1099	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.4%		ICU Level of Service A	
Analysis Period (min) 15			

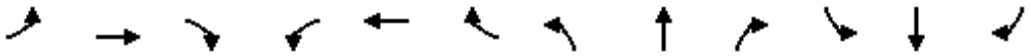
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	10	9	1199	1004	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	94	94	92	92
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	0	20	10	1276	1091	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1752	549	1099	0	-	0
Stage 1	1095	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	78	485	643	-	-	-
Stage 1	286	-	-	-	-	-
Stage 2	483	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	74	485	643	-	-	-
Mov Cap-2 Maneuver	74	-	-	-	-	-
Stage 1	286	-	-	-	-	-
Stage 2	457	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	643	-	485	-	-
HCM Lane V/C Ratio	0.015	-	0.041	-	-
HCM Control Delay (s)	10.7	0.3	12.7	-	-
HCM Lane LOS	B	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	99	0	1109	0	0	1014	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.95
Frt						0.865						
Flt Protected												
Satd. Flow (prot)	0	1900	0	0	0	1644	0	3574	0	0	3574	0
Flt Permitted												
Satd. Flow (perm)	0	1900	0	0	0	1644	0	3574	0	0	3574	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		96			205			448			170	
Travel Time (s)		2.2			4.7			10.2			3.9	
Peak Hour Factor	0.25	0.25	0.25	0.83	0.83	0.83	0.94	0.94	0.94	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	0	0	0	0	0	119	0	1180	0	0	1090	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	119	0	1180	0	0	1090	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	99	0	1109	0	0	1014	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	83	83	83	94	94	94	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	0	0	0	0	0	119	0	1180	0	0	1090	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1680	2270	545	1725	2270	590	1090	0	0	1180	0	0
Stage 1	1090	1090	-	1180	1180	-	-	-	-	-	-	-
Stage 2	590	1180	-	545	1090	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	63	41	488	58	41	456	648	-	-	599	-	-
Stage 1	233	294	-	205	266	-	-	-	-	-	-	-
Stage 2	466	266	-	495	294	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	47	41	488	58	41	456	648	-	-	599	-	-
Mov Cap-2 Maneuver	47	41	-	58	41	-	-	-	-	-	-	-
Stage 1	233	294	-	205	266	-	-	-	-	-	-	-
Stage 2	344	266	-	495	294	-	-	-	-	-	-	-

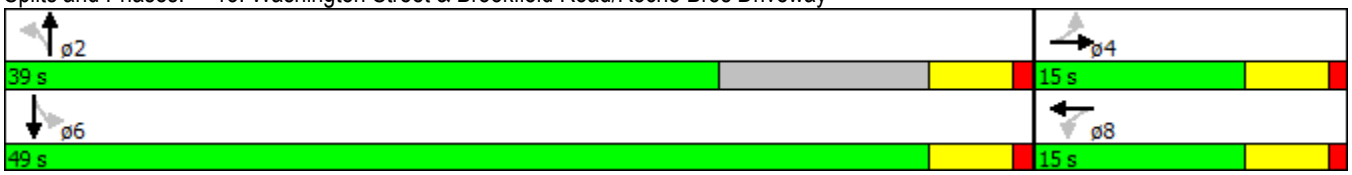
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	15.7	0	0
HCM LOS	A	C		

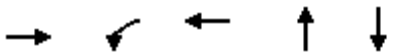
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	648	-	-	-	456	599	-	-
HCM Lane V/C Ratio	-	-	-	-	0.262	-	-	-
HCM Control Delay (s)	0	-	-	0	15.7	0	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1	0	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	9	0	129	2	16	1076	131	872
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	12.0	12.0	12.0	21.0	21.0	21.0	21.0
Total Split (s)	15.0	15.0	15.0	15.0	39.0	39.0	49.0	49.0
Total Split (%)	23.4%	23.4%	23.4%	23.4%	60.9%	60.9%	76.6%	76.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		9.7	9.7	9.7		46.8		46.8
Actuated g/C Ratio		0.15	0.15	0.15		0.70		0.70
v/c Ratio		0.10	0.76	0.12		0.58		0.73
Control Delay		8.9	51.9	11.7		6.1		9.9
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		8.9	51.9	11.7		6.1		9.9
LOS		A	D	B		A		A
Approach Delay		8.9		45.2		6.1		9.9
Approach LOS		A		D		A		A

Intersection Summary	
Cycle Length: 64	
Actuated Cycle Length: 66.6	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 87.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Washington Street & Brookfield Road/Roche Bros Driveway





Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	26	155	31	1344	1114
v/c Ratio	0.10	0.76	0.12	0.58	0.73
Control Delay	8.9	51.9	11.7	6.1	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	51.9	11.7	6.1	9.9
Queue Length 50th (ft)	0	58	1	111	117
Queue Length 95th (ft)	10	#122	19	156	192
Internal Link Dist (ft)	152		134	481	368
Turn Bay Length (ft)					
Base Capacity (vph)	258	212	271	2328	1520
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.10	0.73	0.11	0.58	0.73

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	0	9	129	2	24	16	1076	117	131	872	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1883	1900	1900	1884	1900
Adj Flow Rate, veh/h	13	0	13	155	2	29	18	1196	130	144	958	12
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.70	0.70	0.70	0.83	0.83	0.83	0.90	0.90	0.90	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	163	26	103	309	14	202	71	2224	239	235	1576	20
Arrive On Green	0.13	0.00	0.13	0.13	0.13	0.13	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	579	199	778	1423	105	1526	16	3146	338	221	2229	29
Grp Volume(v), veh/h	26	0	0	155	0	31	709	0	635	402	0	712
Grp Sat Flow(s),veh/h/ln	1556	0	0	1423	0	1631	1847	0	1654	770	0	1709
Q Serve(g_s), s	0.0	0.0	0.0	5.5	0.0	1.0	0.0	0.0	11.4	12.0	0.0	13.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	6.4	0.0	1.0	11.0	0.0	11.4	23.4	0.0	13.0
Prop In Lane	0.50		0.50	1.00		0.94	0.03		0.20	0.36		0.02
Lane Grp Cap(c), veh/h	293	0	0	309	0	216	1365	0	1169	623	0	1208
V/C Ratio(X)	0.09	0.00	0.00	0.50	0.00	0.14	0.52	0.00	0.54	0.64	0.00	0.59
Avail Cap(c_a), veh/h	335	0	0	349	0	262	1365	0	1169	623	0	1208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.8	0.0	0.0	26.1	0.0	23.9	4.3	0.0	4.3	5.7	0.0	4.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.3	0.0	0.3	1.4	0.0	1.8	5.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.4	0.0	0.0	2.7	0.0	0.5	6.0	0.0	5.7	5.3	0.0	6.6
LnGrp Delay(d),s/veh	23.9	0.0	0.0	27.3	0.0	24.2	5.7	0.0	6.2	10.8	0.0	6.7
LnGrp LOS	C			C		C	A		A	B		A
Approach Vol, veh/h		26			186			1344			1114	
Approach Delay, s/veh		23.9			26.8			5.9			8.2	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.0		13.3		49.0		13.3
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		34.0		10.0		44.0		10.0
Max Q Clear Time (g_c+I1), s		13.4		2.8		25.4		8.4
Green Ext Time (p_c), s		17.3		0.4		15.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	8.5
HCM 2010 LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	183	0	0	153	9	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.894	
Flt Protected					0.989	
Satd. Flow (prot)	1881	0	0	1900	1581	0
Flt Permitted					0.989	
Satd. Flow (perm)	1881	0	0	1900	1581	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	270			187	194	
Travel Time (s)	6.1			4.3	4.4	
Peak Hour Factor	0.80	0.80	0.89	0.89	0.75	0.75
Heavy Vehicles (%)	1%	0%	0%	0%	0%	8%
Adj. Flow (vph)	229	0	0	172	12	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	229	0	0	172	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	183	0	0	153	9	33
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	80	80	89	89	75	75
Heavy Vehicles, %	1	0	0	0	0	8
Mvmt Flow	229	0	0	172	12	44

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	229	0	401	229
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	172	-
Critical Hdwy	-	-	4.1	-	6.4	6.28
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.372
Pot Cap-1 Maneuver	-	-	1351	-	609	796
Stage 1	-	-	-	-	814	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1351	-	609	796
Mov Cap-2 Maneuver	-	-	-	-	609	-
Stage 1	-	-	-	-	814	-
Stage 2	-	-	-	-	863	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

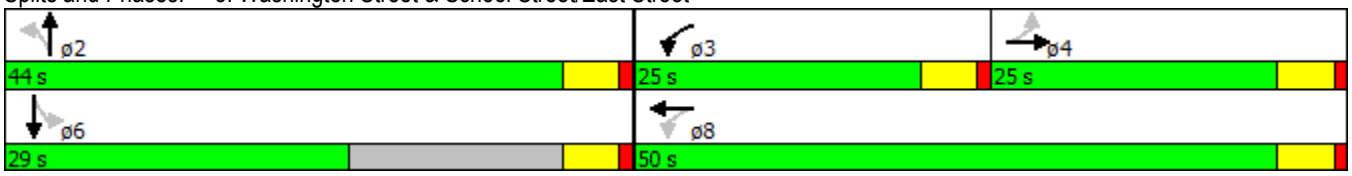
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	747	-	-	1351	-
HCM Lane V/C Ratio	0.075	-	-	-	-
HCM Control Delay (s)	10.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	28	117	456	88	52	628	63	519
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	9.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	25.0	25.0	25.0	50.0	44.0	44.0	29.0	29.0
Total Split (%)	26.6%	26.6%	26.6%	53.2%	46.8%	46.8%	30.9%	30.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		17.1	42.1	42.1		39.0		39.0
Actuated g/C Ratio		0.19	0.46	0.46		0.43		0.43
v/c Ratio		0.78	1.04	0.20		0.93		0.85dl
Control Delay		53.3	71.8	15.1		33.4		29.4
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		53.3	71.8	15.1		33.4		29.4
LOS		D	E	B		C		C
Approach Delay		53.3		58.4		33.4		29.4
Approach LOS		D		E		C		C

Intersection Summary	
Cycle Length: 94	
Actuated Cycle Length: 91.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 40.2	Intersection LOS: D
Intersection Capacity Utilization 106.7%	ICU Level of Service G
Analysis Period (min) 15	

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3: Washington Street & School Street/East Street



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	247	530	164	1312	654
v/c Ratio	0.78	1.04	0.20	0.93	0.85dl
Control Delay	53.3	71.8	15.1	33.4	29.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	71.8	15.1	33.4	29.4
Queue Length 50th (ft)	137	~246	54	322	168
Queue Length 95th (ft)	#228	#409	88	#493	248
Internal Link Dist (ft)	107		827	130	229
Turn Bay Length (ft)		300			
Base Capacity (vph)	368	512	881	1412	869
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.67	1.04	0.19	0.93	0.75

Intersection Summary

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

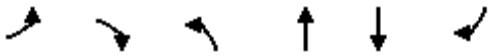
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	117	77	456	88	53	52	628	526	63	519	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1877	1900	1810	1893	1900	1900	1882	1900	1900	1864	1900
Adj Flow Rate, veh/h	31	130	86	530	102	62	57	683	572	69	570	15
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.90	0.90	0.90	0.86	0.86	0.86	0.92	0.92	0.92	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	5	0	0	1	1	1	2	2	2
Cap, veh/h	69	170	103	593	501	304	80	668	605	61	849	28
Arrive On Green	0.17	0.17	0.17	0.22	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	135	974	592	1723	1104	671	83	1535	1390	24	1953	64
Grp Volume(v), veh/h	247	0	0	530	0	164	708	0	604	260	0	394
Grp Sat Flow(s),veh/h/ln	1701	0	0	1723	0	1774	1541	0	1467	357	0	1685
Q Serve(g_s), s	6.9	0.0	0.0	20.0	0.0	5.0	23.6	0.0	35.4	3.6	0.0	15.4
Cycle Q Clear(g_c), s	12.5	0.0	0.0	20.0	0.0	5.0	39.0	0.0	35.4	39.0	0.0	15.4
Prop In Lane	0.13		0.35	1.00		0.38	0.08		0.95	0.26		0.04
Lane Grp Cap(c), veh/h	342	0	0	593	0	805	714	0	638	206	0	733
V/C Ratio(X)	0.72	0.00	0.00	0.89	0.00	0.20	0.99	0.00	0.95	1.26	0.00	0.54
Avail Cap(c_a), veh/h	423	0	0	593	0	891	714	0	638	206	0	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.6	0.0	0.0	22.9	0.0	14.8	26.8	0.0	24.3	24.2	0.0	18.7
Incr Delay (d2), s/veh	4.6	0.0	0.0	16.0	0.0	0.1	31.9	0.0	24.6	151.9	0.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	6.3	0.0	0.0	13.1	0.0	2.4	23.6	0.0	18.6	13.7	0.0	7.7
LnGrp Delay(d),s/veh	40.2	0.0	0.0	39.0	0.0	14.9	58.7	0.0	48.9	176.1	0.0	21.5
LnGrp LOS	D			D		B	E		D	F		C
Approach Vol, veh/h		247			694			1312			654	
Approach Delay, s/veh		40.2			33.3			54.2			83.1	
Approach LOS		D			C			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		44.0	25.0	20.7		44.0		45.7
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s		39.0	20.0	20.0		24.0		45.0
Max Q Clear Time (g_c+I1), s		41.0	22.0	14.5		41.0		7.0
Green Ext Time (p_c), s		0.0	0.0	1.2		0.0		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	54.5
HCM 2010 LOS	D



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	15	1206	1028	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt					0.997	
Flt Protected				0.999		
Satd. Flow (prot)	1900	0	0	3571	3564	0
Flt Permitted				0.999		
Satd. Flow (perm)	1900	0	0	3571	3564	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	133			170	210	
Travel Time (s)	3.0			3.9	4.8	
Peak Hour Factor	0.50	0.50	0.94	0.94	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Adj. Flow (vph)	0	0	16	1283	1117	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1299	1143	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		

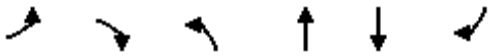
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	15	1206	1028	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	94	94	92	92
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	0	0	16	1283	1117	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1803	572	1143	0	-	0
Stage 1	1130	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	72	468	619	-	-	-
Stage 1	274	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	66	468	619	-	-	-
Mov Cap-2 Maneuver	66	-	-	-	-	-
Stage 1	274	-	-	-	-	-
Stage 2	431	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	619	-	-	-	-
HCM Lane V/C Ratio	0.026	-	-	-	-
HCM Control Delay (s)	11	0.5	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	9	2	2	1212	1017	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.977				0.998	
Flt Protected	0.960					
Satd. Flow (prot)	1782	0	0	3574	3567	0
Flt Permitted	0.960					
Satd. Flow (perm)	1782	0	0	3574	3567	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	95			97	73	
Travel Time (s)	2.2			2.2	1.7	
Peak Hour Factor	0.92	0.92	0.94	0.94	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Adj. Flow (vph)	10	2	2	1289	1105	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	0	1291	1117	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

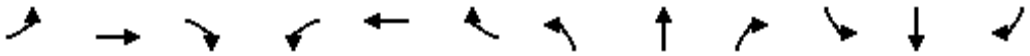
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	9	2	2	1212	1017	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	94	94	92	92
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	10	2	2	1289	1105	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1760	559	1117	0	-	0
Stage 1	1111	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	77	478	633	-	-	-
Stage 1	281	-	-	-	-	-
Stage 2	487	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	76	478	633	-	-	-
Mov Cap-2 Maneuver	76	-	-	-	-	-
Stage 1	281	-	-	-	-	-
Stage 2	482	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	51	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	633	-	90	-	-
HCM Lane V/C Ratio	0.003	-	0.133	-	-
HCM Control Delay (s)	10.7	0.1	51	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	99	0	1115	0	0	1019	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.95
Frt						0.865						
Flt Protected												
Satd. Flow (prot)	0	1900	0	0	0	1644	0	3574	0	0	3574	0
Flt Permitted												
Satd. Flow (perm)	0	1900	0	0	0	1644	0	3574	0	0	3574	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		96			205			448			97	
Travel Time (s)		2.2			4.7			10.2			2.2	
Peak Hour Factor	0.25	0.25	0.25	0.83	0.83	0.83	0.94	0.94	0.94	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	0	0	0	0	0	119	0	1186	0	0	1096	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	119	0	1186	0	0	1096	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	0	0	99	0	1115	0	0	1019	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	83	83	83	94	94	94	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	0	0	0	0	0	119	0	1186	0	0	1096	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1689	2282	548	1734	2282	593	1096	0	0	1186	0	0
Stage 1	1096	1096	-	1186	1186	-	-	-	-	-	-	-
Stage 2	593	1186	-	548	1096	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	62	40	485	57	40	454	644	-	-	596	-	-
Stage 1	231	292	-	204	265	-	-	-	-	-	-	-
Stage 2	464	265	-	493	292	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	46	40	485	57	40	454	644	-	-	596	-	-
Mov Cap-2 Maneuver	46	40	-	57	40	-	-	-	-	-	-	-
Stage 1	231	292	-	204	265	-	-	-	-	-	-	-
Stage 2	342	265	-	493	292	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	15.7	0	0
HCM LOS	A	C		

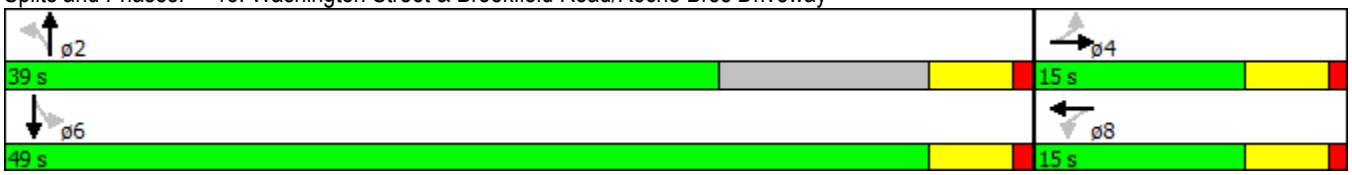
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	644	-	-	-	454	596	-	-
HCM Lane V/C Ratio	-	-	-	-	0.263	-	-	-
HCM Control Delay (s)	0	-	-	0	15.7	0	-	-
HCM Lane LOS	A	-	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1	0	-	-

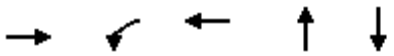
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	9	0	129	2	16	1082	131	877
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	12.0	12.0	12.0	21.0	21.0	21.0	21.0
Total Split (s)	15.0	15.0	15.0	15.0	39.0	39.0	49.0	49.0
Total Split (%)	23.4%	23.4%	23.4%	23.4%	60.9%	60.9%	76.6%	76.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.0	5.0	5.0		5.0		5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		9.7	9.7	9.7		46.8		46.8
Actuated g/C Ratio		0.15	0.15	0.15		0.70		0.70
v/c Ratio		0.10	0.76	0.12		0.58		0.74
Control Delay		8.9	51.9	11.7		6.1		10.1
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		8.9	51.9	11.7		6.1		10.1
LOS		A	D	B		A		B
Approach Delay		8.9		45.2		6.1		10.1
Approach LOS		A		D		A		B

Intersection Summary

Cycle Length: 64
Actuated Cycle Length: 66.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 10.5 — Intersection LOS: B
Intersection Capacity Utilization 87.6% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 13: Washington Street & Brookfield Road/Roche Bros Driveway





Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	26	155	31	1350	1120
v/c Ratio	0.10	0.76	0.12	0.58	0.74
Control Delay	8.9	51.9	11.7	6.1	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	51.9	11.7	6.1	10.1
Queue Length 50th (ft)	0	58	1	112	118
Queue Length 95th (ft)	10	#122	19	158	195
Internal Link Dist (ft)	152		134	481	368
Turn Bay Length (ft)					
Base Capacity (vph)	258	212	271	2329	1518
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.10	0.73	0.11	0.58	0.74

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	0	9	129	2	24	16	1082	117	131	877	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1883	1900	1900	1884	1900
Adj Flow Rate, veh/h	13	0	13	155	2	29	18	1202	130	144	964	12
Adj No. of Lanes	0	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.70	0.70	0.70	0.83	0.83	0.83	0.90	0.90	0.90	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	163	26	103	309	14	202	71	2225	238	233	1577	20
Arrive On Green	0.13	0.00	0.13	0.13	0.13	0.13	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	579	199	778	1423	105	1526	16	3148	337	219	2230	29
Grp Volume(v), veh/h	26	0	0	155	0	31	712	0	638	404	0	716
Grp Sat Flow(s),veh/h/ln	1556	0	0	1423	0	1631	1846	0	1654	769	0	1709
Q Serve(g_s), s	0.0	0.0	0.0	5.5	0.0	1.0	0.0	0.0	11.5	12.2	0.0	13.2
Cycle Q Clear(g_c), s	0.8	0.0	0.0	6.4	0.0	1.0	11.1	0.0	11.5	23.6	0.0	13.2
Prop In Lane	0.50		0.50	1.00		0.94	0.03		0.20	0.36		0.02
Lane Grp Cap(c), veh/h	293	0	0	309	0	216	1364	0	1169	622	0	1208
V/C Ratio(X)	0.09	0.00	0.00	0.50	0.00	0.14	0.52	0.00	0.55	0.65	0.00	0.59
Avail Cap(c_a), veh/h	335	0	0	349	0	262	1364	0	1169	622	0	1208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.8	0.0	0.0	26.1	0.0	23.9	4.3	0.0	4.4	5.7	0.0	4.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.3	0.0	0.3	1.4	0.0	1.8	5.2	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.4	0.0	0.0	2.7	0.0	0.5	6.1	0.0	5.7	5.5	0.0	6.7
LnGrp Delay(d),s/veh	23.9	0.0	0.0	27.3	0.0	24.2	5.7	0.0	6.2	10.9	0.0	6.7
LnGrp LOS	C			C		C	A		A	B		A
Approach Vol, veh/h		26			186			1350			1120	
Approach Delay, s/veh		23.9			26.8			5.9			8.3	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.0		13.3		49.0		13.3
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		34.0		10.0		44.0		10.0
Max Q Clear Time (g_c+I1), s		13.5		2.8		25.6		8.4
Green Ext Time (p_c), s		17.3		0.4		15.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	8.5
HCM 2010 LOS	A

Sight Distance Calculations

Proposed Mixed-Use, Westwood, MA

Inputs

Posted Speed Limit = 30 mph NB and 30 mph SB

Direction 1 =	Washington St NB	85% Speed =	33	mph	Grade =	0	t=	2.5 s	a=	11.2	ft/s^2
Direction 2 =	Washington St SB	85% Speed =	35	mph	Grade =	0	t=	2.5 s	a=	11.2	ft/s^2
						Left:	t_g =	7.5 s			
						Right:	t_g =	6.5 s			

SSD = Reaction Distance + Braking Distance

Reaction Distance = 1.47 x V x t

Braking Distance = $V^2/(30 \times ((a/32.2) + G))$

ISD = 1.47 x V x t_g

Where t = reaction time (sec)

t_g = time gap for minor road vehicle to enter the major road

V= travel speed (mph)

G= roadway grade

a= deceleration rate (ft/s^2)

Calculations

	Reaction Distance (ft)	Brake Distance (ft)	SSD (ft)
Washington St NB	121.3	104.4	226
Washington St SB	128.6	117.4	246

For 33 mph:

Left Turn ISD =	364	ft
Right Turn ISD =	315	ft

For 35 mph:

Left Turn ISD =	386	ft
Right Turn ISD =	334	ft

Source: AASHTO Geometric Design of Highways and Streets; FHWA; Washington, D.C.; 2011

Sight Distance Calculations

Proposed Mixed-Use, Westwood, MA

Inputs

Posted Speed Limit = 30 mph WB and 30 mph EB

Direction 1 =	School Street WB	85% Speed =	29	mph	Grade =	0	t=	2.5 s	a=	11.2	ft/s^2
Direction 2 =	School Street EB	85% Speed =	27	mph	Grade =	0	t=	2.5 s	a=	11.2	ft/s^2
						Left:	t_g =	7.5 s			
						Right:	t_g =	6.5 s			

SSD = Reaction Distance + Braking Distance

Reaction Distance = 1.47 x V x t

Braking Distance = $V^2/(30 \times ((a/32.2) + G))$

ISD = $1.47 \times V \times t_g$

Where t = reaction time (sec)

t_g = time gap for minor road vehicle to enter the major road

V= travel speed (mph)

G= roadway grade

a= deceleration rate (ft/s^2)

Calculations

	Reaction Distance (ft)	Brake Distance (ft)	SSD (ft)
School Street WB	106.6	80.6	187
School Street EB	99.2	69.9	169

For 29 mph:

Left Turn ISD =	320	ft
Right Turn ISD =	277	ft

For 27 mph:

Left Turn ISD =	298	ft
Right Turn ISD =	258	ft

Source: AASHTO Geometric Design of Highways and Streets; FHWA; Washington, D.C.; 2011

Washington Street (Route 1A)
north of Roche Brothers Exit Driveway
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 A GAP
Site Code: 2152086
Date Start: 15-Dec-15

SB

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/15/1															
5	8	1	1	0	1	1	1	1	0	0	2	2	0	40	58
01:00	1	0	0	0	0	0	0	0	0	0	0	1	0	23	25
02:00	0	0	1	0	0	0	0	0	0	0	0	0	0	13	14
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14
04:00	5	0	0	0	0	0	0	0	0	0	0	1	0	20	26
05:00	30	0	1	0	0	0	0	1	4	0	1	0	1	49	87
06:00	158	6	5	2	1	2	5	3	7	1	8	4	4	69	275
07:00	261	6	6	6	4	9	7	8	3	4	6	6	4	58	388
08:00	277	13	14	7	10	4	7	7	6	7	6	7	10	53	428
09:00	367	16	10	11	6	5	10	4	6	8	7	7	7	45	509
10:00	351	14	5	8	11	5	7	4	10	6	2	6	2	56	487
11:00	427	17	11	11	3	6	4	3	4	5	3	3	2	56	555
12 PM	471	14	15	5	4	7	4	3	7	3	7	5	2	46	593
13:00	479	17	10	10	5	9	5	5	3	4	1	4	3	50	605
14:00	503	12	13	15	7	5	5	3	8	1	5	5	8	43	633
15:00	636	14	11	8	8	6	7	6	4	6	0	2	5	37	750
16:00	854	17	8	6	2	4	7	10	5	2	3	2	5	24	949
17:00	949	14	7	3	5	6	7	2	7	2	5	4	6	21	1038
18:00	816	17	10	7	8	8	3	8	4	2	1	2	4	31	921
19:00	373	8	9	6	9	7	7	9	7	6	6	8	7	52	514
20:00	232	10	10	9	2	5	7	6	9	7	5	3	11	59	375
21:00	131	2	2	2	3	4	6	9	7	7	3	6	4	66	252
22:00	82	4	2	1	4	3	2	3	7	4	3	8	2	63	188
23:00	37	1	2	0	3	1	3	3	3	5	3	2	5	54	122
Total	7448	203	153	117	96	97	104	98	111	80	77	88	92	1042	9806
Percent	76.0%	2.1%	1.6%	1.2%	1.0%	1.0%	1.1%	1.0%	1.1%	0.8%	0.8%	0.9%	0.9%	10.6%	

Washington Street (Route 1A)
north of Roche Brothers Exit Driveway
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 A GAP
Site Code: 2152086
Date Start: 15-Dec-15

SB

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/16/15	9	0	2	1	0	1	0	2	1	0	1	3	0	45	65
01:00	3	0	0	0	0	1	0	0	0	0	0	0	0	24	28
02:00	0	0	0	0	0	0	0	0	1	0	0	0	0	13	14
03:00	0	0	0	0	0	0	0	0	0	1	0	0	0	13	14
04:00	3	0	0	0	1	1	0	0	0	0	1	0	0	13	19
05:00	25	2	3	2	0	2	2	2	2	0	3	0	1	49	93
06:00	169	4	3	4	4	3	2	3	8	3	3	4	6	73	289
07:00	342	11	6	7	7	8	8	8	6	4	2	9	4	52	474
08:00	330	11	14	8	11	10	4	8	3	9	6	5	6	52	477
09:00	331	10	13	5	8	9	11	5	6	6	6	6	6	52	474
10:00	340	9	6	13	6	6	4	6	5	5	4	5	8	54	471
11:00	429	13	12	9	10	12	9	9	7	6	3	3	4	44	570
12 PM	449	15	16	8	12	8	5	8	6	7	5	1	3	43	586
13:00	541	15	16	4	7	5	9	3	8	8	7	5	8	36	672
14:00	546	14	16	14	7	9	8	4	4	4	2	6	5	37	676
15:00	609	15	21	4	6	4	5	5	4	8	5	8	8	31	733
16:00	928	19	12	9	10	5	3	10	2	5	4	6	3	15	1031
17:00	840	12	12	6	9	9	6	4	5	4	8	5	4	19	943
18:00	789	14	13	2	6	6	3	1	8	4	3	7	2	34	892
19:00	403	12	6	5	6	9	10	9	6	4	4	5	8	49	536
20:00	238	3	6	5	6	7	9	6	12	6	5	5	6	63	377
21:00	165	3	6	5	1	8	1	8	5	6	7	4	5	69	293
22:00	107	7	4	5	2	5	3	5	13	8	6	3	3	59	230
23:00	41	3	1	1	2	4	3	1	4	7	4	1	2	65	139
Total	7637	192	188	117	121	132	105	107	116	105	89	91	92	1004	10096
Percent	75.6%	1.9%	1.9%	1.2%	1.2%	1.3%	1.0%	1.1%	1.1%	1.0%	0.9%	0.9%	0.9%	9.9%	
Grand Total	15085	395	341	234	217	229	209	205	227	185	166	179	184	2046	

Statistics

Number of Gaps > 55 Secs. : 0

Percent of Gaps > 55 Secs. : 0.0%

Washington Street (Route 1A)
north of Roche Brothers Exit Driveway
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 A GAP
Site Code: 2152086
Date Start: 15-Dec-15

NB

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/15/1															
5	3	0	1	0	0	0	2	0	0	0	0	1	0	32	39
01:00	2	0	0	0	0	0	0	0	0	0	0	0	0	23	25
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15
03:00	2	0	0	0	0	0	0	1	0	0	0	0	0	21	24
04:00	15	2	0	2	0	2	0	2	1	2	1	0	1	41	69
05:00	148	4	5	11	6	4	4	6	4	2	3	4	2	64	267
06:00	773	16	14	9	11	6	10	4	4	4	3	6	1	26	887
07:00	777	9	10	8	10	6	11	1	5	3	3	5	2	35	885
08:00	723	16	8	6	7	7	8	9	4	7	3	1	2	31	832
09:00	672	17	14	10	6	6	8	8	2	5	4	4	3	34	793
10:00	519	11	16	7	13	5	10	6	4	11	4	0	5	43	654
11:00	501	8	8	11	10	12	4	3	4	8	7	6	3	42	627
12 PM	507	17	7	10	11	9	7	6	8	6	7	4	4	36	639
13:00	542	16	17	16	7	6	9	7	5	4	2	4	2	39	676
14:00	511	15	16	9	7	11	4	5	7	5	9	2	2	43	646
15:00	550	19	17	11	9	7	8	7	2	7	5	2	3	30	677
16:00	465	18	13	6	12	8	11	4	5	3	4	3	2	43	597
17:00	448	13	18	13	12	2	7	11	7	4	4	4	3	40	586
18:00	399	21	9	11	6	11	10	6	7	8	5	1	5	38	537
19:00	326	17	12	5	5	6	7	4	6	6	2	4	6	49	455
20:00	280	8	12	9	7	10	8	8	4	4	7	3	3	55	418
21:00	124	7	8	8	2	4	4	5	2	1	7	6	0	71	249
22:00	66	5	3	5	1	2	1	4	4	3	4	2	1	59	160
23:00	33	0	2	1	1	1	3	0	3	3	1	1	1	53	103
Total	8386	239	210	168	143	125	136	107	88	96	85	63	51	963	10860
Percent	77.2%	2.2%	1.9%	1.5%	1.3%	1.2%	1.3%	1.0%	0.8%	0.9%	0.8%	0.6%	0.5%	8.9%	

Washington Street (Route 1A)
north of Roche Brothers Exit Driveway
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 A GAP
Site Code: 2152086
Date Start: 15-Dec-15

NB

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/16/15	4	0	2	1	0	1	1	1	1	0	0	1	1	27	40
01:00	2	0	0	0	0	0	0	0	0	0	1	0	0	17	20
02:00	0	0	0	0	0	0	0	0	0	0	0	1	0	13	14
03:00	1	0	0	0	2	0	0	0	0	0	1	0	1	16	21
04:00	4	1	0	4	1	0	1	1	1	1	0	0	1	50	65
05:00	133	6	7	6	4	6	4	6	2	4	2	2	5	60	247
06:00	781	12	14	9	13	6	6	1	3	3	5	5	4	28	890
07:00	863	13	14	7	8	10	4	5	5	3	3	2	0	33	970
08:00	718	21	14	5	3	4	12	2	7	3	7	4	5	31	836
09:00	602	13	10	5	10	4	9	6	4	4	1	3	4	42	717
10:00	504	14	8	9	8	6	7	5	3	6	2	1	5	49	627
11:00	535	17	12	10	6	3	11	8	4	5	4	2	2	44	663
12 PM	568	14	8	3	8	8	9	3	4	5	6	6	3	41	686
13:00	547	16	18	11	7	5	8	4	11	8	7	4	3	32	681
14:00	541	13	15	6	10	8	5	3	5	3	5	4	6	38	662
15:00	561	16	16	6	8	4	3	8	5	3	5	6	6	31	678
16:00	469	16	10	13	11	5	5	7	9	6	5	2	2	40	600
17:00	441	14	12	11	10	5	6	11	7	2	0	3	7	47	576
18:00	480	14	14	7	7	3	6	6	5	1	10	3	5	41	602
19:00	343	13	7	4	9	7	8	5	3	2	2	7	5	49	464
20:00	270	13	8	8	7	5	11	6	4	3	7	2	3	57	404
21:00	148	8	9	6	3	8	8	2	5	4	2	6	6	59	274
22:00	70	4	6	2	3	3	3	2	4	3	2	3	3	60	168
23:00	46	6	3	1	1	1	0	2	2	7	2	2	2	59	134
Total	8631	244	207	134	139	102	127	94	94	76	79	69	79	964	11039
Percent	78.2%	2.2%	1.9%	1.2%	1.3%	0.9%	1.2%	0.9%	0.9%	0.7%	0.7%	0.6%	0.7%	8.7%	
Grand Total	17017	483	417	302	282	227	263	201	182	172	164	132	130	1927	

Statistics		
Number of Gaps > 55 Secs. :	0	
Percent of Gaps > 55 Secs. :	0.0%	

Washington Street (Route 1A)
north of Roche Brothers Exit Driveway
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 A GAP
Site Code: 2152086
Date Start: 15-Dec-15

COMBINED

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/15/1															
5	20	2	1	0	2	2	2	3	2	0	2	4	0	57	97
01:00	8	1	0	0	0	0	0	0	0	0	1	0	1	39	50
02:00	2	0	0	1	0	0	0	1	0	0	0	0	0	25	29
03:00	5	0	1	1	1	0	0	0	0	0	0	0	0	30	38
04:00	25	2	3	3	2	4	1	1	1	2	1	1	2	47	95
05:00	217	5	7	10	8	5	6	8	7	7	2	5	5	62	354
06:00	1048	15	14	12	9	11	5	4	7	2	5	2	6	22	1162
07:00	1165	19	16	13	7	11	4	4	1	4	3	3	3	20	1273
08:00	1158	26	11	6	8	5	5	2	5	6	2	3	4	19	1260
09:00	1195	21	18	9	14	4	6	5	3	4	4	4	3	12	1302
10:00	1015	23	12	18	14	5	5	9	8	5	2	1	1	23	1141
11:00	1071	22	18	12	11	8	6	3	3	7	3	4	0	14	1182
12 PM	1122	17	19	17	7	4	7	2	4	5	4	6	8	10	1232
13:00	1193	16	8	10	10	7	7	6	4	1	1	2	0	16	1281
14:00	1175	18	12	17	6	7	3	4	5	6	2	2	4	18	1279
15:00	1334	15	15	12	13	4	6	8	4	1	2	2	2	9	1427
16:00	1469	21	8	9	10	5	4	6	0	0	3	0	1	10	1546
17:00	1552	17	8	10	8	3	5	4	1	2	4	3	1	6	1624
18:00	1373	16	6	9	9	8	10	3	5	2	5	3	1	8	1458
19:00	835	18	18	8	9	7	8	11	5	9	4	3	8	26	969
20:00	644	21	12	16	12	7	11	10	14	7	8	3	6	22	793
21:00	336	11	15	15	9	17	9	11	6	9	4	9	4	46	501
22:00	197	18	6	5	7	7	6	8	8	12	6	9	3	56	348
23:00	98	3	9	2	4	3	7	6	5	9	7	4	6	62	225
Total	18257	327	237	215	180	134	123	119	98	100	75	73	69	659	20666
Percent	88.3%	1.6%	1.1%	1.0%	0.9%	0.6%	0.6%	0.6%	0.5%	0.5%	0.4%	0.4%	0.3%	3.2%	

Washington Street (Route 1A)
north of Roche Brothers Exit Driveway
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 A GAP
Site Code: 2152086
Date Start: 15-Dec-15

COMBINED

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/16/15	20	2	3	4	1	2	1	3	1	3	2	2	2	59	105
01:00	7	0	0	1	0	1	1	0	0	1	1	0	1	35	48
02:00	1	0	0	1	0	0	0	1	0	1	0	1	0	23	28
03:00	2	0	0	0	2	0	0	1	0	1	1	1	1	26	35
04:00	12	1	2	3	5	1	0	1	1	2	1	0	0	55	84
05:00	198	8	13	8	5	6	9	10	2	5	6	5	6	59	340
06:00	1060	23	13	15	11	11	2	4	4	3	3	2	2	26	1179
07:00	1341	23	8	9	9	8	2	8	8	2	4	0	4	18	1444
08:00	1221	16	15	8	7	10	8	4	2	2	2	1	2	15	1313
09:00	1077	19	14	8	10	4	10	7	6	8	2	3	2	21	1191
10:00	984	23	11	8	7	10	7	10	6	9	2	4	5	12	1098
11:00	1125	20	12	17	9	8	5	8	6	2	6	2	2	11	1233
12 PM	1177	19	15	12	10	10	1	4	3	1	5	2	2	11	1272
13:00	1248	17	13	14	7	7	7	2	5	8	3	4	3	15	1353
14:00	1232	22	20	12	4	10	4	5	3	3	7	1	3	12	1338
15:00	1321	18	19	7	8	9	3	3	4	6	1	2	2	8	1411
16:00	1556	18	9	11	9	4	1	5	2	3	2	1	2	8	1631
17:00	1423	17	16	14	9	5	6	4	6	2	3	1	3	10	1519
18:00	1411	13	9	9	10	7	3	3	8	3	3	4	4	7	1494
19:00	874	18	14	8	16	12	10	9	9	0	5	4	4	17	1000
20:00	625	18	18	6	13	14	13	14	11	5	7	1	5	31	781
21:00	411	18	16	18	6	15	8	10	8	3	7	2	5	40	567
22:00	234	17	19	7	6	6	8	7	9	14	8	6	3	54	398
23:00	122	13	7	8	3	6	4	7	9	13	5	4	2	70	273
Total	18682	343	266	208	167	166	113	130	113	100	86	53	65	643	21135
Percent	88.4%	1.6%	1.3%	1.0%	0.8%	0.8%	0.5%	0.6%	0.5%	0.5%	0.4%	0.3%	0.3%	3.0%	
Grand Total	36939	670	503	423	347	300	236	249	211	200	161	126	134	1302	

Statistics

Number of Gaps > 55 Secs. : 0

Percent of Gaps > 55 Secs. : 0.0%

School Street
west of Washington Street (Route 1A)
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 B Gap
Site Code: 2152086
Date Start: 15-Dec-15

WB

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/15/1															
5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
01:00	1	0	0	0	0	0	0	0	0	0	0	0	0	3	4
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
06:00	6	0	1	0	0	1	0	2	0	0	0	1	1	25	37
07:00	40	4	1	2	0	1	1	0	0	3	1	1	1	49	104
08:00	41	1	3	2	3	5	0	2	4	1	0	2	3	61	128
09:00	13	1	0	0	0	0	0	0	0	0	1	0	0	42	57
10:00	8	1	0	0	1	1	3	1	0	1	0	1	1	48	66
11:00	13	0	4	1	3	0	0	2	1	1	1	0	2	56	84
12 PM	22	4	1	3	2	0	1	3	0	2	0	0	2	49	89
13:00	13	2	3	3	3	1	0	1	0	3	1	1	1	53	85
14:00	58	1	1	2	2	3	3	0	2	1	1	3	2	66	145
15:00	67	3	2	1	9	2	1	3	1	2	3	5	0	59	158
16:00	99	2	5	5	0	3	1	1	3	2	3	2	2	55	183
17:00	162	1	3	4	2	3	1	2	5	1	2	7	5	55	253
18:00	99	3	6	4	6	2	7	6	2	3	1	3	0	55	197
19:00	22	0	1	1	0	2	0	2	3	0	1	2	3	57	94
20:00	17	0	2	0	0	1	0	0	0	0	0	0	2	43	65
21:00	6	2	0	0	0	0	0	0	0	0	2	0	1	39	50
22:00	4	0	0	1	0	1	0	0	0	0	0	0	0	16	22
23:00	1	0	0	0	0	0	0	0	0	0	0	0	0	5	6
Total	692	25	33	29	31	26	18	25	21	20	17	28	26	850	1841
Percent	37.6%	1.4%	1.8%	1.6%	1.7%	1.4%	1.0%	1.4%	1.1%	1.1%	0.9%	1.5%	1.4%	46.2%	

School Street
west of Washington Street (Route 1A)
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 B Gap
Site Code: 2152086
Date Start: 15-Dec-15

WB

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/16/15	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
06:00	6	0	1	0	0	0	0	1	1	1	0	0	0	31	41
07:00	56	3	0	4	1	0	0	2	3	3	2	1	1	54	130
08:00	28	1	4	3	2	0	1	2	0	2	1	0	0	46	90
09:00	12	1	1	0	1	0	0	0	1	1	1	1	0	42	61
10:00	5	1	0	0	1	0	0	0	1	2	0	2	0	41	53
11:00	22	1	2	3	4	3	1	0	0	2	3	1	2	52	96
12 PM	30	4	1	2	3	1	2	3	1	0	1	1	0	53	102
13:00	26	2	4	1	1	0	0	1	0	4	1	1	2	62	105
14:00	54	3	4	2	3	0	2	1	2	0	3	2	3	52	131
15:00	65	2	4	7	3	4	0	1	2	5	0	3	0	58	154
16:00	89	2	5	5	6	2	1	2	0	2	2	0	2	58	176
17:00	147	5	3	5	1	1	3	2	2	2	2	1	0	57	231
18:00	116	3	3	2	1	0	4	3	2	1	2	1	3	56	197
19:00	36	0	2	4	0	2	2	2	0	0	1	1	2	47	99
20:00	16	0	0	0	2	2	0	1	0	2	3	0	0	50	76
21:00	15	1	0	1	0	3	0	0	0	0	1	2	1	37	61
22:00	2	0	1	0	0	0	1	0	0	0	0	0	0	20	24
23:00	1	0	0	0	0	1	0	0	0	0	0	0	0	18	20
Total	726	29	35	39	29	19	17	21	15	27	23	17	16	850	1863
Percent	39.0%	1.6%	1.9%	2.1%	1.6%	1.0%	0.9%	1.1%	0.8%	1.4%	1.2%	0.9%	0.9%	45.6%	
Grand Total	1418	54	68	68	60	45	35	46	36	47	40	45	42	1700	

Statistics

Number of Gaps > 55 Secs. : 0

Percent of Gaps > 55 Secs. : 0.0%

School Street
west of Washington Street (Route 1A)
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 B Gap
Site Code: 2152086
Date Start: 15-Dec-15

EB

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/15/1															
5	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
05:00	3	1	0	0	0	0	0	1	1	0	0	0	0	19	25
06:00	32	5	3	4	2	2	2	2	0	2	3	1	2	54	114
07:00	173	9	12	10	5	5	6	2	3	5	0	3	3	64	300
08:00	127	6	6	7	5	4	7	3	4	5	4	3	2	70	253
09:00	36	5	1	3	3	0	4	1	2	1	3	5	4	67	135
10:00	20	1	2	1	1	0	3	3	0	3	0	2	1	51	88
11:00	15	2	0	2	1	3	0	0	1	1	2	0	1	46	74
12 PM	15	2	1	1	1	2	1	0	0	2	2	0	0	50	77
13:00	25	1	0	2	2	1	5	4	6	3	0	1	3	59	112
14:00	48	0	2	5	5	4	0	3	2	3	3	4	2	53	134
15:00	44	1	2	5	2	3	3	3	2	1	1	3	2	69	141
16:00	46	4	4	4	3	4	3	1	1	2	0	2	2	71	147
17:00	33	4	1	5	5	1	4	1	2	4	1	0	1	65	127
18:00	35	2	1	0	1	0	1	1	1	2	0	4	2	51	101
19:00	11	0	2	0	1	1	0	0	3	0	0	1	1	53	73
20:00	9	3	2	0	3	2	1	1	1	2	1	0	2	32	59
21:00	1	0	0	0	0	0	0	0	0	0	0	0	0	14	15
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6
Total	673	46	39	49	40	32	40	26	29	36	20	29	28	919	2006
Percent	33.5%	2.3%	1.9%	2.4%	2.0%	1.6%	2.0%	1.3%	1.4%	1.8%	1.0%	1.4%	1.4%	45.8%	

School Street
west of Washington Street (Route 1A)
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 B Gap
Site Code: 2152086
Date Start: 15-Dec-15

EB

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/16/15	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
05:00	1	0	0	0	0	0	0	0	0	1	0	2	0	17	21
06:00	31	4	5	1	0	1	1	4	2	1	3	1	1	48	103
07:00	186	9	4	5	5	7	5	5	4	3	7	4	2	59	305
08:00	134	14	3	7	9	7	5	3	4	2	5	2	2	58	255
09:00	39	2	4	1	1	2	0	0	1	2	1	0	3	64	120
10:00	19	1	2	1	2	0	1	3	1	2	0	1	6	59	98
11:00	26	2	0	0	3	2	4	0	1	3	2	0	4	44	91
12 PM	22	3	1	2	4	2	3	0	0	1	3	3	0	53	97
13:00	19	3	3	1	2	2	0	2	2	0	1	1	4	54	94
14:00	41	3	2	2	1	3	6	5	0	4	3	0	1	59	130
15:00	37	2	1	1	3	4	2	3	2	3	2	3	2	60	125
16:00	45	2	2	5	2	3	2	2	0	4	3	3	3	64	140
17:00	38	3	4	2	1	0	2	5	2	0	1	2	3	56	119
18:00	33	1	1	3	2	2	1	3	2	3	2	1	2	66	122
19:00	7	1	0	1	0	1	1	4	1	0	0	1	1	41	59
20:00	5	1	1	0	0	0	1	0	0	0	1	0	0	31	40
21:00	2	0	1	0	0	0	0	0	0	0	0	0	1	20	24
22:00	0	0	0	0	0	1	0	0	0	0	0	0	0	22	23
23:00	0	0	0	0	0	1	0	0	0	0	0	0	0	7	8
Total	686	51	34	32	35	38	34	39	22	29	34	24	35	895	1988
Percent	34.5%	2.6%	1.7%	1.6%	1.8%	1.9%	1.7%	2.0%	1.1%	1.5%	1.7%	1.2%	1.8%	45.0%	
Grand Total	1359	97	73	81	75	70	74	65	51	65	54	53	63	1814	

Statistics

Number of Gaps > 55 Secs. : 0

Percent of Gaps > 55 Secs. : 0.0%

School Street
west of Washington Street (Route 1A)
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 B Gap
Site Code: 2152086
Date Start: 15-Dec-15

COMBINED

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/15/1															
5	0	0	0	0	0	0	0	0	1	0	0	0	0	8	9
01:00	1	0	0	0	0	0	0	0	0	0	0	0	0	4	5
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7
05:00	3	1	0	0	0	0	0	1	1	0	0	0	0	22	28
06:00	47	4	7	3	3	4	5	4	2	2	6	1	4	59	151
07:00	258	14	11	15	11	8	6	7	5	8	3	4	3	51	404
08:00	218	12	9	11	18	9	7	9	9	9	5	3	5	57	381
09:00	67	9	5	5	6	8	5	2	2	2	4	4	2	71	192
10:00	39	4	4	3	0	6	7	5	4	3	1	2	8	68	154
11:00	42	5	2	6	9	4	1	4	6	3	3	2	3	68	158
12 PM	47	5	4	6	5	9	4	2	4	10	3	1	2	64	166
13:00	60	6	7	6	8	9	6	5	10	6	3	4	6	61	197
14:00	142	5	3	5	10	8	8	5	6	7	10	5	6	59	279
15:00	148	7	8	11	13	6	10	5	9	4	5	4	6	63	299
16:00	186	11	12	10	10	10	8	1	4	4	3	5	6	60	330
17:00	241	10	5	8	10	11	6	4	12	7	5	3	7	51	380
18:00	163	8	11	5	9	6	7	8	6	8	4	5	2	56	298
19:00	54	2	2	1	1	6	2	6	4	2	3	6	3	75	167
20:00	39	2	5	1	3	3	5	0	2	2	2	3	4	53	124
21:00	7	2	0	0	0	0	0	1	1	0	2	0	3	49	65
22:00	5	0	0	1	0	1	0	0	0	0	0	0	1	26	34
23:00	2	0	0	0	0	0	0	0	0	0	0	0	0	10	12
Total	1769	107	95	97	116	108	87	69	88	77	62	52	71	1049	3847
Percent	46.0%	2.8%	2.5%	2.5%	3.0%	2.8%	2.3%	1.8%	2.3%	2.0%	1.6%	1.4%	1.8%	27.3%	

School Street
west of Washington Street (Route 1A)
City, State: Westwood, MA
Client: Bayside/ K. Cram

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

154841 B Gap
Site Code: 2152086
Date Start: 15-Dec-15

COMBINED

Start Time	1 7	8 8	9 9	10 10	11 11	12 12	13 13	14 14	15 15	16 16	17 17	18 18	19 19	20 9999	Total
12/16/15	1	0	0	0	0	0	0	0	0	0	0	0	0	8	9
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6
05:00	1	0	0	0	0	0	0	0	0	1	0	2	0	22	26
06:00	52	1	6	4	2	4	3	1	4	4	2	3	1	57	144
07:00	289	14	7	7	10	10	14	7	4	7	6	6	3	51	435
08:00	195	14	9	9	10	12	7	5	4	3	6	8	4	59	345
09:00	65	5	5	2	3	3	2	4	5	5	4	2	2	74	181
10:00	42	1	3	1	2	5	5	4	2	3	2	5	7	69	151
11:00	62	7	3	5	8	12	10	2	3	3	4	1	3	64	187
12 PM	75	8	5	8	7	5	8	3	1	3	3	4	4	65	199
13:00	66	4	10	7	4	7	5	4	4	5	1	2	4	76	199
14:00	118	9	7	9	5	8	6	9	5	5	7	2	4	67	261
15:00	139	8	7	9	10	9	2	9	7	6	3	2	2	66	279
16:00	176	8	5	10	8	10	7	7	8	5	7	3	2	60	316
17:00	218	7	10	8	4	3	10	5	5	7	4	6	7	56	350
18:00	181	8	7	12	4	5	6	6	6	5	5	3	3	68	319
19:00	54	2	6	7	1	5	3	4	2	1	2	2	2	67	158
20:00	27	2	2	0	3	3	2	2	3	3	4	1	1	63	116
21:00	23	1	2	2	0	2	0	0	1	0	2	2	3	47	85
22:00	3	1	0	1	0	1	2	1	1	0	1	0	0	36	47
23:00	2	0	0	0	1	2	0	0	0	0	0	0	0	23	28
Total	1789	100	94	101	82	106	92	73	65	66	63	54	52	1114	3851
Percent	46.5%	2.6%	2.4%	2.6%	2.1%	2.8%	2.4%	1.9%	1.7%	1.7%	1.6%	1.4%	1.4%	28.9%	
Grand Total	3558	207	189	198	198	214	179	142	153	143	125	106	123	2163	

Statistics

Number of Gaps > 55 Secs. : 0

Percent of Gaps > 55 Secs. : 0.0%