											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑			↑			↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frt		1.00			1.00			0.98			0.93	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		4558			4576			1582			1525	
Flt Permitted		0.93			0.93			0.73			0.90	
Satd. Flow (perm)		4245			4268			1206			1398	
Volume (vph)	10	1347	35	5	980	0	203	3	26	11	3	17
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	10	1374	36	5	1000	0	207	3	27	11	3	17
RTOR Reduction (vph)	0	3	0	0	0	0	0	5	0	0	11	0
Lane Group Flow (vph)	0	1417	0	0	1005	0	0	232	0	0	20	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		59.0			59.0			31.0			31.0	
Effective Green, g (s)		61.0			61.0			33.0			33.0	
Actuated g/C Ratio		0.61			0.61			0.33			0.33	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		2589			2603			398			461	
v/s Ratio Prot												
v/s Ratio Perm		c0.33			0.24			c0.19			0.01	
v/c Ratio		0.55			0.39			0.58			0.04	
Uniform Delay, d1		11.4			9.9			27.8			22.8	
Progression Factor		0.49			1.20			1.00			1.00	
Incremental Delay, d2		0.8			0.3			6.1			0.2	
Delay (s)		6.4			12.2			33.9			22.9	
Level of Service		A			B			C			C	
Approach Delay (s)		6.4			12.2			33.9			22.9	
Approach LOS		A			B			C			C	
Intersection Summary												
HCM Average Control Delay		11.2			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.56										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			6.0				
Intersection Capacity Utilization		65.2%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑						↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0						3.0	
Lane Util. Factor		0.91			0.91						1.00	
Frt		0.99			1.00						0.94	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		4533			4557						1563	
Flt Permitted		1.00			1.00						0.99	
Satd. Flow (perm)		4533			4557						1563	
Volume (vph)	81	1300	65	53	995	14	0	0	0	20	62	68
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	83	1327	66	54	1015	14	0	0	0	20	63	69
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	30	0
Lane Group Flow (vph)	0	1471	0	0	1082	0	0	0	0	0	122	0
Turn Type	custom				custom				Perm			
Protected Phases	4	4		8	8						3	
Permitted Phases	4			8						3		
Actuated Green, G (s)		40.0			29.0						16.0	
Effective Green, g (s)		42.0			31.0						18.0	
Actuated g/C Ratio		0.42			0.31						0.18	
Clearance Time (s)		5.0			5.0						5.0	
Lane Grp Cap (vph)		1904			1413						281	
v/s Ratio Prot		c0.32			c0.24							
v/s Ratio Perm											0.08	
v/c Ratio		0.77			0.77						0.44	
Uniform Delay, d1		24.9			31.2						36.5	
Progression Factor		0.60			1.00						1.00	
Incremental Delay, d2		2.7			4.0						4.9	
Delay (s)		17.7			35.2						41.3	
Level of Service		B			D						D	
Approach Delay (s)		17.7			35.2			0.0			41.3	
Approach LOS		B			D			A			D	
Intersection Summary												
HCM Average Control Delay			26.0			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			9.0			
Intersection Capacity Utilization			73.7%			ICU Level of Service			D			
Analysis Period (min)			15									

c Critical Lane Group

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0			3.0	3.0	3.0
Lane Util. Factor	0.91			0.91	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	4568			4567	1593	1425
Flt Permitted	1.00			0.66	0.95	1.00
Satd. Flow (perm)	4568			3034	1593	1425
Volume (vph)	3876	51	86	1883	47	87
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3955	52	88	1921	48	89
RTOR Reduction (vph)	1	0	0	0	0	0
Lane Group Flow (vph)	4006	0	0	2009	48	89
Turn Type		pm+pt			pm+ov	
Protected Phases	4		3	8	9	3
Permitted Phases			8			9
Actuated Green, G (s)	70.2			82.5	9.5	17.8
Effective Green, g (s)	71.2			83.5	10.5	19.8
Actuated g/C Ratio	0.71			0.84	0.10	0.20
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	3252			2676	167	325
v/s Ratio Prot	c0.88			c0.07	0.03	c0.03
v/s Ratio Perm				0.56		0.04
v/c Ratio	1.23			0.75	0.29	0.27
Uniform Delay, d1	14.4			3.6	41.3	34.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	107.1			1.2	4.3	0.5
Delay (s)	121.5			4.9	45.6	34.5
Level of Service	F			A	D	C
Approach Delay (s)	121.5			4.9	38.4	
Approach LOS	F			A	D	
Intersection Summary						
HCM Average Control Delay		81.6		HCM Level of Service		F
HCM Volume to Capacity ratio		1.03				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		3.0
Intersection Capacity Utilization		122.0%		ICU Level of Service		H
Analysis Period (min)		15				
c Critical Lane Group						

Appendix E

Total Future Intersection Capacity Analyses



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↑	↑↑	↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	0.91		1.00	0.95	0.97	
Frpb, ped/bikes	0.94		1.00	1.00	0.98	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.95		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	4064		1593	3185	2985	
Flt Permitted	1.00		0.09	1.00	0.96	
Satd. Flow (perm)	4064		156	3185	2985	
Volume (vph)	893	458	390	1624	115	15
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	911	467	398	1657	117	15
RTOR Reduction (vph)	92	0	0	0	10	0
Lane Group Flow (vph)	1286	0	398	1657	122	0
Confl. Peds. (#/hr)		97	97		99	105
Turn Type		pm+pt				
Protected Phases	8		7	4	2	
Permitted Phases			4			
Actuated Green, G (s)	38.0		75.0	75.0	15.0	
Effective Green, g (s)	40.0		77.0	77.0	17.0	
Actuated g/C Ratio	0.40		0.77	0.77	0.17	
Clearance Time (s)	5.0		4.0	5.0	5.0	
Lane Grp Cap (vph)	1626		609	2452	507	
v/s Ratio Prot	c0.32		0.22	c0.52	c0.04	
v/s Ratio Perm			0.28			
v/c Ratio	0.79		0.65	0.68	0.24	
Uniform Delay, d1	26.3		20.3	5.5	35.9	
Progression Factor	1.00		1.58	0.55	0.69	
Incremental Delay, d2	4.0		3.0	0.8	0.1	
Delay (s)	30.3		35.1	3.9	24.8	
Level of Service	C		D	A	C	
Approach Delay (s)	30.3			9.9	24.8	
Approach LOS	C			A	C	
Intersection Summary						
HCM Average Control Delay		18.4		HCM Level of Service		B
HCM Volume to Capacity ratio		0.65				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		9.0
Intersection Capacity Utilization		79.1%		ICU Level of Service		D
Analysis Period (min)		15				
c Critical Lane Group						

Washington Gateway
2: Florida Ave & Eckington Place

Total Future AM
No Circle

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		0.91			0.95	1.00		1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.94		1.00		1.00	0.77	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		1.00			1.00	0.85		1.00		1.00	0.86	
Flt Protected		1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		4572			3185	1339		1671		1586	1112	
Flt Permitted		0.86			0.95	1.00		1.00		0.61	1.00	
Satd. Flow (perm)		3948			3041	1339		1671		1024	1112	
Volume (vph)	7	934	3	1	1654	523	0	42	1	261	18	247
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	7	953	3	1	1688	534	0	43	1	266	18	252
RTOR Reduction (vph)	0	0	0	0	0	198	0	1	0	0	19	0
Lane Group Flow (vph)	0	963	0	0	1689	336	0	43	0	266	251	0
Confl. Peds. (#/hr)	18		90	90		18	111		3	3		111
Turn Type	Perm		Perm		Perm		pm+pt					
Protected Phases	8				4		2		1		6	
Permitted Phases	8		4		4				6			
Actuated Green, G (s)	36.0				61.0		14.0		29.0		29.0	
Effective Green, g (s)	63.0				63.0		16.0		31.0		31.0	
Actuated g/C Ratio	0.63				0.63		0.16		0.31		0.31	
Clearance Time (s)	30.0				5.0		5.0		4.0		5.0	
Lane Grp Cap (vph)	2487				1916		844		385		345	
v/s Ratio Prot							0.03		0.08		c0.23	
v/s Ratio Perm	0.24				c0.56		0.25		0.13			
v/c Ratio	0.39				0.88		0.40		0.16		0.69 0.73	
Uniform Delay, d1	9.1				15.4		9.1		36.2		29.1 30.8	
Progression Factor	0.13				0.45		0.00		1.00		1.00 1.00	
Incremental Delay, d2	0.3				0.6		0.1		1.3		9.8 12.7	
Delay (s)	1.4				7.6		0.1		37.5		38.8 43.4	
Level of Service	A				A		A		D		D D	
Approach Delay (s)	1.4				5.8		37.5				41.1	
Approach LOS	A				A		D				D	
Intersection Summary												
HCM Average Control Delay	10.1			HCM Level of Service			B					
HCM Volume to Capacity ratio	0.83											
Actuated Cycle Length (s)	100.0			Sum of lost time (s)			6.0					
Intersection Capacity Utilization	82.1%			ICU Level of Service			E					
Analysis Period (min)	15											
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑			↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.91			0.91			0.91	
Frpb, ped/bikes		1.00			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.99			1.00			0.98	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		4554			4543			4577			4424	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		4554			4543			4577			4424	
Volume (vph)	0	1173	31	0	1634	62	0	1533	0	0	3323	604
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1197	32	0	1667	63	0	1564	0	0	3391	616
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1229	0	0	1726	0	0	1564	0	0	4006	0
Confl. Peds. (#/hr)	57		44	44		57	101		178	178		101
Turn Type												
Protected Phases		6			2			4			8	
Permitted Phases												
Actuated Green, G (s)		38.0			38.0			51.0			51.0	
Effective Green, g (s)		39.0			39.0			53.0			53.0	
Actuated g/C Ratio		0.39			0.39			0.53			0.53	
Clearance Time (s)		5.0			5.0			6.0			6.0	
Lane Grp Cap (vph)		1776			1772			2426			2345	
v/s Ratio Prot		0.27			0.38			0.34			0.91	
v/s Ratio Perm												
v/c Ratio		0.69			0.97			0.64			1.71	
Uniform Delay, d1		25.5			30.0			16.8			23.5	
Progression Factor		0.76			0.69			0.39			1.00	
Incremental Delay, d2		2.0			14.8			0.9			320.6	
Delay (s)		21.4			35.6			7.5			344.1	
Level of Service		C			D			A			F	
Approach Delay (s)		21.4			35.6			7.5			344.1	
Approach LOS		C			D			A			F	
Intersection Summary												
HCM Average Control Delay		173.3			HCM Level of Service			F				
HCM Volume to Capacity ratio		1.40										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		130.7%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												



Movement	EBL2	EBL	EBR	EBR2	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0					3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00					1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.89					1.00	0.99		1.00	0.44	
Flpb, ped/bikes		0.93					1.00	1.00		1.00	1.00	
Frt		0.94					1.00	0.85		1.00	0.85	
Flt Protected		0.97					0.98	1.00		0.99	1.00	
Satd. Flow (prot)		1272					1643	1407		1662	633	
Flt Permitted		0.97					0.10	1.00		0.67	1.00	
Satd. Flow (perm)		1272					167	1407		1122	633	
Volume (vph)	3	83	45	25	80	32	168	153	92	449	176	59
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3	85	46	26	82	33	171	156	94	458	180	60
RTOR Reduction (vph)	0	7	0	0	0	0	0	12	0	0	12	0
Lane Group Flow (vph)	0	153	0	0	0	0	286	144	0	552	228	0
Confl. Peds. (#/hr)	72		39	92	92	65		2	8		92	40
Turn Type	Perm				Perm	Perm	custom	Perm		Perm		
Protected Phases		9					4			8		
Permitted Phases	9				4	4		14	8		8	
Actuated Green, G (s)		8.0					28.0	58.0		28.0	28.0	
Effective Green, g (s)		10.0					30.0	60.0		30.0	30.0	
Actuated g/C Ratio		0.10					0.30	0.60		0.30	0.30	
Clearance Time (s)		5.0					5.0			5.0	5.0	
Lane Grp Cap (vph)		127					50	844		337	190	
v/s Ratio Prot												
v/s Ratio Perm		0.12					0.171	0.10		0.49	0.36	
v/c Ratio		1.20					5.72	0.17		1.64	1.20	
Uniform Delay, d1		45.0					35.0	8.9		35.0	35.0	
Progression Factor		1.00					1.07	1.32		0.76	0.75	
Incremental Delay, d2		144.5					2165.0	0.4		295.9	118.7	
Delay (s)		189.5					2202.5	12.2		322.6	144.9	
Level of Service		F					F	B		F	F	
Approach Delay (s)		189.5					1429.5			268.7		
Approach LOS		F					F			F		
Intersection Summary												
HCM Average Control Delay		364.6					HCM Level of Service		F			
HCM Volume to Capacity ratio		2.97										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)		9.0			
Intersection Capacity Utilization		176.5%					ICU Level of Service		H			
Analysis Period (min)		15										
c Critical Lane Group												



Movement	NET	NER	SWL	SWT	SWR	SWR2
Lane Configurations	↑↑↑			↑↑↑		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0			3.0		
Lane Util. Factor	0.91			0.91		
Frpb, ped/bikes	1.00			0.99		
Flpb, ped/bikes	1.00			1.00		
Frt	0.99			1.00		
Flt Protected	1.00			0.99		
Satd. Flow (prot)	4534			4472		
Flt Permitted	1.00			0.71		
Satd. Flow (perm)	4534			3196		
Volume (vph)	1041	44	831	2419	101	4
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1062	45	848	2468	103	4
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	1102	0	0	3423	0	0
Confl. Peds. (#/hr)		39	39		85	72
Turn Type		pm+pt				
Protected Phases	2		1	6		
Permitted Phases			6			
Actuated Green, G (s)	19.0			48.0		
Effective Green, g (s)	21.0			51.0		
Actuated g/C Ratio	0.21			0.51		
Clearance Time (s)	5.0			6.0		
Lane Grp Cap (vph)	952			1974		
v/s Ratio Prot	0.24			c0.47		
v/s Ratio Perm				c0.42		
v/c Ratio	1.16			1.73		
Uniform Delay, d1	39.5			24.5		
Progression Factor	1.00			0.21		
Incremental Delay, d2	82.9			330.5		
Delay (s)	122.4			335.7		
Level of Service	F			F		
Approach Delay (s)	122.4			335.7		
Approach LOS	F			F		

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑↑			↑↑↑		↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	890	0	0	1694	0	122
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	908	0	0	1729	0	124
Pedestrians				224		
Lane Width (ft)				12.0		
Walking Speed (ft/s)				4.0		
Percent Blockage				19		
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)	216			139		
pX, platoon unblocked			0.82		0.89	0.82
vC, conflicting volume			908		1484	527
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			445		549	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	83
cM capacity (veh/h)			910		416	722

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	303	303	303	576	576	576	124
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	124
cSH	1700	1700	1700	1700	1700	1700	722
Volume to Capacity	0.18	0.18	0.18	0.34	0.34	0.34	0.17
Queue Length 95th (ft)	0	0	0	0	0	0	15
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	11.0
Lane LOS							B
Approach Delay (s)	0.0			0.0			11.0
Approach LOS							B

Intersection Summary							
Average Delay			0.5				
Intersection Capacity Utilization			42.2%		ICU Level of Service		A
Analysis Period (min)			15				

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.94		1.00	0.93		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		1.00	1.00		0.98	1.00	
Frt	1.00	0.96		1.00	0.85		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1521	1515		1593	1331		1593	1590		1561	1581	
Flt Permitted	0.73	1.00		0.18	1.00		0.10	1.00		0.49	1.00	
Satd. Flow (perm)	1174	1515		305	1331		174	1590		811	1581	
Volume (vph)	108	356	114	35	0	35	192	290	96	260	789	317
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	110	363	116	36	0	36	196	296	98	265	805	323
RTOR Reduction (vph)	0	12	0	0	28	0	0	12	0	0	15	0
Lane Group Flow (vph)	110	467	0	36	8	0	196	382	0	265	1113	0
Confl. Peds. (#/hr)	19		77	80		22	10		13	13		10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	4			8			2			6		
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		70.0	70.0		70.0	70.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		72.0	72.0		72.0	72.0	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.72	0.72		0.72	0.72	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	258	333		67	293		125	1145		584	1138	
v/s Ratio Prot	c0.31			0.01			0.24			0.70		
v/s Ratio Perm	0.09			0.12			c1.13			0.33		
v/c Ratio	0.43	1.40		0.54	0.03		1.57	0.33		0.45	0.98	
Uniform Delay, d1	33.6	39.0		34.5	30.6		14.0	5.2		5.8	13.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.09	0.85	
Incremental Delay, d2	5.1	198.7		27.6	0.2		290.6	0.8		0.2	4.4	
Delay (s)	38.7	237.7		62.1	30.8		304.6	5.9		6.6	15.7	
Level of Service	D	F		E	C		F	A		A	B	
Approach Delay (s)	200.5			46.4			105.1			14.0		
Approach LOS	F			D			F			B		
Intersection Summary												
HCM Average Control Delay	76.8			HCM Level of Service			E					
HCM Volume to Capacity ratio	1.53											
Actuated Cycle Length (s)	100.0			Sum of lost time (s)			6.0					
Intersection Capacity Utilization	122.0%			ICU Level of Service			H					
Analysis Period (min)	15											
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frpb, ped/bikes		0.97			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			0.99			0.99	
Frt		0.98			1.00			0.99			0.92	
Flt Protected		1.00			1.00			0.96			0.99	
Satd. Flow (prot)		4365			4571			1566			1483	
Flt Permitted		0.94			0.92			0.75			0.94	
Satd. Flow (perm)		4094			4225			1223			1412	
Volume (vph)	2	866	117	16	1504	1	86	2	7	8	3	17
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	2	884	119	16	1535	1	88	2	7	8	3	17
RTOR Reduction (vph)	0	17	0	0	0	0	0	3	0	0	13	0
Lane Group Flow (vph)	0	988	0	0	1552	0	0	94	0	0	15	0
Confl. Peds. (#/hr)	25		73	73		25	6		23	23		6
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		68.0			68.0			22.0			22.0	
Effective Green, g (s)		70.0			70.0			24.0			24.0	
Actuated g/C Ratio		0.70			0.70			0.24			0.24	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		2866			2958			294			339	
v/s Ratio Prot												
v/s Ratio Perm		0.24			0.37			0.08			0.01	
v/c Ratio		0.34			0.52			0.32			0.04	
Uniform Delay, d1		5.9			7.1			31.3			29.2	
Progression Factor		0.07			0.09			1.00			1.00	
Incremental Delay, d2		0.3			0.5			2.8			0.2	
Delay (s)		0.8			1.1			34.1			29.4	
Level of Service		A			A			C			C	
Approach Delay (s)		0.8			1.1			34.1			29.4	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay		2.5										
HCM Volume to Capacity ratio		0.47										
Actuated Cycle Length (s)		100.0										
Intersection Capacity Utilization		64.7%										
Analysis Period (min)		15										
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑					↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0					3.0	3.0	3.0
Lane Util. Factor		0.91			0.91					1.00	1.00	1.00
Frbp, ped/bikes		0.99			1.00					1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00					0.97	1.00	1.00
Frt		0.99			1.00					1.00	1.00	0.85
Flt Protected		0.99			1.00					0.95	1.00	1.00
Satd. Flow (prot)		4475			4558					1545	1676	1387
Flt Permitted		0.70			0.84					0.95	1.00	1.00
Satd. Flow (perm)		3168			3836					1545	1676	1387
Volume (vph)	101	708	55	85	1569	4	0	0	0	15	81	74
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	103	722	56	87	1601	4	0	0	0	15	83	76
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	0	26
Lane Group Flow (vph)	0	873	0	0	1692	0	0	0	0	15	83	50
Confl. Peds. (#/hr)	29		26	26		29	8		16	16		8
Turn Type	pm+pt			pm+pt						Perm		Perm
Protected Phases	5	2		1	6						4	
Permitted Phases	2			6						4		4
Actuated Green, G (s)		61.0			61.0					24.0	24.0	24.0
Effective Green, g (s)		65.0			65.0					26.0	26.0	26.0
Actuated g/C Ratio		0.65			0.65					0.26	0.26	0.26
Clearance Time (s)		5.0			5.0					5.0	5.0	5.0
Lane Grp Cap (vph)		2399			2681					402	436	361
v/s Ratio Prot		0.09			0.16						0.05	
v/s Ratio Perm		0.14			0.25					0.01		0.04
v/c Ratio		0.36			0.63					0.04	0.19	0.14
Uniform Delay, d1		8.0			10.4					27.6	28.8	28.4
Progression Factor		0.45			1.00					1.00	1.00	1.00
Incremental Delay, d2		0.4			1.1					0.2	1.0	0.8
Delay (s)		4.0			11.5					27.8	29.8	29.2
Level of Service		A			B					C	C	C
Approach Delay (s)		4.0			11.5			0.0			29.4	
Approach LOS		A			B			A			C	

Intersection Summary

HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑	↑↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0			3.0	3.0	3.0
Lane Util. Factor	0.91			0.91	0.97	0.91
Frpb, ped/bikes	1.00			1.00	1.00	1.00
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.99			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	4529			4565	3090	1297
Flt Permitted	1.00			0.63	0.95	1.00
Satd. Flow (perm)	4529			2903	3090	1297
Volume (vph)	1484	96	207	3893	38	44
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1514	98	211	3972	39	45
RTOR Reduction (vph)	6	0	0	0	0	1
Lane Group Flow (vph)	1606	0	0	4183	39	44
Confl. Peds. (#/hr)		1	1		2	16
Turn Type		pm+pt			pt+ov	
Protected Phases	4		3	8	9	9 3
Permitted Phases			8			
Actuated Green, G (s)	39.0			94.0	10.0	65.0
Effective Green, g (s)	41.0			96.0	12.0	67.0
Actuated g/C Ratio	0.36			0.84	0.11	0.59
Clearance Time (s)	5.0			5.0	5.0	
Lane Grp Cap (vph)	1629			3203	325	762
v/s Ratio Prot	0.35			c0.60	c0.01	0.03
v/s Ratio Perm				c0.50		
v/c Ratio	0.99			1.31	0.12	0.06
Uniform Delay, d1	36.2			9.0	46.2	10.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	19.1			140.0	0.8	0.1
Delay (s)	55.3			149.0	47.0	10.2
Level of Service	E			F	D	B
Approach Delay (s)	55.3			149.0	27.3	
Approach LOS	E			F	C	
Intersection Summary						
HCM Average Control Delay		121.6		HCM Level of Service		F
HCM Volume to Capacity ratio		1.16				
Actuated Cycle Length (s)		114.0		Sum of lost time (s)		6.0
Intersection Capacity Utilization		140.8%		ICU Level of Service		H
Analysis Period (min)		15				
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔↔			↔↔↔			↖	↗		↖	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		0.91			0.91		1.00	1.00		1.00	1.00	
Frt		1.00			0.99		1.00	1.00		1.00	0.89	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		5054			5056		1770	1854		1770	1661	
Flt Permitted		0.79			0.94		0.69	1.00		0.46	1.00	
Satd. Flow (perm)		4020			4740		1288	1854		865	1661	
Volume (vph)	43	941	27	5	1596	62	42	188	6	14	22	56
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	44	960	28	5	1629	63	43	192	6	14	22	57
RTOR Reduction (vph)	0	3	0	0	4	0	0	1	0	0	36	0
Lane Group Flow (vph)	0	1029	0	0	1693	0	43	197	0	14	43	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8	8		2			6		
Actuated Green, G (s)		68.0			68.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)		70.0			70.0		24.0	24.0		24.0	24.0	
Actuated g/C Ratio		0.70			0.70		0.24	0.24		0.24	0.24	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		2814			3318		309	445		208	399	
v/s Ratio Prot							c0.11				0.03	
v/s Ratio Perm		0.26			c0.36		0.03			0.02		
v/c Ratio		0.37			0.51		0.14	0.44		0.07	0.11	
Uniform Delay, d1		6.0			7.0		29.9	32.3		29.4	29.6	
Progression Factor		0.09			0.27		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			0.5		0.9	3.2		0.6	0.5	
Delay (s)		0.8			2.4		30.8	35.5		30.0	30.2	
Level of Service		A			A		C	D		C	C	
Approach Delay (s)		0.8			2.4			34.7			30.1	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay		5.3			HCM Level of Service			A				
HCM Volume to Capacity ratio		0.49										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			6.0				
Intersection Capacity Utilization		69.3%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

	→	↘	↙	←	↖	↗	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑↑			↑↑↑		↑	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Volume (veh/h)	1567	24	0	3932	0	14	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	1599	24	0	4012	0	14	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type					None		
Median storage veh							
Upstream signal (ft)	321						
pX, platoon unblocked			0.77		0.77	0.77	
vC, conflicting volume			1623		2949	545	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			1202		2933	0	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		100	98	
cM capacity (veh/h)			441		9	830	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	640	640	344	1337	1337	1337	14
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	24	0	0	0	14
cSH	1700	1700	1700	1700	1700	1700	830
Volume to Capacity	0.38	0.38	0.20	0.79	0.79	0.79	0.02
Queue Length 95th (ft)	0	0	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	9.4
Lane LOS							A
Approach Delay (s)	0.0			0.0			9.4
Approach LOS							A
Intersection Summary							
Average Delay			0.0				
Intersection Capacity Utilization			79.3%		ICU Level of Service		D
Analysis Period (min)			15				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↑	↑↑	↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	0.91		1.00	0.95	0.97	
Frpb, ped/bikes	0.97		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	4318		1593	3185	3086	
Flt Permitted	1.00		0.09	1.00	0.95	
Satd. Flow (perm)	4318		143	3185	3086	
Volume (vph)	1240	293	185	1400	513	8
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1292	305	193	1458	534	8
RTOR Reduction (vph)	33	0	0	0	1	0
Lane Group Flow (vph)	1564	0	193	1458	541	0
Confl. Peds. (#/hr)		63	63		64	63
Turn Type		pm+pt				
Protected Phases	8		7	4	2	
Permitted Phases			4			
Actuated Green, G (s)	61.0		77.0	77.0	33.0	
Effective Green, g (s)	63.0		79.0	79.0	35.0	
Actuated g/C Ratio	0.52		0.66	0.66	0.29	
Clearance Time (s)	5.0		4.0	5.0	5.0	
Lane Grp Cap (vph)	2267		251	2097	900	
v/s Ratio Prot	0.36		c0.08	0.46	c0.18	
v/s Ratio Perm			c0.42			
v/c Ratio	0.69		0.77	0.70	0.60	
Uniform Delay, d1	21.2		25.0	12.9	36.5	
Progression Factor	1.00		1.78	0.18	1.00	
Incremental Delay, d2	1.7		15.4	1.4	3.0	
Delay (s)	23.0		60.0	3.8	39.5	
Level of Service	C		E	A	D	
Approach Delay (s)	23.0			10.3	39.5	
Approach LOS	C			B	D	

Intersection Summary

HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑	↑		↑		↑	↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		0.91			0.95	1.00		1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.87		0.99		1.00	0.86	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		0.99	1.00	
Frt		1.00			1.00	0.85		0.95		1.00	0.86	
Flt Protected		1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		4564			3185	1240		1574		1577	1241	
Flt Permitted		0.90			0.95	1.00		0.99		0.68	1.00	
Satd. Flow (perm)		4101			3033	1240		1566		1136	1241	
Volume (vph)	8	1280	15	3	1275	458	1	19	11	444	11	133
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	8	1333	16	3	1328	477	1	20	11	462	11	139
RTOR Reduction (vph)	0	1	0	0	0	215	0	9	0	0	20	0
Lane Group Flow (vph)	0	1356	0	0	1331	262	0	23	0	462	130	0
Confl. Peds. (#/hr)	41		50	50		41	67		8	8		67
Turn Type	Perm			Perm		Perm	Perm			pm+pt		
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)		42.0			64.0	64.0		17.0		46.0	46.0	
Effective Green, g (s)		66.0			66.0	66.0		19.0		48.0	48.0	
Actuated g/C Ratio		0.55			0.55	0.55		0.16		0.40	0.40	
Clearance Time (s)		27.0			5.0	5.0		5.0		4.0	5.0	
Lane Grp Cap (vph)		2256			1668	682		248		550	496	
v/s Ratio Prot										c0.18	0.10	
v/s Ratio Perm		0.33			c0.44	0.21		0.01		c0.15		
v/c Ratio		0.60			0.80	0.38		0.09		0.84	0.26	
Uniform Delay, d1		18.2			21.7	15.4		43.1		31.2	24.1	
Progression Factor		0.35			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		0.9			4.1	1.6		0.7		14.3	1.3	
Delay (s)		7.3			25.7	17.1		43.9		45.5	25.4	
Level of Service		A			C	B		D		D	C	
Approach Delay (s)		7.3			23.4			43.9			40.6	
Approach LOS		A			C			D			D	
Intersection Summary												
HCM Average Control Delay		20.6			HCM Level of Service			C				
HCM Volume to Capacity ratio		0.81										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)			6.0				
Intersection Capacity Utilization		86.4%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑			↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.91			0.91			0.91	
Frpb, ped/bikes		1.00			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.98			1.00			0.96	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		4557			4450			4577			4340	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		4557			4450			4577			4340	
Volume (vph)	0	1658	40	0	1303	238	0	3757	0	0	1406	545
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1727	42	0	1357	248	0	3914	0	0	1465	568
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	1767	0	0	1605	0	0	3914	0	0	2029	0
Confl. Peds. (#/hr)	24		24	24		24	44		128	128		44
Turn Type												
Protected Phases		6			2			4			8	
Permitted Phases												
Actuated Green, G (s)		38.0			38.0			52.0			52.0	
Effective Green, g (s)		39.0			39.0			53.0			53.0	
Actuated g/C Ratio		0.39			0.39			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1777			1736			2426			2300	
v/s Ratio Prot		c0.39			0.36			c0.86			0.47	
v/s Ratio Perm												
v/c Ratio		0.99			0.92			1.61			0.88	
Uniform Delay, d1		30.4			29.1			23.5			20.7	
Progression Factor		1.00			1.00			0.48			0.83	
Incremental Delay, d2		20.0			9.8			276.2			3.7	
Delay (s)		50.4			38.9			287.4			21.0	
Level of Service		D			D			F			C	
Approach Delay (s)		50.4			38.9			287.4			21.0	
Approach LOS		D			D			F			C	
Intersection Summary												
HCM Average Control Delay		141.5					HCM Level of Service		F			
HCM Volume to Capacity ratio		1.35										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)		8.0			
Intersection Capacity Utilization		124.0%					ICU Level of Service		H			
Analysis Period (min)		15										
c Critical Lane Group												

Washington Gateway
4: Access Road & New York Avenue

Total Future PM
No Circle

												
Movement	EBL2	EBL	EBR	EBR2	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0					3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00					1.00	1.00		1.00	1.00	
Frbp, ped/bikes		0.96					1.00	0.99		1.00	0.67	
Flpb, ped/bikes		0.94					1.00	1.00		1.00	1.00	
Frt		0.94					1.00	0.85		1.00	0.85	
Flt Protected		0.97					0.99	1.00		0.98	1.00	
Satd. Flow (prot)		1372					1653	1406		1639	954	
Flt Permitted		0.97					0.49	1.00		0.10	1.00	
Satd. Flow (perm)		1372					817	1406		162	954	
Volume (vph)	3	273	137	86	190	47	593	763	135	163	150	73
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	284	143	90	198	49	618	795	141	170	156	76
RTOR Reduction (vph)	0	7	0	0	0	0	0	2	0	0	18	0
Lane Group Flow (vph)	0	513	0	0	0	0	865	793	0	311	215	0
Confl. Peds. (#/hr)	65		10	40	40	65		2	2		40	17
Turn Type	Perm				Perm	Perm		custom	Perm		Perm	
Protected Phases		9					4			8		
Permitted Phases	9				4	4		14	8		8	
Actuated Green, G (s)		7.0					28.0	41.0		28.0	28.0	
Effective Green, g (s)		10.0					30.0	43.0		30.0	30.0	
Actuated g/C Ratio		0.10					0.30	0.43		0.30	0.30	
Clearance Time (s)		6.0					5.0			5.0	5.0	
Lane Grp Cap (vph)		137					245	605		49	286	
v/s Ratio Prot												
v/s Ratio Perm		0.37					1.06	c0.56		c1.91	0.22	
v/c Ratio		3.74					3.53	1.31		6.35	0.75	
Uniform Delay, d1		45.0					35.0	28.5		35.0	31.6	
Progression Factor		1.00					1.07	1.09		1.00	1.00	
Incremental Delay, d2		1252.1					1139.7	141.2		2449.0	16.5	
Delay (s)		1297.1					1177.1	172.1		2484.0	48.1	
Level of Service		F					F	F		F	D	
Approach Delay (s)		1297.1					695.8			1443.2		
Approach LOS		F					F			F		

Intersection Summary

HCM Average Control Delay	487.0	HCM Level of Service	F
HCM Volume to Capacity ratio	3.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	199.0%	ICU Level of Service	H
Analysis Period (min)	15		

d1 Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	NEL	NET	NER	SWL	SWT	SWR	SWR2
Lane Configurations		↑↑↑			↑↑↑		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0		
Lane Util. Factor		0.91			0.91		
Frpb, ped/bikes		1.00			0.99		
Flpb, ped/bikes		1.00			1.00		
Frt		1.00			0.99		
Flt Protected		1.00			0.99		
Satd. Flow (prot)		4571			4477		
Flt Permitted		0.94			0.67		
Satd. Flow (perm)		4288			3028		
Volume (vph)	3	2303	14	219	1160	59	8
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	2399	15	228	1208	61	8
RTOR Reduction (vph)	0	1	0	0	0	0	0
Lane Group Flow (vph)	0	2416	0	0	1505	0	0
Confl. Peds. (#/hr)	67		10	10		65	67
Turn Type	Perm			pm+pt			
Protected Phases		2		1	6		
Permitted Phases	2			6			
Actuated Green, G (s)		36.0			49.0		
Effective Green, g (s)		38.0			51.0		
Actuated g/C Ratio		0.38			0.51		
Clearance Time (s)		5.0			5.0		
Lane Grp Cap (vph)		1629			1689		
v/s Ratio Prot					0.09		
v/s Ratio Perm		0.56			0.37		
v/c Ratio		1.48			1.00dl		
Uniform Delay, d1		31.0			22.0		
Progression Factor		1.00			0.24		
Incremental Delay, d2		220.8			4.2		
Delay (s)		251.8			9.5		
Level of Service		F			A		
Approach Delay (s)		251.8			9.5		
Approach LOS		F			A		
Intersection Summary							

	→	↗	↖	←	↘	↙	
Movement	EBT	EBR	WBL	WBT	NEL	NER	
Lane Configurations	↑↑↑			↑↑↑		↗	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Volume (veh/h)	1262	0	0	1541	0	142	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly flow rate (vph)	1315	0	0	1605	0	148	
Pedestrians				165			
Lane Width (ft)				12.0			
Walking Speed (ft/s)				4.0			
Percent Blockage				14			
Right turn flare (veh)							
Median type					None		
Median storage (veh)							
Upstream signal (ft)	230			106			
pX, platoon unblocked			0.66		0.73	0.66	
vC, conflicting volume			1315		1850	603	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			434		528	0	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		100	76	
cM capacity (veh/h)			737		350	614	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	438	438	438	535	535	535	148
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	148
cSH	1700	1700	1700	1700	1700	1700	614
Volume to Capacity	0.26	0.26	0.26	0.31	0.31	0.31	0.24
Queue Length 95th (ft)	0	0	0	0	0	0	23
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	12.7
Lane LOS							B
Approach Delay (s)	0.0			0.0			12.7
Approach LOS							B
Intersection Summary							
Average Delay			0.6				
Intersection Capacity Utilization			50.9%		ICU Level of Service		A
Analysis Period (min)			15				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.91		1.00	0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.95	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.85		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1587	1372		1509	1369		1593	1662		1593	1632	
Flt Permitted	0.57	1.00		0.40	1.00		0.29	1.00		0.09	1.00	
Satd. Flow (perm)	951	1372		629	1369		488	1662		156	1632	
Volume (vph)	566	129	275	98	0	216	39	808	40	76	387	70
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	590	134	286	102	0	225	41	842	42	79	403	73
RTOR Reduction (vph)	0	77	0	0	39	0	0	2	0	0	6	0
Lane Group Flow (vph)	590	343	0	102	186	0	41	882	0	79	470	0
Confl. Peds. (#/hr)	3		36	48		15	1		3	3		1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	4			8			2			6		
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	49.0	49.0		49.0	49.0		41.0	41.0		41.0	41.0	
Effective Green, g (s)	51.0	51.0		51.0	51.0		43.0	43.0		43.0	43.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.43	0.43		0.43	0.43	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	485	700		321	698		210	715		67	702	
v/s Ratio Prot		0.25			0.14			0.53			0.29	
v/s Ratio Perm	0.62			0.16			0.08			0.51		
v/c Ratio	1.22	0.49		0.32	0.27		0.20	1.23		1.18	0.67	
Uniform Delay, d1	24.5	16.0		14.3	13.9		17.7	28.5		28.5	22.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.88	0.85	
Incremental Delay, d2	115.1	2.4		2.6	0.9		2.1	117.2		94.2	0.5	
Delay (s)	139.6	18.5		16.9	14.8		19.8	145.7		119.3	20.0	
Level of Service	F	B		B	B		B	F		F	B	
Approach Delay (s)		89.2			15.5			140.1			34.1	
Approach LOS		F			B			F			C	

Intersection Summary

HCM Average Control Delay	86.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	119.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway
7: Florida Avenue & Burger King Entrance

Total Future PM
No Circle

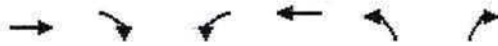


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑			↑			↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			0.99			0.99	
Frt		1.00			1.00			0.98			0.92	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		4521			4575			1560			1496	
Flt Permitted		0.93			0.93			0.77			0.90	
Satd. Flow (perm)		4212			4267			1250			1376	
Volume (vph)	10	1404	38	5	1002	0	195	3	26	11	3	17
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	1462	40	5	1044	0	203	3	27	11	3	18
RTOR Reduction (vph)	0	3	0	0	0	0	0	5	0	0	14	0
Lane Group Flow (vph)	0	1509	0	0	1049	0	0	228	0	0	18	0
Confl. Peds. (#/hr)	34		90	90		34	5		20	20		5
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		68.0			68.0			22.0			22.0	
Effective Green, g (s)		70.0			70.0			24.0			24.0	
Actuated g/C Ratio		0.70			0.70			0.24			0.24	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		2948			2987			300			330	
v/s Ratio Prot												
v/s Ratio Perm		c0.36			0.25			c0.18			0.01	
v/c Ratio		0.51			0.35			0.76			0.06	
Uniform Delay, d1		7.0			6.0			35.3			29.3	
Progression Factor		1.00			0.71			1.00			1.00	
Incremental Delay, d2		0.6			0.3			16.6			0.3	
Delay (s)		7.7			4.5			51.9			29.6	
Level of Service		A			A			D			C	
Approach Delay (s)		7.7			4.5			51.9			29.6	
Approach LOS		A			A			D			C	

Intersection Summary

HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑					↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0					3.0	3.0	3.0
Lane Util. Factor		0.91			0.91					1.00	1.00	1.00
Frpb, ped/bikes		1.00			1.00					1.00	1.00	0.95
Flpb, ped/bikes		1.00			1.00					0.96	1.00	1.00
Frt		0.99			1.00					1.00	1.00	0.85
Flt Protected		1.00			1.00					0.95	1.00	1.00
Satd. Flow (prot)		4513			4550					1534	1676	1353
Flt Permitted		0.80			0.80					0.95	1.00	1.00
Satd. Flow (perm)		3615			3655					1534	1676	1353
Volume (vph)	81	1354	67	53	1017	14	0	0	0	20	62	68
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	84	1410	70	55	1059	15	0	0	0	21	65	71
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	0	53
Lane Group Flow (vph)	0	1559	0	0	1128	0	0	0	0	21	65	18
Confl. Peds. (#/hr)	23		22	22		23	17			16		17
Turn Type	pm+pt			pm+pt						Perm		Perm
Protected Phases	5	2		1	6						4	
Permitted Phases	2			6						4		4
Actuated Green, G (s)		63.0			63.0					23.0	23.0	23.0
Effective Green, g (s)		66.0			66.0					25.0	25.0	25.0
Actuated g/C Ratio		0.66			0.66					0.25	0.25	0.25
Clearance Time (s)		5.0			5.0					5.0	5.0	5.0
Lane Grp Cap (vph)		2525			2551					384	419	338
v/s Ratio Prot		c0.10			0.07						c0.04	
v/s Ratio Perm		c0.31			0.22					0.01		0.01
v/c Ratio		0.62			0.44					0.05	0.16	0.05
Uniform Delay, d1		9.8			8.2					28.5	29.3	28.5
Progression Factor		0.21			1.00					1.00	1.00	1.00
Incremental Delay, d2		1.0			0.6					0.3	0.8	0.3
Delay (s)		3.0			8.7					28.8	30.0	28.8
Level of Service		A			A					C	C	C
Approach Delay (s)		3.0			8.7			0.0			29.3	
Approach LOS		A			A			A			C	
Intersection Summary												
HCM Average Control Delay		6.7			HCM Level of Service			A				
HCM Volume to Capacity ratio		0.49										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			9.0				
Intersection Capacity Utilization		76.9%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑	↑↑↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0			3.0	3.0	3.0
Lane Util. Factor	0.91			0.91	0.97	0.91
Frpb, ped/bikes	1.00			1.00	0.95	0.93
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	1.00			1.00	0.93	0.85
Flt Protected	1.00			1.00	0.97	1.00
Satd. Flow (prot)	5076			5074	3102	1333
Flt Permitted	1.00			0.65	0.97	1.00
Satd. Flow (perm)	5076			3329	3102	1333
Volume (vph)	3955	51	90	1906	47	87
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	4120	53	94	1985	49	91
RTOR Reduction (vph)	1	0	0	0	39	0
Lane Group Flow (vph)	4172	0	0	2079	54	47
Confl. Peds. (#/hr)					2	33
Turn Type			pm+pt		pm+ov	
Protected Phases	4		3	8	9	3
Permitted Phases			8			9
Actuated Green, G (s)	74.0			82.0	10.0	14.0
Effective Green, g (s)	75.0			83.0	11.0	16.0
Actuated g/C Ratio	0.75			0.83	0.11	0.16
Clearance Time (s)	4.0			4.0	4.0	4.0
Lane Grp Cap (vph)	3807			2850	341	253
v/s Ratio Prot	c0.82			c0.04	0.02	c0.01
v/s Ratio Perm				0.57		0.03
v/c Ratio	1.10			0.73	0.16	0.19
Uniform Delay, d1	12.5			3.7	40.3	36.4
Progression Factor	0.71			1.00	1.00	1.00
Incremental Delay, d2	43.6			1.7	1.0	1.6
Delay (s)	52.5			5.3	41.3	38.0
Level of Service	D			A	D	D
Approach Delay (s)	52.5			5.3	40.2	
Approach LOS	D			A	D	
Intersection Summary						
HCM Average Control Delay		36.9		HCM Level of Service		D
HCM Volume to Capacity ratio		0.92				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		3.0
Intersection Capacity Utilization		119.4%		ICU Level of Service		H
Analysis Period (min)		15				
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔↔			↔↔↔		↗	↖		↗	↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		0.91			0.91		1.00	1.00		1.00	1.00	
Frt		1.00			1.00		1.00	0.97		1.00	0.89	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		5075			5071		1770	1807		1770	1656	
Flt Permitted		0.90			0.93		0.95	1.00		0.69	1.00	
Satd. Flow (perm)		4577			4736		1770	1807		1278	1656	
Volume (vph)	19	1306	12	5	1199	22	193	84	21	44	52	149
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	20	1360	12	5	1249	23	201	88	22	46	54	155
RTOR Reduction (vph)	0	1	0	0	2	0	0	8	0	0	85	0
Lane Group Flow (vph)	0	1391	0	0	1275	0	201	102	0	46	124	0
Turn Type	Perm			Perm			Split			Perm		
Protected Phases		4			8		2	2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)		66.0			66.0		24.0	24.0		16.0	16.0	
Effective Green, g (s)		68.0			68.0		26.0	26.0		17.5	17.5	
Actuated g/C Ratio		0.56			0.56		0.22	0.22		0.15	0.15	
Clearance Time (s)		5.0			5.0		5.0	5.0		4.5	4.5	
Lane Grp Cap (vph)		2583			2673		382	390		186	240	
v/s Ratio Prot							c0.11	0.06			c0.07	
v/s Ratio Perm		c0.30			0.27					0.04		
v/c Ratio		0.54			0.48		0.53	0.26		0.25	0.51	
Uniform Delay, d1		16.4			15.7		41.8	39.3		45.7	47.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			0.6		5.1	1.6		3.2	7.7	
Delay (s)		17.2			16.3		46.9	40.9		48.8	55.3	
Level of Service		B			B		D	D		D	E	
Approach Delay (s)		17.2			16.3			44.8			54.1	
Approach LOS		B			B			D			D	

Intersection Summary

HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group