

Appendix E
Total Future Levels of Service

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		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.99			1.00			1.00	
Flt Protected		0.98			0.96			1.00			1.00	
Satd. Flow (prot)		1824			1765			1859			1854	
Flt Permitted		0.88			0.70			1.00			0.94	
Satd. Flow (perm)		1633			1285			1853			1744	
Volume (vph)	39	71	2	197	29	19	5	961	11	37	913	21
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	42	77	2	214	32	21	5	1045	12	40	992	23
RTOR Reduction (vph)	0	1	0	0	5	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	120	0	0	262	0	0	1061	0	0	1054	0
Confl. Peds. (#/hr)	3		1	1		3			3	3		
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		15.7			15.7			46.0			46.0	
Effective Green, g (s)		15.7			15.7			46.0			46.0	
Actuated g/C Ratio		0.23			0.23			0.66			0.66	
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)		368			289			1223			1151	
v/s Ratio Prot												
v/s Ratio Perm		0.07			c0.20			0.57			c0.60	
v/c Ratio		0.33			0.91			0.87			0.92	
Uniform Delay, d1		22.6			26.3			9.4			10.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			29.9			8.5			12.7	
Delay (s)		23.1			56.2			17.9			22.9	
Level of Service		C			E			B			C	
Approach Delay (s)		23.1			56.2			17.9			22.9	
Approach LOS		C			E			B			C	
Intersection Summary												
HCM Average Control Delay		24.3			HCM Level of Service			C				
HCM Volume to Capacity ratio		0.91										
Actuated Cycle Length (s)		69.7			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		102.5%			ICU Level of Service			G				
Analysis Period (min)		15										

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1852		1770	1863
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	1852		1770	1863
Volume (vph)	28	22	1005	37	73	1057
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	24	1092	40	79	1149
RTOR Reduction (vph)	0	22	1	0	0	0
Lane Group Flow (vph)	30	2	1131	0	79	1149
Confl. Peds. (#/hr)				1	1	
Turn Type	Perm			Prot		
Protected Phases	8		6		5	2
Permitted Phases	8					
Actuated Green, G (s)	3.0	3.0	35.8		7.2	47.0
Effective Green, g (s)	4.0	4.0	36.8		7.2	48.0
Actuated g/C Ratio	0.07	0.07	0.61		0.12	0.80
Clearance Time (s)	5.0	5.0	5.0		4.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	118	106	1136		212	1490
v/s Ratio Prot	c0.02		c0.61		0.04	c0.62
v/s Ratio Perm		0.00				
v/c Ratio	0.25	0.02	1.00		0.37	0.77
Uniform Delay, d1	26.6	26.2	11.5		24.3	3.1
Progression Factor	1.00	1.00	1.08		1.00	1.00
Incremental Delay, d2	1.1	0.1	23.2		1.1	3.9
Delay (s)	27.7	26.2	35.7		25.4	7.1
Level of Service	C	C	D		C	A
Approach Delay (s)	27.1		35.7			8.2
Approach LOS	C		D			A
Intersection Summary						
HCM Average Control Delay			21.5		HCM Level of Service	C
HCM Volume to Capacity ratio			0.87			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			73.2%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	⇄			⇄			⇄			⇄		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	36	2	133	6	5	8	22	1063	2	5	1003	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	39	2	145	7	5	9	24	1155	2	5	1090	79
Pedestrians	1											
Lane Width (ft)	12.0											
Walking Speed (ft/s)	4.0											
Percent Blockage	0											
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)							700			604		
pX, platoon unblocked	0.59	0.59	0.26	0.59	0.59	0.22	0.26				0.22	
vC, conflicting volume	2357	2347	1130	2492	2386	1158	1170				1159	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1416	1400	1499	1644	1466	1707	1652				1712	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	0	96	0	0	90	65	76				93	
cM capacity (veh/h)	32	59	39	0	54	25	102				82	
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	186	21	1182	1175								
Volume Left	39	7	24	5								
Volume Right	145	9	2	79								
cSH	37	0	102	82								
Volume to Capacity	4.96	Err	0.24	0.07								
Queue Length 95th (ft)	Err	Err	21	5								
Control Delay (s)	Err	Err	37.9	11.1								
Lane LOS	F	F	E	B								
Approach Delay (s)	Err	Err	37.9	11.1								
Approach LOS	F	F										
Intersection Summary												
Average Delay				Err								
Intersection Capacity Utilization				90.4%	ICU Level of Service			E				
Analysis Period (min)				15								

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
Volume (veh/h)	36	2	133	6	5	8	22	1063	2	5	1003	73	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	39	2	145	7	5	9	24	1155	2	5	1090	79	
Pedestrians					1								
Lane Width (ft)					12.0								
Walking Speed (ft/s)					4.0								
Percent Blockage					0								
Right turn flare (veh)													
Median type		None			None								
Median storage (veh)													
Upstream signal (ft)								688			604		
pX, platoon unblocked	0.59	0.59	0.26	0.59	0.59	0.22	0.26			0.22			
vC, conflicting volume	2357	2347	1130	2492	2386	1158	1170			1159			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1422	1406	1497	1651	1471	1712	1648			1717			
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	0	96	0	0	90	65	77			93			
cM capacity (veh/h)	31	59	39	0	54	25	103			81			
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1							
Volume Total	41	145	12	9	1182	1175							
Volume Left	39	0	7	0	24	5							
Volume Right	0	145	0	9	2	79							
cSH	32	39	0	25	103	81							
Volume to Capacity	1.28	3.67	Err	0.35	0.23	0.07							
Queue Length 95th (ft)	114	Err	Err	27	21	5							
Control Delay (s)	440.6	Err	Err	214.9	37.2	11.4							
Lane LOS	F	F	F	F	E	B							
Approach Delay (s)	7874.9		Err		37.2	11.4							
Approach LOS	F		F										
Intersection Summary													
Average Delay	Err												
Intersection Capacity Utilization	87.0%			ICU Level of Service			E						
Analysis Period (min)	15												

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.93		1.00	1.00	0.97	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1696		1770	1863	1796	
Flt Permitted	0.98		0.10	1.00	1.00	
Satd. Flow (perm)	1696		191	1863	1796	
Volume (vph)	128	123	94	893	862	242
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	139	134	102	971	937	263
RTOR Reduction (vph)	65	0	0	0	14	0
Lane Group Flow (vph)	208	0	102	971	1186	0
Confl. Peds. (#/hr)	1		5			5
Turn Type			Perm			
Protected Phases	8			6	2	
Permitted Phases			6			
Actuated Green, G (s)	11.9		38.1	38.1	38.1	
Effective Green, g (s)	12.9		39.1	39.1	39.1	
Actuated g/C Ratio	0.22		0.65	0.65	0.65	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	365		124	1214	1170	
v/s Ratio Prot	c0.12			0.52	c0.66	
v/s Ratio Perm			0.54			
v/c Ratio	0.57		0.82	0.80	1.01	
Uniform Delay, d1	21.1		7.8	7.6	10.4	
Progression Factor	1.00		2.26	2.34	0.92	
Incremental Delay, d2	2.0		40.6	5.1	26.1	
Delay (s)	23.1		58.3	22.9	35.8	
Level of Service	C		E	C	D	
Approach Delay (s)	23.1			26.2	35.8	
Approach LOS	C			C	D	
Intersection Summary						
HCM Average Control Delay			30.4		HCM Level of Service	C
HCM Volume to Capacity ratio			0.90			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			90.7%		ICU Level of Service	E
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)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3531		1770	3539	1770	1583
Flt Permitted	1.00		0.12	1.00	0.95	1.00
Satd. Flow (perm)	3531		219	3539	1770	1583
Volume (vph)	1414	16	27	935	71	705
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1537	17	29	1016	77	766
RTOR Reduction (vph)	1	0	0	0	0	47
Lane Group Flow (vph)	1553	0	29	1016	77	719
Confl. Peds. (#/hr)		7	7		18	
Turn Type			Perm		Prot	
Protected Phases	6			2	8	8
Permitted Phases			2	2		
Actuated Green, G (s)	70.0		70.0	70.0	19.0	19.0
Effective Green, g (s)	71.0		71.0	71.0	21.0	21.0
Actuated g/C Ratio	0.71		0.71	0.71	0.21	0.21
Clearance Time (s)	5.0		5.0	5.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2507		155	2513	372	332
v/s Ratio Prot	c0.44			0.29	0.04	c0.45
v/s Ratio Perm			0.13			
v/c Ratio	0.62		0.19	0.40	0.21	2.17
Uniform Delay, d1	7.5		4.8	5.9	32.6	39.5
Progression Factor	1.00		1.23	1.47	1.00	1.00
Incremental Delay, d2	1.2		2.2	0.4	0.3	535.0
Delay (s)	8.7		8.2	9.1	32.9	574.5
Level of Service	A		A	A	C	F
Approach Delay (s)	8.7			9.1	525.0	
Approach LOS	A			A	F	
Intersection Summary						
HCM Average Control Delay		135.2		HCM Level of Service		F
HCM Volume to Capacity ratio		0.97				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		89.9%		ICU Level of Service		E
Analysis Period (min)		15				
c Critical Lane Group						

	↖	→	←	↗	↘	
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	192	1927	875	61	54	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	209	2095	951	66	59	93
Pedestrians		10			40	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		4.0			4.0	
Percent Blockage		1			3	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		137	301			
pX, platoon unblocked					0.76	
vC, conflicting volume	1057				2489	559
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1057				2641	559
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	67				0	79
cM capacity (veh/h)	632				9	453
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	907	1396	634	383	152	
Volume Left	209	0	0	0	59	
Volume Right	0	0	0	66	93	
cSH	632	1700	1700	1700	23	
Volume to Capacity	0.33	0.82	0.37	0.23	6.48	
Queue Length 95th (ft)	36	0	0	0	Err	
Control Delay (s)	8.9	0.0	0.0	0.0	Err	
Lane LOS	A				F	
Approach Delay (s)	3.5		0.0		Err	
Approach LOS					F	
Intersection Summary						
Average Delay		440.5				
Intersection Capacity Utilization		105.4%		ICU Level of Service		G
Analysis Period (min)		15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SST	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	4.0			4.0	
Lane Util. Factor		0.95	0.95		1.00		0.95	0.95			1.00	
Frpb, ped/bikes		1.00	0.98		1.00		1.00	1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00			1.00	
Frt		1.00	0.85		0.98		1.00	1.00			0.92	
Flt Protected		0.99	1.00		1.00		0.95	0.96			0.99	
Satd. Flow (prot)		1757	1478		1826		1681	1684			1679	
Flt Permitted		0.82	1.00		1.00		0.95	0.96			0.99	
Satd. Flow (perm)		1448	1478		1826		1681	1684			1679	
Volume (vph)	110	823	1228	0	315	40	536	14	5	25	29	85
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	895	1335	0	342	43	583	15	5	27	32	92
RTOR Reduction (vph)	0	0	469	0	4	0	0	1	0	0	56	0
Lane Group Flow (vph)	0	1015	866	0	381	0	303	299	0	0	93	0
Confl. Peds. (#/hr)	6		10	10		6	1		16	16		1
Turn Type	Perm		Perm				Split			Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2		2									
Actuated Green, G (s)		51.5	51.5		51.5		19.2	19.2			10.3	
Effective Green, g (s)		52.5	52.5		52.5		22.2	22.2			13.3	
Actuated g/C Ratio		0.52	0.52		0.52		0.22	0.22			0.13	
Clearance Time (s)		5.0	5.0		5.0		7.0	7.0			7.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		760	776		959		373	374			223	
v/s Ratio Prot					0.21		c0.18	0.18			c0.06	
v/s Ratio Perm		c0.70	0.59									
v/c Ratio		1.34	1.12		0.40		0.81	0.80			0.42	
Uniform Delay, d1		23.8	23.8		14.3		36.9	36.8			39.8	
Progression Factor		1.08	2.12		1.00		1.00	1.00			1.00	
Incremental Delay, d2		153.7	57.8		1.2		12.6	11.6			1.3	
Delay (s)		179.3	108.2		15.5		49.6	48.4			41.1	
Level of Service		F	F		B		D	D			D	
Approach Delay (s)		138.9			15.5			49.0			41.1	
Approach LOS		F			B			D			D	
Intersection Summary												
HCM Average Control Delay		105.5				HCM Level of Service				F		
HCM Volume to Capacity ratio		1.06										
Actuated Cycle Length (s)		100.0				Sum of lost time (s)			12.0			
Intersection Capacity Utilization		125.8%				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)		4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor		0.95		1.00	1.00	1.00		0.95		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00	1.00		1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Frt		0.99		1.00	1.00	0.85		0.96		1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		3461		1770	1863	1583		3383		1770	1838	
Flt Permitted		0.94		0.12	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)		3256		219	1863	1583		3383		1770	1838	
Volume (vph)	23	747	83	129	227	111	70	834	307	387	486	38
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	812	90	140	247	121	76	907	334	421	528	41
RTOR Reduction (vph)	0	7	0	0	0	81	0	28	0	0	2	0
Lane Group Flow (vph)	0	920	0	140	247	40	0	1289	0	421	567	0
Confl. Peds. (#/hr)			21	21			7		2	2		7
Turn Type	Perm			pm+pt			Perm	Split		Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4			8	8	8						
Actuated Green, G (s)		28.0		38.0	38.0	38.0		36.0		28.0	28.0	
Effective Green, g (s)		30.0		40.0	40.0	40.0		38.0		30.0	30.0	
Actuated g/C Ratio		0.25		0.33	0.33	0.33		0.32		0.25	0.25	
Clearance Time (s)		6.0		4.0	6.0	6.0		6.0		6.0	6.0	
Lane Grp Cap (vph)		814		151	621	528		1071		443	460	
v/s Ratio Prot				c0.05	0.13			c0.38		0.24	c0.31	
v/s Ratio Perm		c0.28		0.26		0.03						
v/c Ratio		1.13		0.93	0.40	0.08		1.20		0.95	1.23	
Uniform Delay, d1		45.0		36.5	30.7	27.4		41.0		44.3	45.0	
Progression Factor		1.00		1.00	1.00	1.00		1.00		1.03	1.02	
Incremental Delay, d2		74.0		56.0	1.9	0.3		100.6		31.4	121.8	
Delay (s)		119.0		92.5	32.6	27.6		141.6		77.0	167.7	
Level of Service		F		F	C	C		F		E	F	
Approach Delay (s)		119.0			48.0			141.6			129.2	
Approach LOS		F			D			F			F	
Intersection Summary												
HCM Average Control Delay		120.0										
HCM Volume to Capacity ratio		1.18										
Actuated Cycle Length (s)		120.0							16.0			
Intersection Capacity Utilization		112.3%										
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	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00		0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00		1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85		0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	3464		1770	1863	1583		3383		1770	1838	
Flt Permitted	0.61	1.00		0.12	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	1128	3464		219	1863	1583		3383		1770	1838	
Volume (vph)	23	747	83	129	227	111	70	834	307	387	486	38
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	812	90	140	247	121	76	907	334	421	528	41
RTOR Reduction (vph)	0	7	0	0	0	81	0	28	0	0	2	0
Lane Group Flow (vph)	25	895	0	140	247	40	0	1289	0	421	567	0
Confl. Peds. (#/hr)			21	21			7		2	2		7
Turn Type	Perm			pm+pt		Perm	Split			Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4			8	8	8						
Actuated Green, G (s)	28.0	28.0		38.0	38.0	38.0		36.0		28.0	28.0	
Effective Green, g (s)	30.0	30.0		40.0	40.0	40.0		38.0		30.0	30.0	
Actuated g/C Ratio	0.25	0.25		0.33	0.33	0.33		0.32		0.25	0.25	
Clearance Time (s)	6.0	6.0		4.0	6.0	6.0		6.0		6.0	6.0	
Lane Grp Cap (vph)	282	866		151	621	528		1071		443	460	
v/s Ratio Prot		c0.26		c0.05	0.13			c0.38		0.24	c0.31	
v/s Ratio Perm	0.02			0.26		0.03						
v/c Ratio	0.09	1.03		0.93	0.40	0.08		1.20		0.95	1.23	
Uniform Delay, d1	34.5	45.0		36.2	30.7	27.4		41.0		44.3	45.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.04	1.03	
Incremental Delay, d2	0.6	39.6		56.0	1.9	0.3		100.6		31.5	121.8	
Delay (s)	35.1	84.6		92.2	32.6	27.6		141.6		77.6	168.2	
Level of Service	D	F		F	C	C		F		E	F	
Approach Delay (s)		83.3			47.9			141.6			129.7	
Approach LOS		F			D			F			F	
Intersection Summary												
HCM Average Control Delay		111.3								F		
HCM Volume to Capacity ratio		1.15										
Actuated Cycle Length (s)		120.0								16.0		
Intersection Capacity Utilization		106.9%								G		
Analysis Period (min)		15										
c Critical Lane Group												

	EBL	EBT	WBT	WBR	SBL	SBR
Movement						
Lane Configurations	↔	↔	↔		↔	
Sign Control	Free	Free	Free		Stop	
Grade	0%	0%	0%		0%	
Volume (veh/h)	0	1407	448	0	22	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1529	487	0	24	9
Pedestrians		5	2		23	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		2	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		709				
pX, platoon unblocked					0.78	
vC, conflicting volume	510				1277	271
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	510				1069	271
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				85	99
cM capacity (veh/h)	1031				165	709
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	765	765	243	243	33	
Volume Left	0	0	0	0	24	
Volume Right	0	0	0	0	9	
cSH	1700	1700	1700	1700	207	
Volume to Capacity	0.45	0.45	0.14	0.14	0.16	
Queue Length 95th (ft)	0	0	0	0	14	
Control Delay (s)	0.0	0.0	0.0	0.0	25.6	
Lane LOS					D	
Approach Delay (s)	0.0		0.0		25.6	
Approach LOS					D	
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			50.4%		ICU Level of Service	A
Analysis Period (min)			15			

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑↓			↘↗
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	4	17	823	9	3	896
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	18	895	10	3	974
Pedestrians			1			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			0			
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			272			968
pX, platoon unblocked	0.71	0.71			0.71	
vC, conflicting volume	1394	452			904	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1152	0			466	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	98			100	
cM capacity (veh/h)	136	775			780	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	23	596	308	328	649	
Volume Left	4	0	0	3	0	
Volume Right	18	0	10	0	0	
cSH	409	1700	1700	780	1700	
Volume to Capacity	0.06	0.35	0.18	0.00	0.38	
Queue Length 95th (ft)	4	0	0	0	0	
Control Delay (s)	14.3	0.0	0.0	0.1	0.0	
Lane LOS	B			A		
Approach Delay (s)	14.3	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay		0.2				
Intersection Capacity Utilization		36.9%		ICU Level of Service	A	
Analysis Period (min)		15				

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑			↑↑
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	899	2	26	906
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	977	2	28	985
Pedestrians	1					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			630			610
pX, platoon unblocked	0.76	0.75			0.75	
vC, conflicting volume	1528	491			960	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1314	0			641	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			96	
cM capacity (veh/h)	109	813			705	
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	651	328	357	657		
Volume Left	0	0	28	0		
Volume Right	0	2	0	0		
cSH	1700	1700	705	1700		
Volume to Capacity	0.38	0.19	0.04	0.39		
Queue Length 95th (ft)	0	0	3	0		
Control Delay (s)	0.0	0.0	1.3	0.0		
Lane LOS			A			
Approach Delay (s)	0.0		0.5			
Approach LOS						
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			47.1%		ICU Level of Service	A
Analysis Period (min)			15			

	↖	↗	↖	↗	↑	↖	↗	↓	↖	↗	↖	↗
Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
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		4.0	4.0		4.0		
Lane Util. Factor	1.00		1.00	1.00	0.95		1.00	0.95		1.00		
Frt	1.00		0.85	1.00	0.99		1.00	1.00		0.93		
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00		0.98		
Satd. Flow (prot)	1770		1583	1770	3521		1770	3533		1695		
Flt Permitted	0.95		1.00	0.30	1.00		0.95	1.00		0.98		
Satd. Flow (perm)	1770		1583	564	3521		1770	3533		1695		
Volume (vph)	20	0	78	10	919	33	126	858	10	10	0	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	0	85	11	999	36	137	933	11	11	0	11
RTOR Reduction (vph)	0	0	78	0	3	0	0	1	0	10	0	0
Lane Group Flow (vph)	22	0	7	11	1032	0	137	943	0	12	0	0
Turn Type	Prot	custom		Perm			Prot			Prot		
Protected Phases	8				2		1	6		4		
Permitted Phases			8	2								
Actuated Green, G (s)	4.1		4.1	32.0	32.0		8.9	45.9		4.1		
Effective Green, g (s)	5.1		5.1	33.0	33.0		9.9	46.9		5.1		
Actuated g/C Ratio	0.08		0.08	0.55	0.55		0.16	0.78		0.08		
Clearance Time (s)	5.0		5.0	5.0	5.0		5.0	5.0		5.0		
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0		3.0		
Lane Grp Cap (vph)	150		135	310	1937		292	2762		144		
v/s Ratio Prot	c0.01				c0.29		c0.08	0.27		0.01		
v/s Ratio Perm			0.00	0.02								
v/c Ratio	0.15		0.05	0.04	0.53		0.47	0.34		0.08		
Uniform Delay, d1	25.4		25.2	6.2	8.6		22.7	2.0		25.3		
Progression Factor	1.00		1.00	1.47	1.96		1.05	1.31		1.00		
Incremental Delay, d2	0.5		0.2	0.1	0.4		0.4	0.1		0.2		
Delay (s)	25.9		25.4	9.2	17.2		24.2	2.7		25.5		
Level of Service	C		C	A	B		C	A		C		
Approach Delay (s)		25.5			17.1			5.4		25.5		
Approach LOS		C			B			A		C		
Intersection Summary												
HCM Average Control Delay		12.0			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.48										
Actuated Cycle Length (s)		60.0			Sum of lost time (s)			12.0				
Intersection Capacity Utilization		53.4%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑		↘	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1862		1770	1863
Flt Permitted	0.95	1.00	1.00		0.21	1.00
Satd. Flow (perm)	1770	1583	1862		392	1863
Volume (vph)	6	5	1025	2	2	1098
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	5	1114	2	2	1193
RTOR Reduction (vph)	0	5	0	0	0	0
Lane Group Flow (vph)	7	0	1116	0	2	1193
Turn Type	Perm				Perm	
Protected Phases	8		2		6	
Permitted Phases	8				6	
Actuated Green, G (s)	1.3	1.3	50.7		50.7	50.7
Effective Green, g (s)	1.3	1.3	50.7		50.7	50.7
Actuated g/C Ratio	0.02	0.02	0.85		0.85	0.85
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	38	34	1573		331	1574
v/s Ratio Prot	c0.00		0.60		c0.64	
v/s Ratio Perm	0.00				0.01	
v/c Ratio	0.18	0.00	0.71		0.01	0.76
Uniform Delay, d1	28.8	28.7	1.8		0.7	2.0
Progression Factor	1.00	1.00	0.92		0.40	1.06
Incremental Delay, d2	2.3	0.0	1.7		0.0	2.8
Delay (s)	31.2	28.8	3.4		0.3	4.9
Level of Service	C		A		A	A
Approach Delay (s)	30.2		3.4		4.9	
Approach LOS	C		A		A	
Intersection Summary						
HCM Average Control Delay			4.3	HCM Level of Service		A
HCM Volume to Capacity ratio			0.74			
Actuated Cycle Length (s)			60.0	Sum of lost time (s)		8.0
Intersection Capacity Utilization			67.8%	ICU Level of Service		C
Analysis Period (min)			15			
c Critical Lane Group						

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
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		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.98			0.98			0.99	
Flt Protected		0.99			0.97			1.00			1.00	
Satd. Flow (prot)		1827			1769			1828			1850	
Flt Permitted		0.90			0.81			1.00			1.00	
Satd. Flow (perm)		1663			1484			1826			1845	
Volume (vph)	22	49	2	118	50	26	2	750	101	4	680	36
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	53	2	128	54	28	2	815	110	4	739	39
RTOR Reduction (vph)	0	2	0	0	8	0	0	6	0	0	2	0
Lane Group Flow (vph)	0	77	0	0	202	0	0	921	0	0	780	0
Confl. Peds. (#/hr)			2	2					3	3		
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		13.1			13.1			46.8			46.8	
Effective Green, g (s)		13.1			13.1			46.8			46.8	
Actuated g/C Ratio		0.19			0.19			0.69			0.69	
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)		321			286			1259			1272	
v/s Ratio Prot												
v/s Ratio Perm		0.05			0.14			0.50			0.42	
v/c Ratio		0.24			0.71			0.73			0.61	
Uniform Delay, d1		23.2			25.6			6.6			5.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.4			7.7			3.8			2.2	
Delay (s)		23.6			33.3			10.4			7.9	
Level of Service		C			C			B			A	
Approach Delay (s)		23.6			33.3			10.4			7.9	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM Average Control Delay		12.3			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.73										
Actuated Cycle Length (s)		67.9			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		71.1%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

	↖	↗	↑	↘	↙	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↑		↖	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1857		1770	1863
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	1857		1770	1863
Volume (vph)	28	58	639	14	33	694
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	63	695	15	36	754
RTOR Reduction (vph)	0	60	0	0	0	0
Lane Group Flow (vph)	30	3	710	0	36	754
Confl. Peds. (#/hr)				1		1
Turn Type		Perm			Prot	
Protected Phases	8		6		5	2
Permitted Phases		8				
Actuated Green, G (s)	4.5	4.5	74.3		7.2	85.5
Effective Green, g (s)	5.5	5.5	75.3		7.2	86.5
Actuated g/C Ratio	0.06	0.06	0.75		0.07	0.86
Clearance Time (s)	5.0	5.0	5.0		4.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	97	87	1398		127	1611
v/s Ratio Prot	c0.02		c0.38		0.02	c0.40
v/s Ratio Perm		0.00				
v/c Ratio	0.31	0.04	0.51		0.28	0.47
Uniform Delay, d1	45.4	44.7	4.9		44.0	1.5
Progression Factor	1.00	1.00	0.82		1.00	1.00
Incremental Delay, d2	1.8	0.2	1.2		1.2	1.0
Delay (s)	47.2	44.9	5.2		45.2	2.5
Level of Service	D	D	A		D	A
Approach Delay (s)	45.7		5.2			4.5
Approach LOS	D		A			A
Intersection Summary						
HCM Average Control Delay			7.2		HCM Level of Service	A
HCM Volume to Capacity ratio			0.48			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			49.0%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	⇌			⇌			⇌			⇌		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	35	0	61	7	2	7	35	716	16	1	663	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	0	66	8	2	8	38	778	17	1	721	65
Pedestrians				2			1					
Lane Width (ft)				12.0			12.0					
Walking Speed (ft/s)				4.0			4.0					
Percent Blockage				0			0					
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)							680			604		
pX, platoon unblocked	0.94	0.94	0.89	0.94	0.94	0.90	0.89				0.90	
vC, conflicting volume	1627	1629	754	1688	1653	789	786				798	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1513	1515	724	1578	1541	766	759				776	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	55	100	82	88	98	98	95				100	
cM capacity (veh/h)	85	106	378	66	102	363	758				757	
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	104	17	834	787								
Volume Left	38	8	38	1								
Volume Right	66	8	17	65								
cSH	168	110	758	757								
Volume to Capacity	0.62	0.16	0.05	0.00								
Queue Length 95th (ft)	86	13	4	0								
Control Delay (s)	56.4	43.8	1.4	0.0								
Lane LOS	F	E	A	A								
Approach Delay (s)	56.4	43.8	1.4	0.0								
Approach LOS	F	E										
Intersection Summary												
Average Delay				4.5								
Intersection Capacity Utilization				79.9%	ICU Level of Service			D				
Analysis Period (min)				15								

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations		↕	↗		↕	↗		↕			↕	↗
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	35	1	61	7	2	7	35	716	16	1	663	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	1	66	8	2	8	38	778	17	1	721	65
Pedestrians					2			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)								698			604	
pX, platoon unblocked	0.93	0.93	0.89	0.93	0.93	0.90	0.89			0.90		
vC, conflicting volume	1627	1629	754	1688	1653	789	786			798		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1517	1519	723	1583	1545	767	758			776		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	55	99	82	88	98	98	95			100		
cM capacity (veh/h)	84	105	378	64	101	363	756			758		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	39	66	10	8	834	787						
Volume Left	38	0	8	0	38	1						
Volume Right	0	66	0	8	17	65						
cSH	85	378	70	363	756	758						
Volume to Capacity	0.46	0.18	0.14	0.02	0.05	0.00						
Queue Length 95th (ft)	48	16	11	2	4	0						
Control Delay (s)	79.7	16.6	64.7	15.1	1.4	0.0						
Lane LOS	F	C	F	C	A	A						
Approach Delay (s)	40.0		43.0		1.4	0.0						
Approach LOS	E		E									
Intersection Summary												
Average Delay			3.5									
Intersection Capacity Utilization			81.6%		ICU Level of Service					D		
Analysis Period (min)			15									

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.97	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1734		1770	1863	1800	
Flt Permitted	0.96		0.96	1.00	1.00	
Satd. Flow (perm)	1734		1770	1863	1800	
Volume (vph)	169	57	87	670	601	164
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	184	62	95	728	653	178
RTOR Reduction (vph)	13	0	0	0	8	0
Lane Group Flow (vph)	233	0	95	728	823	0
Confl. Peds. (#/hr)			1			1
Turn Type			Perm			
Protected Phases	8			6	2	
Permitted Phases			6			
Actuated Green, G (s)	17.2		72.8	72.8	72.8	
Effective Green, g (s)	18.2		73.8	73.8	73.8	
Actuated g/C Ratio	0.18		0.74	0.74	0.74	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	316		364	1375	1328	
v/s Ratio Prot	c0.13			0.39	c0.46	
v/s Ratio Perm			0.19			
v/c Ratio	0.74		0.26	0.53	0.62	
Uniform Delay, d1	38.6		4.3	5.6	6.3	
Progression Factor	0.99		1.05	1.21	1.36	
Incremental Delay, d2	8.6		1.7	1.4	2.0	
Delay (s)	46.9		6.2	8.3	10.6	
Level of Service	D		A	A	B	
Approach Delay (s)	46.9			8.0	10.6	
Approach LOS	D			A	B	
Intersection Summary						
HCM Average Control Delay		14.2		HCM Level of Service		B
HCM Volume to Capacity ratio		0.64				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		70.3%		ICU Level of Service		C
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)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		0.99	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3499		1756	3539	1770	1583
Flt Permitted	1.00		0.24	1.00	0.95	1.00
Satd. Flow (perm)	3499		439	3539	1770	1583
Volume (vph)	988	55	285	797	44	24
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1074	60	310	866	48	26
RTOR Reduction (vph)	3	0	0	0	0	24
Lane Group Flow (vph)	1131	0	310	866	48	2
Confl. Peds. (#/hr)		10	10		5	1
Turn Type			Perm		Prot	
Protected Phases	6			2	8	8
Permitted Phases			2	2		
Actuated Green, G (s)	82.0		82.0	82.0	7.0	7.0
Effective Green, g (s)	83.0		83.0	83.0	9.0	9.0
Actuated g/C Ratio	0.83		0.83	0.83	0.09	0.09
Clearance Time (s)	5.0		5.0	5.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2904		364	2937	159	142
v/s Ratio Prot	0.32			0.24	c0.03	0.00
v/s Ratio Perm			c0.71			
v/c Ratio	0.39		0.85	0.29	0.30	0.02
Uniform Delay, d1	2.1		4.9	1.9	42.6	41.5
Progression Factor	1.00		1.13	0.42	1.00	1.00
Incremental Delay, d2	0.4		20.6	0.2	1.1	0.0
Delay (s)	2.5		26.2	1.0	43.6	41.5
Level of Service	A		C	A	D	D
Approach Delay (s)	2.5			7.7	42.9	
Approach LOS	A			A	D	
Intersection Summary						
HCM Average Control Delay		6.3		HCM Level of Service		A
HCM Volume to Capacity ratio		0.80				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		60.9%		ICU Level of Service		B
Analysis Period (min)		15				
c Critical Lane Group						

	EBL	EBT	WBT	WBR	SBL	SBR
Movement						
Lane Configurations		↑↑	↑↑		↑	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	73	945	846	39	57	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	79	1027	920	42	62	162
Pedestrians		3			27	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		4.0			4.0	
Percent Blockage		0			2	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		137	301			
pX, platoon unblocked					0.92	
vC, conflicting volume	989				1640	511
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	989				1608	511
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				18	67
cM capacity (veh/h)	679				76	495
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	422	685	613	349	224	
Volume Left	79	0	0	0	62	
Volume Right	0	0	0	42	162	
cSH	679	1700	1700	1700	196	
Volume to Capacity	0.12	0.40	0.36	0.21	1.14	
Queue Length 95th (ft)	10	0	0	0	277	
Control Delay (s)	3.4	0.0	0.0	0.0	158.5	
Lane LOS	A				F	
Approach Delay (s)	1.3		0.0		158.5	
Approach LOS					F	
Intersection Summary						
Average Delay			16.1			
Intersection Capacity Utilization			75.6%		ICU Level of Service	D
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)		4.0	4.0		4.0		4.0	4.0			4.0	
Lane Util. Factor		0.95	0.95		1.00		0.95	0.95			1.00	
Frpb, ped/bikes		1.00	0.98		1.00		1.00	0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00			1.00	
Frt		1.00	0.85		0.99		1.00	0.99			0.90	
Flt Protected		0.99	1.00		1.00		0.95	0.96			0.99	
Satd. Flow (prot)		1759	1477		1841		1681	1667			1648	
Flt Permitted		0.90	1.00		1.00		0.95	0.96			0.99	
Satd. Flow (perm)		1585	1477		1841		1681	1667			1648	
Volume (vph)	48	353	637	0	456	25	423	18	15	14	12	71
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	384	692	0	496	27	460	20	16	15	13	77
RTOR Reduction (vph)	0	0	311	0	1	0	0	3	0	0	69	0
Lane Group Flow (vph)	0	436	381	0	522	0	256	237	0	0	36	0
Confl. Peds. (#/hr)	19		11	11		19	1		24	24		1
Turn Type	Perm		Perm				Split			Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2		2									
Actuated Green, G (s)		54.1	54.1		54.1		19.9	19.9			7.0	
Effective Green, g (s)		55.1	55.1		55.1		22.9	22.9			10.0	
Actuated g/C Ratio		0.55	0.55		0.55		0.23	0.23			0.10	
Clearance Time (s)		5.0	5.0		5.0		7.0	7.0			7.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		873	814		1014		385	382			165	
v/s Ratio Prot					c0.28		c0.15	0.14			c0.02	
v/s Ratio Perm		0.28	0.26									
v/c Ratio		0.50	0.47		0.51		0.66	0.62			0.22	
Uniform Delay, d1		13.9	13.6		14.1		35.1	34.6			41.4	
Progression Factor		0.90	1.02		0.54		1.00	1.00			1.00	
Incremental Delay, d2		2.0	1.9		1.3		4.3	3.1			0.7	
Delay (s)		14.5	15.7		9.0		39.4	37.8			42.1	
Level of Service		B	B		A		D	D			D	
Approach Delay (s)		15.2			9.0		38.6				42.1	
Approach LOS		B			A		D				D	
Intersection Summary												
HCM Average Control Delay			20.2			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			89.6%			ICU Level of Service			E			
Analysis Period (min)			15									

c Critical Lane Group

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.98	1.00	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.97	1.00	1.00	1.00	0.85	0.96	1.00	0.96	1.00	0.99	1.00	0.99
Flt Protected	1.00	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3353	1763	1863	1558	3359	1770	1848	3359	1770	1848	3359	1770
Flt Permitted	0.87	0.22	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	2940	402	1863	1558	3359	1770	1848	3359	1770	1848	3359	1770
Volume (vph)	33	253	76	259	370	66	66	523	234	142	474	23
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	275	83	282	402	72	72	568	254	154	515	25
RTOR Reduction (vph)	0	24	0	0	0	49	0	42	0	0	2	0
Lane Group Flow (vph)	0	370	0	282	402	23	0	852	0	154	538	0
Confl. Peds. (#/hr)	4	16	16	4	1	5	5	1	5	5	1	1
Turn Type	Perm		pm+pt		Perm	Split		Split		Split		
Protected Phases	4		3	8	2	2		6		6		
Permitted Phases	4		8	8	8							
Actuated Green, G (s)	13.0		30.0	30.0	30.0	34.0		18.0		18.0		
Effective Green, g (s)	15.0		32.0	32.0	32.0	36.0		20.0		20.0		
Actuated g/C Ratio	0.15		0.32	0.32	0.32	0.36		0.20		0.20		
Clearance Time (s)	6.0		4.0	6.0	6.0	6.0		6.0		6.0		
Lane Grp Cap (vph)	441		306	596	499	1209		354		370		
v/s Ratio Prot			c0.12	0.22		c0.25		0.09		c0.29		
v/s Ratio Perm	0.13		c0.18		0.01							
v/c Ratio	0.84		0.92	0.67	0.05	0.70		0.44		1.46		
Uniform Delay, d1	41.3		28.4	29.5	23.5	27.4		35.0		40.0		
Progression Factor	1.02		1.00	1.00	1.00	1.00		0.91		0.96		
Incremental Delay, d2	13.2		34.8	6.0	0.2	3.5		3.8		219.2		
Delay (s)	55.5		63.2	35.5	23.6	30.9		35.7		257.6		
Level of Service	E		E	D	C	C		D		F		
Approach Delay (s)	55.5			44.7		30.9				208.4		
Approach LOS	E			D		C				F		
Intersection Summary												
HCM Average Control Delay		83.2										F
HCM Volume to Capacity ratio		0.94										
Actuated Cycle Length (s)		100.0						12.0				
Intersection Capacity Utilization		102.2%						G				
Analysis Period (min)		15										
c Critical Lane Group												

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	↰	↱	↲	↰	↱	↲	↰	↱	↲	↰	↱	↲
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	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00		0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.98		1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00		1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85		0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1765	3353		1761	1863	1558		3359		1770	1848	
Flt Permitted	0.53	1.00		0.26	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	977	3353		475	1863	1558		3359		1770	1848	
Volume (vph)	33	253	76	259	370	166	66	523	234	142	474	23
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	275	83	282	402	180	72	568	254	154	515	25
RTOR Reduction (vph)	0	28	0	0	0	122	0	42	0	0	2	0
Lane Group Flow (vph)	36	330	0	282	402	58	0	852	0	154	538	0
Confl. Peds. (#/hr)	4		16	16		4	1		5	5		1
Turn Type	Perm			pm+pt		Perm	Split			Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4			8	8	8						
Actuated Green, G (s)	13.0	13.0		30.0	30.0	30.0		34.0		18.0	18.0	
Effective Green, g (s)	15.0	15.0		32.0	32.0	32.0		36.0		20.0	20.0	
Actuated g/C Ratio	0.15	0.15		0.32	0.32	0.32		0.36		0.20	0.20	
Clearance Time (s)	6.0	6.0		4.0	6.0	6.0		6.0		6.0	6.0	
Lane Grp Cap (vph)	147	503		319	596	499		1209		354	370	
v/s Ratio Prot		0.10		c0.11	0.22			c0.25		0.09	c0.29	
v/s Ratio Perm	0.04			c0.17		0.04						
v/c Ratio	0.24	0.66		0.88	0.67	0.12		0.70		0.44	1.46	
Uniform Delay, d1	37.5	40.1		28.2	29.5	24.0		27.4		35.0	40.0	
Progression Factor	0.92	1.03		1.00	1.00	1.00		1.00		1.41	1.32	
Incremental Delay, d2	3.0	5.1		28.0	6.0	0.5		3.5		3.8	219.2	
Delay (s)	37.4	46.2		56.2	35.5	24.5		30.9		53.3	271.9	
Level of Service	D	D		E	D	C		C		D	F	
Approach Delay (s)		45.4			40.0			30.9			223.4	
Approach LOS		D			D			C			F	
Intersection Summary												
HCM Average Control Delay			82.6			HCM Level of Service				F		
HCM Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			98.3%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑		↑↑		↑	
Sign Control	Free		Free		Stop	
Grade	0%		0%		0%	
Volume (veh/h)	0	631	782	0	16	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	686	850	0	17	13
Pedestrians	3		31			
Lane Width (ft)	12.0		12.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	0		3			
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)	709					
pX, platoon unblocked						
vC, conflicting volume	881				1224	459
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	881				1224	459
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				90	98
cM capacity (veh/h)	743				167	533
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	343	343	425	425	30	
Volume Left	0	0	0	0	17	
Volume Right	0	0	0	0	13	
cSH	1700	1700	1700	1700	237	
Volume to Capacity	0.20	0.20	0.25	0.25	0.13	
Queue Length 95th (ft)	0	0	0	0	11	
Control Delay (s)	0.0	0.0	0.0	0.0	22.4	
Lane LOS					C	
Approach Delay (s)	0.0		0.0		22.4	
Approach LOS					C	
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	32.6%		ICU Level of Service		A	
Analysis Period (min)	15					

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	W		↑		↑	↑
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	3	8	674	4	10	563
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	9	733	4	11	612
Pedestrians	1					1
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			272			955
pX, platoon unblocked	0.84	0.84			0.84	
vC, conflicting volume	1064	370			738	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	879	50			490	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	237	840			893	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	12	488	249	215	408	
Volume Left	3	0	0	11	0	
Volume Right	9	0	4	0	0	
cSH	495	1700	1700	893	1700	
Volume to Capacity	0.02	0.29	0.15	0.01	0.24	
Queue Length 95th (ft)	2	0	0	1	0	
Control Delay (s)	12.4	0.0	0.0	0.6	0.0	
Lane LOS	B			A		
Approach Delay (s)	12.4	0.0		0.2		
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization		33.0%		ICU Level of Service	A	
Analysis Period (min)		15				

	↙	↘	↑	↗	↖	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑			↑↑
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	670	4	18	645
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	728	4	20	701
Pedestrians	2					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			630			597
pX, platoon unblocked	0.93	0.93			0.93	
vC, conflicting volume	1122	368			735	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1055	243			638	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			98	
cM capacity (veh/h)	201	704			875	
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	486	247	253	467		
Volume Left	0	0	20	0		
Volume Right	0	4	0	0		
cSH	1700	1700	875	1700		
Volume to Capacity	0.29	0.15	0.02	0.27		
Queue Length 95th (ft)	0	0	2	0		
Control Delay (s)	0.0	0.0	0.9	0.0		
Lane LOS			A			
Approach Delay (s)	0.0		0.3			
Approach LOS						
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			34.1%		ICU Level of Service	A
Analysis Period (min)			15			

	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Movement	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
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		4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00		1.00	1.00	0.95		1.00	0.95	1.00	1.00		
Frt	1.00		0.85	1.00	1.00		1.00	1.00	0.85	0.93		
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00	1.00	0.98		
Satd. Flow (prot)	1770		1583	1770	3533		1770	3539	1583	1695		
Flt Permitted	0.95		1.00	0.40	1.00		0.95	1.00	1.00	0.98		
Satd. Flow (perm)	1770		1583	742	3533		1770	3539	1583	1695		
Volume (vph)	25	0	100	10	657	8	42	613	10	10	0	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	0	109	11	714	9	46	666	11	11	0	11
RTOR Reduction (vph)	0	0	102	0	1	0	0	0	2	10	0	0
Lane Group Flow (vph)	27	0	7	11	722	0	46	666	9	12	0	0
Turn Type	Prot		custom	Perm			Prot		Perm	Prot		
Protected Phases	8				2		1	6		4		
Permitted Phases			8	2					6			
Actuated Green, G (s)	5.8		5.8	73.7	73.7		5.5	84.2	84.2	5.8		
Effective Green, g (s)	6.8		6.8	74.7	74.7		6.5	85.2	85.2	6.8		
Actuated g/C Ratio	0.07		0.07	0.75	0.75		0.06	0.85	0.85	0.07		
Clearance Time (s)	5.0		5.0	5.0	5.0		5.0	5.0	5.0	5.0		
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	120		108	554	2639		115	3015	1349	115		
v/s Ratio Prot	c0.02				c0.20		c0.03	0.19		0.01		
v/s Ratio Perm			0.00	0.01					0.01			
v/c Ratio	0.22		0.07	0.02	0.27		0.40	0.22	0.01	0.10		
Uniform Delay, d1	44.1		43.6	3.2	4.0		44.9	1.3	1.1	43.7		
Progression Factor	1.00		1.00	0.24	0.20		0.86	1.99	2.23	1.00		
Incremental Delay, d2	1.0		0.3	0.1	0.2		1.8	0.1	0.0	0.4		
Delay (s)	45.1		43.9	0.8	1.0		40.2	2.8	2.5	44.1		
Level of Service	D		D	A	A		D	A	A	D		
Approach Delay (s)		44.1			1.0			5.2		44.1		
Approach LOS		D			A			A		D		
Intersection Summary												
HCM Average Control Delay			7.1		HCM Level of Service					A		
HCM Volume to Capacity ratio			0.28									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)					12.0		
Intersection Capacity Utilization			41.7%		ICU Level of Service					A		
Analysis Period (min)			15									
c Critical Lane Group												

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↑		↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1862		1770	1863
Flt Permitted	0.95	1.00	1.00		0.31	1.00
Satd. Flow (perm)	1770	1583	1862		573	1863
Volume (vph)	3	2	836	3	4	760
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	2	909	3	4	826
RTOR Reduction (vph)	0	2	0	0	0	0
Lane Group Flow (vph)	3	0	912	0	4	826
Turn Type	Perm		Perm			
Protected Phases	8		2		6	
Permitted Phases	8		6			
Actuated Green, G (s)	1.2	1.2	90.8		90.8	90.8
Effective Green, g (s)	1.2	1.2	90.8		90.8	90.8
Actuated g/C Ratio	0.01	0.01	0.91		0.91	0.91
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	21	19	1691		520	1692
v/s Ratio Prot	c0.00		c0.49		0.44	
v/s Ratio Perm	0.00		0.01			
v/c Ratio	0.14	0.00	0.54		0.01	0.49
Uniform Delay, d1	48.9	48.8	0.8		0.4	0.8
Progression Factor	1.00	1.00	1.21		1.00	0.94
Incremental Delay, d2	3.1	0.0	1.1		0.0	1.0
Delay (s)	52.0	48.8	2.1		0.5	1.7
Level of Service	D		A		A	
Approach Delay (s)	50.7		2.1		1.7	
Approach LOS	D		A		A	
Intersection Summary						
HCM Average Control Delay			2.0	HCM Level of Service		A
HCM Volume to Capacity ratio			0.53			
Actuated Cycle Length (s)			100.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization			54.2%	ICU Level of Service	A	
Analysis Period (min)			15			
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
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		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.98			0.99			0.98	
Flt Protected		0.97			0.97			1.00			1.00	
Satd. Flow (prot)		1809			1763			1838			1822	
Flt Permitted		0.81			0.81			1.00			0.98	
Satd. Flow (perm)		1513			1476			1838			1789	
Volume (vph)	31	26	1	113	40	31	1	858	79	14	666	127
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	28	1	123	43	34	1	933	86	15	724	138
RTOR Reduction (vph)	0	1	0	0	11	0	0	4	0	0	9	0
Lane Group Flow (vph)	0	62	0	0	189	0	0	1016	0	0	868	0
Confl. Peds. (#/hr)			1	1					1	1		
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		8		8		2		6		6	
Permitted Phases	4		8		8		2		6		6	
Actuated Green, G (s)	12.9		12.9		12.9		47.3		47.3		47.3	
Effective Green, g (s)	12.9		12.9		12.9		47.3		47.3		47.3	
Actuated g/C Ratio	0.19		0.19		0.19		0.69		0.69		0.69	
Clearance Time (s)	4.0		4.0		4.0		4.0		4.0		4.0	
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	286		279		279		1275		1241		1241	
v/s Ratio Prot												
v/s Ratio Perm	0.04		0.13		0.13		0.55		0.49		0.49	
v/c Ratio	0.22		0.68		0.68		0.80		0.70		0.70	
Uniform Delay, d1	23.4		25.7		25.7		7.2		6.2		6.2	
Progression Factor	1.00		1.00		1.00		1.00		1.00		1.00	
Incremental Delay, d2	0.4		6.4		6.4		5.2		3.3		3.3	
Delay (s)	23.8		32.1		32.1		12.4		9.5		9.5	
Level of Service	C		C		C		B		A		A	
Approach Delay (s)	23.8		32.1		32.1		12.4		9.5		9.5	
Approach LOS	C		C		C		B		A		A	
Intersection Summary												
HCM Average Control Delay			13.4		13.4		HCM Level of Service				B	
HCM Volume to Capacity ratio			0.77		0.77							
Actuated Cycle Length (s)			68.2		68.2		Sum of lost time (s)				8.0	
Intersection Capacity Utilization			73.9%		73.9%		ICU Level of Service				D	
Analysis Period (min)			15		15							
c Critical Lane Group												

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1858		1770	1863
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	1858		1770	1863
Volume (vph)	25	31	889	15	31	712
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	34	966	16	34	774
RTOR Reduction (vph)	0	32	0	0	0	0
Lane Group Flow (vph)	27	2	982	0	34	774
Confl. Peds. (#/hr)				2		2
Turn Type		Perm			Prot	
Protected Phases	8		6		5	2
Permitted Phases		8				
Actuated Green, G (s)	4.5	4.5	74.3		7.2	85.5
Effective Green, g (s)	5.5	5.5	75.3		7.2	86.5
Actuated g/C Ratio	0.06	0.06	0.75		0.07	0.86
Clearance Time (s)	5.0	5.0	5.0		4.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	97	87	1399		127	1611
v/s Ratio Prot	c0.02		c0.53		0.02	c0.42
v/s Ratio Perm		0.00				
v/c Ratio	0.28	0.02	0.70		0.27	0.48
Uniform Delay, d1	45.3	44.7	6.5		43.9	1.6
Progression Factor	1.00	1.00	0.82		1.00	1.00
Incremental Delay, d2	1.6	0.1	2.7		1.1	1.0
Delay (s)	46.9	44.8	8.0		45.0	2.6
Level of Service	D	D	A		D	A
Approach Delay (s)	45.7		8.0			4.4
Approach LOS	D		A			A
Intersection Summary						
HCM Average Control Delay			7.7	HCM Level of Service		A
HCM Volume to Capacity ratio			0.64			
Actuated Cycle Length (s)			100.0	Sum of lost time (s)		8.0
Intersection Capacity Utilization			60.2%	ICU Level of Service		B
Analysis Period (min)			15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔											
Sign Control	Stop											
Grade	0%											
Volume (veh/h)	40	3	28	3	3	4	43	857	9	16	698	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	3	30	3	3	4	47	932	10	17	759	41
Pedestrians	2											
Lane Width (ft)	12.0											
Walking Speed (ft/s)	4.0											
Percent Blockage	0											
Right turn flare (veh)												
Median type	None											
Median storage (veh)												
Upstream signal (ft)	700											
pX, platoon unblocked	0.89	0.89	0.88	0.89	0.89	0.83	0.88	0.83				
vC, conflicting volume	1850	1849	781	1878	1865	936	800	941				
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1756	1755	752	1788	1773	923	773	929				
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1	4.1				
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2				
p0 queue free %	16	95	92	93	95	98	94	97				
cM capacity (veh/h)	52	69	361	46	67	270	741	608				
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	77	11	988	817								
Volume Left	43	3	47	17								
Volume Right	30	4	10	41								
cSH	80	80	741	608								
Volume to Capacity	0.97	0.14	0.06	0.03								
Queue Length 95th (ft)	131	11	5	2								
Control Delay (s)	183.9	57.0	1.9	0.8								
Lane LOS	F	F	A	A								
Approach Delay (s)	183.9	57.0	1.9	0.8								
Approach LOS	F	F										
Intersection Summary												
Average Delay	9.1											
Intersection Capacity Utilization	82.0%											
ICU Level of Service	D											
Analysis Period (min)	15											

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	40	3	28	3	3	4	43	857	9	16	698	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	3	30	3	3	4	47	932	10	17	759	41
Pedestrians								2				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)								700			604	
pX, platoon unblocked	0.89	0.89	0.88	0.89	0.89	0.83	0.88			0.83		
vC, conflicting volume	1850	1849	781	1878	1865	936	800			941		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1753	1752	751	1785	1769	923	772			929		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	17	95	92	93	95	98	94			97		
cM capacity (veh/h)	52	69	360	46	67	270	740			608		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	47	30	7	4	988	817						
Volume Left	43	0	3	0	47	17						
Volume Right	0	30	0	4	10	41						
cSH	53	360	55	270	740	608						
Volume to Capacity	0.88	0.08	0.12	0.02	0.06	0.03						
Queue Length 95th (ft)	95	7	10	1	5	2						
Control Delay (s)	211.5	15.9	79.5	18.5	1.9	0.8						
Lane LOS	F	C	F	C	A	A						
Approach Delay (s)	134.4		55.1		1.9	0.8						
Approach LOS	F		F									
Intersection Summary												
Average Delay	7.1											
Intersection Capacity Utilization	83.5%		ICU Level of Service				E					
Analysis Period (min)	15											

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↑	↓	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1707		1766	1863	1830	
Flt Permitted	0.97		0.33	1.00	1.00	
Satd. Flow (perm)	1707		608	1863	1830	
Volume (vph)	60	44	58	805	646	77
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	48	63	875	702	84
RTOR Reduction (vph)	32	0	0	0	2	0
Lane Group Flow (vph)	81	0	63	875	784	0
Confl. Peds. (#/hr)			3			3
Turn Type			Perm			
Protected Phases	8			6	2	
Permitted Phases			6			
Actuated Green, G (s)	8.1		81.9	81.9	81.9	
Effective Green, g (s)	9.1		82.9	82.9	82.9	
Actuated g/C Ratio	0.09		0.83	0.83	0.83	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	155		504	1544	1517	
v/s Ratio Prot	c0.05			c0.47	0.43	
v/s Ratio Perm			0.10			
v/c Ratio	0.52		0.12	0.57	0.52	
Uniform Delay, d1	43.4		1.6	2.8	2.6	
Progression Factor	1.10		0.97	1.66	1.55	
Incremental Delay, d2	3.1		0.5	1.5	1.2	
Delay (s)	50.7		2.1	6.1	5.1	
Level of Service	D		A	A	A	
Approach Delay (s)	50.7			5.8	5.1	
Approach LOS	D			A	A	
Intersection Summary						
HCM Average Control Delay		8.3		HCM Level of Service		A
HCM Volume to Capacity ratio		0.56				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		60.6%		ICU Level of Service		B
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)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		0.99	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3510		1760	3539	1770	1583
Flt Permitted	1.00		0.26	1.00	0.95	1.00
Satd. Flow (perm)	3510		478	3539	1770	1583
Volume (vph)	950	41	325	812	8	14
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1033	45	353	883	9	15
RTOR Reduction (vph)	2	0	0	0	0	14
Lane Group Flow (vph)	1076	0	353	883	9	1
Confl. Peds. (#/hr)		6	6		1	2
Turn Type			Perm		Prot	
Protected Phases	6			2	8	8
Permitted Phases			2	2		
Actuated Green, G (s)	85.4		85.4	85.4	3.6	3.6
Effective Green, g (s)	86.4		86.4	86.4	5.6	5.6
Actuated g/C Ratio	0.86		0.86	0.86	0.06	0.06
Clearance Time (s)	5.0		5.0	5.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3033		413	3058	99	89
v/s Ratio Prot	0.31			0.25	c0.01	0.00
v/s Ratio Perm			c0.74			
v/c Ratio	0.35		0.85	0.29	0.09	0.01
Uniform Delay, d1	1.3		3.5	1.2	44.8	44.6
Progression Factor	1.00		1.47	0.37	1.00	1.00
Incremental Delay, d2	0.3		17.8	0.2	0.4	0.0
Delay (s)	1.7		23.0	0.7	45.2	44.6
Level of Service	A		C	A	D	D
Approach Delay (s)	1.7			7.0	44.8	
Approach LOS	A			A	D	
Intersection Summary						
HCM Average Control Delay		4.9		HCM Level of Service		A
HCM Volume to Capacity ratio		0.81				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		61.8%		ICU Level of Service		B
Analysis Period (min)		15				
c Critical Lane Group						

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↗↘	↗↘	↗↘		↗	↘
Sign Control	Free	Free	Free		Stop	
Grade	0%	0%	0%		0%	
Volume (veh/h)	44	905	1061	15	53	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	984	1153	16	58	85
Pedestrians		7			23	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		4.0			4.0	
Percent Blockage		1			2	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)		137	301			
pX, platoon unblocked					0.94	
vC, conflicting volume	1193				1772	615
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1193				1758	615
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				10	80
cM capacity (veh/h)	570				64	423
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	376	656	769	401	142	
Volume Left	48	0	0	0	58	
Volume Right	0	0	0	16	85	
cSH	570	1700	1700	1700	130	
Volume to Capacity	0.08	0.39	0.45	0.24	1.10	
Queue Length 95th (ft)	7	0	0	0	203	
Control Delay (s)	2.6	0.0	0.0	0.0	173.7	
Lane LOS	A				F	
Approach Delay (s)	0.9		0.0		173.7	
Approach LOS					F	
Intersection Summary						
Average Delay		11.0				
Intersection Capacity Utilization		73.4%		ICU Level of Service	D	
Analysis Period (min)		15				

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95		1.00	1.00		0.95	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00		1.00	1.00		0.90	0.90	
Flt Protected	1.00	1.00		1.00	0.95		0.95	0.95		0.99	0.99	
Satd. Flow (prot)	1766	1477		1854	1681		1681	1681		1668	1668	
Flt Permitted	0.97	1.00		1.00	0.95		0.95	0.95		0.99	0.99	
Satd. Flow (perm)	1721	1477		1854	1681		1681	1681		1668	1668	
Volume (vph)	14	344	519	0	565	13	472	8	5	12	5	40
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	374	564	0	614	14	513	9	5	13	5	43
RTOR Reduction (vph)	0	0	255	0	0	0	0	1	0	0	39	0
Lane Group Flow (vph)	0	389	309	0	628	0	269	257	0	0	22	0
Confl. Peds. (#/hr)	15	11	11		15				20	20		
Turn Type	Perm		Perm				Split			Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2		2									
Actuated Green, G (s)		53.7	53.7		53.7		20.9	20.9			6.4	
Effective Green, g (s)		54.7	54.7		54.7		23.9	23.9			9.4	
Actuated g/C Ratio		0.55	0.55		0.55		0.24	0.24			0.09	
Clearance Time (s)		5.0	5.0		5.0		7.0	7.0			7.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		941	808		1014		402	402			157	
v/s Ratio Prot					c0.34		c0.16	0.15			c0.01	
v/s Ratio Perm		0.23	0.21									
v/c Ratio		0.41	0.38		0.62		0.67	0.64			0.14	
Uniform Delay, d1		13.3	13.0		15.5		34.5	34.2			41.6	
Progression Factor		0.92	0.85		0.74		1.00	1.00			1.00	
Incremental Delay, d2		1.3	1.3		1.3		4.2	3.3			0.4	
Delay (s)		13.5	12.3		12.7		38.7	37.5			42.0	
Level of Service		B	B		B		D	D			D	
Approach Delay (s)		12.8			12.7		38.1				42.0	
Approach LOS		B			B		D				D	
Intersection Summary												
HCM Average Control Delay			19.8			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			67.6%			ICU Level of Service			C			
Analysis Period (min)			15									

c Critical Lane Group

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
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		4.0		4.0	4.0	
Lane Util. Factor	0.95			1.00	1.00	1.00		0.95		1.00	1.00	
Frpb, ped/bikes	0.99			1.00	1.00	0.98		1.00		1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	1.00		1.00		1.00	1.00	
Frt	0.98			1.00	1.00	0.85		0.97		1.00	0.99	
Flt Protected	1.00			0.95	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (prot)	3432			1765	1863	1559		3384		1770	1847	
Flt Permitted	0.78			0.22	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (perm)	2681			403	1863	1559		3384		1770	1847	
Volume (vph)	22	294	46	209	478	216	100	557	198	146	496	25
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	320	50	227	520	235	109	605	215	159	539	27
RTOR Reduction (vph)	0	11	0	0	0	160	0	28	0	0	2	0
Lane Group Flow (vph)	0	383	0	227	520	75	0	901	0	159	564	0
Confl. Peds. (#/hr)	3		12	12		3	1		5	5		1
Turn Type	Perm			pm+pt		Perm	Split			Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4			8	8	8						
Actuated Green, G (s)		13.0		30.0	30.0	30.0		34.0		18.0	18.0	
Effective Green, g (s)		15.0		32.0	32.0	32.0		36.0		20.0	20.0	
Actuated g/C Ratio		0.15		0.32	0.32	0.32		0.36		0.20	0.20	
Clearance Time (s)		6.0		4.0	6.0	6.0		6.0		6.0	6.0	
Lane Grp Cap (vph)		402		306	596	499		1218		354	369	
v/s Ratio Prot				0.10	c0.28			c0.27		0.09	c0.31	
v/s Ratio Perm		0.14		0.14		0.05						
w/c Ratio		0.95		0.74	0.87	0.15		0.74		0.45	1.53	
Uniform Delay, d1		42.1		27.3	32.1	24.3		27.9		35.2	40.0	
Progression Factor		1.09		1.00	1.00	1.00		1.00		1.02	1.02	
Incremental Delay, d2		31.5		15.0	16.1	0.6		4.1		4.0	251.5	
Delay (s)		77.6		42.3	48.2	24.9		32.0		39.9	292.4	
Level of Service		E		D	D	C		C		D	F	
Approach Delay (s)		77.6			41.3			32.0			237.0	
Approach LOS		E			D			C			F	
Intersection Summary												
HCM Average Control Delay		90.0								F		
HCM Volume to Capacity ratio		0.97										
Actuated Cycle Length (s)		100.0							12.0			
Intersection Capacity Utilization		105.3%							G			
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	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00		0.95		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98		1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85		0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (prot)	1767	3437		1764	1863	1559		3384		1770	1848	
Flt Permitted	0.27	1.00		0.24	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (perm)	496	3437		451	1863	1559		3384		1770	1848	
Volume (vph)	22	294	46	209	478	216	100	557	198	146	496	25
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	320	50	227	520	235	109	605	215	159	539	27
RTOR Reduction (vph)	0	13	0	0	0	160	0	28	0	0	2	0
Lane Group Flow (vph)	24	357	0	227	520	75	0	901	0	159	564	0
Confl. Peds. (#/hr)	3		12	12		3	1		5	5		1
Turn Type	Perm			pm+pt		Perm	Split			Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4			8	8	8						
Actuated Green, G (s)	13.0	13.0		30.0	30.0	30.0		34.0		18.0	18.0	
Effective Green, g (s)	15.0	15.0		32.0	32.0	32.0		36.0		20.0	20.0	
Actuated g/C Ratio	0.15	0.15		0.32	0.32	0.32		0.36		0.20	0.20	
Clearance Time (s)	6.0	6.0		4.0	6.0	6.0		6.0		6.0	6.0	
Lane Grp Cap (vph)	74	516		315	596	499		1218		354	370	
v/s Ratio Prot		0.10		0.09	c0.28			c0.27		0.09	c0.31	
v/s Ratio Perm	0.05			0.14		0.05						
v/c Ratio	0.32	0.69		0.72	0.87	0.15		0.74		0.45	1.53	
Uniform Delay, d1	38.0	40.3		27.2	32.1	24.3		27.9		35.2	40.0	
Progression Factor	1.00	1.09		1.00	1.00	1.00		1.00		1.30	1.22	
Incremental Delay, d2	10.1	6.7		13.3	16.1	0.6		4.1		4.0	249.7	
Delay (s)	48.2	50.8		40.6	48.2	24.9		32.0		49.8	298.5	
Level of Service	D	D		D	D	C		C		D	F	
Approach Delay (s)		50.6			40.9			32.0			243.9	
Approach LOS		D			D			C			F	
Intersection Summary												
HCM Average Control Delay		88.0		HCM Level of Service				F				
HCM Volume to Capacity ratio		0.97										
Actuated Cycle Length (s)		100.0		Sum of lost time (s)				12.0				
Intersection Capacity Utilization		100.2%		ICU Level of Service				G				
Analysis Period (min)		15										
c Critical Lane Group												

	↖	→	←	↗	↘	↙
Movement	EBL	EBT	WBT	WBR	SEB	SBR
Lane Configurations		↑↑	↑↑		↓	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	639	899	0	17	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	695	977	0	18	20
Pedestrians		10	11		23	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		2	
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)		709				
pX, platoon unblocked					0.95	
vC, conflicting volume	1000				1358	522
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1000				1327	522
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				86	96
cM capacity (veh/h)	675				136	486
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	347	347	489	489	38	
Volume Left	0	0	0	0	18	
Volume Right	0	0	0	0	20	
cSH	1700	1700	1700	1700	216	
Volume to Capacity	0.20	0.20	0.29	0.29	0.18	
Queue Length 95th (ft)	0	0	0	0	16	
Control Delay (s)	0.0	0.0	0.0	0.0	25.2	
Lane LOS					D	
Approach Delay (s)	0.0		0.0		25.2	
Approach LOS					D	
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			37.7%		ICU Level of Service	A
Analysis Period (min)			15			

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SRT
Lane Configurations	↙		↑↓			↘↑
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	6	16	774	15	11	618
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	17	841	16	12	672
Pedestrians	3					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			272			952
pX, platoon unblocked	0.82	0.82			0.82	
vC, conflicting volume	1212	432			861	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1036	81			606	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	98			98	
cM capacity (veh/h)	182	785			789	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	24	561	297	236	448	
Volume Left	7	0	0	12	0	
Volume Right	17	0	16	0	0	
cSH	413	1700	1700	789	1700	
Volume to Capacity	0.06	0.33	0.17	0.02	0.26	
Queue Length 95th (ft)	5	0	0	1	0	
Control Delay (s)	14.3	0.0	0.0	0.6	0.0	
Lane LOS	B			A		
Approach Delay (s)	14.3	0.0		0.2		
Approach LOS	B					
Intersection Summary						
Average Delay		0.3				
Intersection Capacity Utilization		34.9%		ICU Level of Service	A	
Analysis Period (min)		15				

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑			↑↑
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	779	7	25	607
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	847	8	27	660
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			630			594
pX, platoon unblocked	0.90	0.90			0.90	
vC, conflicting volume	1235	427			854	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1148	248			724	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			97	
cM capacity (veh/h)	167	675			785	
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	564	290	247	440		
Volume Left	0	0	27	0		
Volume Right	0	8	0	0		
cSH	1700	1700	785	1700		
Volume to Capacity	0.33	0.17	0.03	0.26		
Queue Length 95th (ft)	0	0	3	0		
Control Delay (s)	0.0	0.0	1.4	0.0		
Lane LOS			A			
Approach Delay (s)	0.0		0.5			
Approach LOS						
Intersection Summary						
Average Delay		0.2				
Intersection Capacity Utilization		38.4%		ICU Level of Service		A
Analysis Period (min)		15				

	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Movement												
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		4.0	4.0		4.0		
Lane Util. Factor	1.00		1.00	1.00	0.95		1.00	0.95		1.00		
Frt	1.00		0.85	1.00	1.00		1.00	1.00		0.93		
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00		0.98		
Satd. Flow (prot)	1770		1583	1770	3532		1770	3531		1695		
Flt Permitted	0.95		1.00	0.98	1.00		0.95	1.00		0.98		
Satd. Flow (perm)	1770		1583	711	3532		1770	3531		1695		
Volume (vph)	27	0	111	10	749	10	46	643	10	10	0	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	0	121	11	814	11	50	699	11	11	0	11
RTOR Reduction (vph)	0	0	111	0	1	0	0	0	0	10	0	0
Lane Group Flow (vph)	29	0	10	11	824	0	50	710	0	12	0	0
Turn Type	Prot	custom		Perm			Prot			Prot		
Protected Phases	8				2		1	6		4		
Permitted Phases			8	2								
Actuated Green, G (s)	7.0		7.0	70.9	70.9		7.1	83.0		7.0		
Effective Green, g (s)	8.0		8.0	71.9	71.9		8.1	84.0		8.0		
Actuated g/C Ratio	0.08		0.08	0.72	0.72		0.08	0.84		0.08		
Clearance Time (s)	5.0		5.0	5.0	5.0		5.0	5.0		5.0		
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0		3.0		
Lane Grp Cap (vph)	142		127	511	2540		143	2966		136		
v/s Ratio Prot	c0.02				c0.23		c0.03	0.20		0.01		
v/s Ratio Perm			0.01	0.02								
w/c Ratio	0.20		0.08	0.02	0.32		0.35	0.24		0.09		
Uniform Delay, d1	43.0		42.6	4.0	5.1		43.5	1.6		42.6		
Progression Factor	1.00		1.00	0.29	0.25		0.81	1.61		1.00		
Incremental Delay, d2	0.7		0.3	0.1	0.3		1.3	0.2		0.3		
Delay (s)	43.7		42.8	1.2	1.6		36.7	2.7		42.9		
Level of Service	D		D	A	A		D	A		D		
Approach Delay (s)		43.0			1.6			5.0		42.9		
Approach LOS		D			A			A		D		
Intersection Summary												
HCM Average Control Delay			7.1		HCM Level of Service			A				
HCM Volume to Capacity ratio			0.32									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)			12.0				
Intersection Capacity Utilization			44.4%		ICU Level of Service			A				
Analysis Period (min)			15									
c Critical Lane Group												

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↰		↱	↰
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1861		1770	1863
Flt Permitted	0.95	1.00	1.00		0.30	1.00
Satd. Flow (perm)	1770	1583	1861		553	1863
Volume (vph)	4	3	859	6	8	719
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	3	934	7	9	782
RTOR Reduction (vph)	0	3	0	0	0	0
Lane Group Flow (vph)	4	0	941	0	9	782
Turn Type	Perm			Perm		
Protected Phases	8		2		6	
Permitted Phases	8				6	
Actuated Green, G (s)	1.3	1.3	90.7		90.7	90.7
Effective Green, g (s)	1.3	1.3	90.7		90.7	90.7
Actuated g/C Ratio	0.01	0.01	0.91		0.91	0.91
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	23	21	1688		502	1690
v/s Ratio Prot	c0.00		c0.51		0.42	
v/s Ratio Perm	0.00				0.02	
v/c Ratio	0.17	0.00	0.56		0.02	0.46
Uniform Delay, d1	48.8	48.7	0.9		0.4	0.7
Progression Factor	1.00	1.00	3.99		0.98	0.94
Incremental Delay, d2	3.6	0.0	1.1		0.1	0.8
Delay (s)	52.4	48.7	4.6		0.5	1.5
Level of Service	D		A		A	A
Approach Delay (s)	50.8		4.6		1.5	
Approach LOS	D		A		A	
Intersection Summary						
HCM Average Control Delay	3.4		HCM Level of Service		A	
HCM Volume to Capacity ratio	0.55					
Actuated Cycle Length (s)	100.0		Sum of lost time (s)		8.0	
Intersection Capacity Utilization	55.6%		ICU Level of Service		B	
Analysis Period (min)	15					
c Critical Lane Group						