APPENDIX J

Capacity Calculations

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	7	0	9	54	0	58
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	9	0	11	68	0	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	118	45			79	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	118	45			79	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	883	1031			1532	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	79	72
Volume Left	9	0	0
Volume Right	0	68	0
cSH	883	1700	1532
Volume to Capacity	0.01	0.05	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.1	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.1	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	13.8%	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)	54	0	46	6	0	18
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	73	0	62	8	0	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	91	66			70	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	91	66			70	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	100			100	
cM capacity (veh/h)	915	1003			1543	

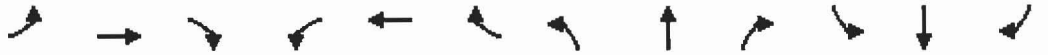
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	73	70	24
Volume Left	73	0	0
Volume Right	0	8	0
cSH	915	1700	1543
Volume to Capacity	0.08	0.04	0.00
Queue Length 95th (ft)	6	0	0
Control Delay (s)	9.3	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.3	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	304	0	0	248	49	0	0	1	53	0	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	327	0	0	267	53	0	0	1	57	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1124							
pX, platoon unblocked												
vC, conflicting volume	319			327			651	666	327	640	639	293
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	319			327			651	666	327	640	639	293
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	85	100	98
cM capacity (veh/h)	1229			1205			375	379	717	388	393	751

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	337	319	1	69
Volume Left	10	0	0	57
Volume Right	0	53	1	12
cSH	1229	1205	717	423
Volume to Capacity	0.01	0.00	0.00	0.16
Queue Length 95th (ft)	1	0	0	14
Control Delay (s)	0.3	0.0	10.0	15.2
Lane LOS	A		B	C
Approach Delay (s)	0.3	0.0	10.0	15.2
Approach LOS			B	C

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	348	3	0	310	49	0	0	1	59	0	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	387	3	0	344	54	0	0	1	66	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1124							
pX, platoon unblocked												
vC, conflicting volume	399			390			777	796	388	770	771	372
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	399			390			777	796	388	770	771	372
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	79	100	99
cM capacity (veh/h)	1165			1169			312	321	664	315	328	672

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	394	399	1	73
Volume Left	4	0	0	66
Volume Right	3	54	1	8
cSH	1165	1169	664	334
Volume to Capacity	0.00	0.00	0.00	0.22
Queue Length 95th (ft)	0	0	0	21
Control Delay (s)	0.1	0.0	10.4	18.8
Lane LOS	A		B	C
Approach Delay (s)	0.1	0.0	10.4	18.8
Approach LOS			B	C

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	350	15	19	266	18	20	1	22	4	1	3
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)	1	380	16	21	289	20	22	1	24	4	1	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					685							
pX, platoon unblocked												
vC, conflicting volume	309			397			725	741	389	747	739	299
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	309			397			725	741	389	747	739	299
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			93	100	96	99	100	100
cM capacity (veh/h)	1241			1146			330	334	653	314	341	745

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	1	397	21	309	47	9
Volume Left	1	0	21	0	22	4
Volume Right	0	16	0	20	24	3
cSH	1241	1700	1146	1700	442	406
Volume to Capacity	0.00	0.23	0.02	0.18	0.11	0.02
Queue Length 95th (ft)	0	0	1	0	9	2
Control Delay (s)	7.9	0.0	8.2	0.0	14.1	14.1
Lane LOS	A		A		B	B
Approach Delay (s)	0.0		0.5		14.1	14.1
Approach LOS					B	B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	324	74	58	278	12	66	1	74	56	3	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	345	79	62	296	13	70	1	79	60	3	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					685							
pX, platoon unblocked												
vC, conflicting volume	309			423			815	824	384	858	857	302
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	309			423			815	824	384	858	857	302
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			75	100	88	75	99	100
cM capacity (veh/h)	1258			1136			281	291	666	235	280	742

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	4	423	62	309	150	65
Volume Left	4	0	62	0	70	60
Volume Right	0	79	0	13	79	2
cSH	1258	1700	1136	1700	403	242
Volume to Capacity	0.00	0.25	0.05	0.18	0.37	0.27
Queue Length 95th (ft)	0	0	4	0	42	26
Control Delay (s)	7.9	0.0	8.4	0.0	19.1	25.2
Lane LOS	A		A		C	D
Approach Delay (s)	0.1		1.4		19.1	25.2
Approach LOS					C	D

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	16	338	8	66	280	28	3	6	49	99	4	34
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)	17	367	9	72	304	30	3	7	53	108	4	37
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					310							
pX, platoon unblocked												
vC, conflicting volume	335			376			893	885	372	922	874	320
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	335			376			893	885	372	922	874	320
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	99			94			99	97	92	50	98	95
cM capacity (veh/h)	1213			1161			224	255	657	215	268	726

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	17	376	72	335	10	53	149
Volume Left	17	0	72	0	3	0	108
Volume Right	0	9	0	30	0	53	37
cSH	1213	1700	1161	1700	244	657	262
Volume to Capacity	0.01	0.22	0.06	0.20	0.04	0.08	0.57
Queue Length 95th (ft)	1	0	5	0	3	7	80
Control Delay (s)	8.0	0.0	8.3	0.0	20.4	11.0	35.4
Lane LOS	A		A		C	B	E
Approach Delay (s)	0.4		1.5		12.4		35.4
Approach LOS					B		E

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	47	374	24	152	310	50	19	12	150	35	8	18
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	50	398	26	162	330	53	20	13	160	37	9	19
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					310							
pX, platoon unblocked	1.00						1.00	1.00		1.00	1.00	1.00
vC, conflicting volume	383			423			1187	1217	411	1344	1203	356
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	383			423			1187	1217	411	1344	1203	356
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			86			85	91	75	53	94	97
cM capacity (veh/h)	1175			1136			133	148	641	79	153	692

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	50	423	162	383	33	160	65
Volume Left	50	0	162	0	20	0	37
Volume Right	0	26	0	53	0	160	19
cSH	1175	1700	1136	1700	138	641	117
Volume to Capacity	0.04	0.25	0.14	0.23	0.24	0.25	0.56
Queue Length 95th (ft)	3	0	12	0	22	24	66
Control Delay (s)	8.2	0.0	8.7	0.0	39.0	12.5	68.8
Lane LOS	A		A		E	B	F
Approach Delay (s)	0.9		2.6		17.0		68.8
Approach LOS					C		F

Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
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)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1827	1553	1736	1827	1703	1524
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1827	1553	1736	1827	1703	1524
Volume (vph)	42	450	421	64	304	235
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	45	484	453	69	327	253
RTOR Reduction (vph)	0	0	0	0	0	51
Lane Group Flow (vph)	45	484	453	69	327	202
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Turn Type		custom	Prot			custom
Protected Phases	4	4 5 7	3	8	5 6 7 3 5 6 7	
Permitted Phases						5 6 7
Actuated Green, G (s)	14.2	70.7	20.3	37.5	62.6	86.9
Effective Green, g (s)	14.2	70.7	20.3	38.5	62.6	86.9
Actuated g/C Ratio	0.13	0.65	0.19	0.35	0.57	0.80
Clearance Time (s)	4.0		4.0	5.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	238	1006	323	645	977	1214
v/s Ratio Prot	0.02	c0.31	c0.26	0.04	c0.19	0.13
v/s Ratio Perm						
v/c Ratio	0.19	0.48	1.40	0.11	0.33	0.17
Uniform Delay, d1	42.3	9.8	44.4	23.7	12.3	2.6
Progression Factor	1.00	1.00	1.00	1.00	0.29	0.00
Incremental Delay, d2	0.4	0.4	198.8	0.1	0.2	0.1
Delay (s)	42.7	10.2	243.2	23.8	3.7	0.1
Level of Service	D	B	F	C	A	A
Approach Delay (s)	12.9			214.2	2.1	
Approach LOS	B			F	A	

Intersection Summary			
HCM Average Control Delay	73.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	109.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	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	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1881	1599	1787	1881	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1881	1599	1787	1881	1770	1583
Volume (vph)	116	439	342	106	402	325
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	123	467	364	113	428	346
RTOR Reduction (vph)	0	0	0	0	0	53
Lane Group Flow (vph)	123	467	364	113	428	293
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type		custom	Prot			custom
Protected Phases	4	4 5 7	3	8	5 6 7 3	5 6 7
Permitted Phases						5 6 7
Actuated Green, G (s)	14.1	77.6	20.1	37.2	69.5	93.6
Effective Green, g (s)	14.1	77.6	20.1	38.2	69.5	93.6
Actuated g/C Ratio	0.12	0.67	0.17	0.33	0.60	0.81
Clearance Time (s)	4.0		4.0	5.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	229	1072	310	621	1063	1281
v/s Ratio Prot	c0.07	c0.29	c0.20	0.06	c0.24	0.19
v/s Ratio Perm						
v/c Ratio	0.54	0.44	1.17	0.18	0.40	0.23
Uniform Delay, d1	47.7	8.9	47.8	27.6	12.2	2.6
Progression Factor	1.00	1.00	1.00	1.00	0.36	0.00
Incremental Delay, d2	2.4	0.3	107.0	0.1	0.2	0.1
Delay (s)	50.2	9.1	154.8	27.8	4.5	0.1
Level of Service	D	A	F	C	A	A
Approach Delay (s)	17.7			124.7	2.5	
Approach LOS	B			F	A	

Intersection Summary			
HCM Average Control Delay	39.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	115.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.95	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1743	1553	1736	1827			3336	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1743	1553	1736	1827			3336	
Volume (vph)	0	0	0	135	5	188	118	325	0	0	581	276
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	148	5	207	130	357	0	0	638	303
RTOR Reduction (vph)	0	0	0	0	0	169	0	0	0	0	46	0
Lane Group Flow (vph)	0	0	0	0	153	38	130	357	0	0	895	0
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	4%	4%	4%	3%	3%	3%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					19.8	19.8	11.1	28.7			66.2	
Effective Green, g (s)					19.8	19.8	11.1	28.7			66.2	
Actuated g/C Ratio					0.18	0.18	0.10	0.26			0.61	
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)					316	282	177	481			2024	
v/s Ratio Prot					c0.09	0.02	0.07	c0.20			c0.27	
v/s Ratio Perm												
v/c Ratio					0.48	0.13	0.73	0.74			0.44	
Uniform Delay, d1					40.1	37.5	47.6	36.8			11.5	
Progression Factor					1.00	1.00	1.00	1.00			0.76	
Incremental Delay, d2					1.2	0.2	14.6	6.1			0.1	
Delay (s)					41.2	37.7	62.2	42.9			8.9	
Level of Service					D	D	E	D			A	
Approach Delay (s)		0.0			39.2			48.1			8.9	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	109.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	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			4.0	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.96	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1811	1615	1787	1881			3435	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1811	1615	1787	1881			3435	
Volume (vph)	0	0	0	171	3	355	59	389	0	0	576	201
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	192	3	399	66	437	0	0	647	226
RTOR Reduction (vph)	0	0	0	0	0	321	0	0	0	0	28	0
Lane Group Flow (vph)	0	0	0	0	195	78	66	437	0	0	845	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					22.7	22.7	9.3	32.8			71.7	
Effective Green, g (s)					22.7	22.7	9.3	32.8			71.7	
Actuated g/C Ratio					0.20	0.20	0.08	0.28			0.62	
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)					355	317	144	533			2129	
v/s Ratio Prot					c0.11	0.05	0.04	c0.23			c0.25	
v/s Ratio Perm												
v/c Ratio					0.55	0.25	0.46	0.82			0.40	
Uniform Delay, d1					41.9	39.3	50.8	38.7			11.1	
Progression Factor					1.00	1.00	1.00	1.00			0.84	
Incremental Delay, d2					1.7	0.4	2.3	9.6			0.1	
Delay (s)					43.6	39.7	53.1	48.3			9.4	
Level of Service					D	D	D	D			A	
Approach Delay (s)		0.0			41.0			48.9			9.4	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	115.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1740	1553					1827	1553	1752	1845	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1740	1553					1827	1553	1752	1845	
Volume (vph)	135	1	88	0	0	0	0	326	188	285	430	0
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)	147	1	96	0	0	0	0	354	204	310	467	0
RTOR Reduction (vph)	0	0	81	0	0	0	0	0	130	0	0	0
Lane Group Flow (vph)	0	148	15	0	0	0	0	354	74	310	467	0
Heavy Vehicles (%)	4%	4%	4%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		8.5	8.5					20.0	20.0	15.0	39.0	
Effective Green, g (s)		8.5	8.5					20.0	20.0	15.0	39.0	
Actuated g/C Ratio		0.15	0.15					0.36	0.36	0.27	0.70	
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)		266	238					658	560	474	1296	
v/s Ratio Prot								c0.19		c0.18	0.25	
v/s Ratio Perm		0.09	0.01						0.05			
v/c Ratio		0.56	0.06					0.54	0.13	0.65	0.36	
Uniform Delay, d1		21.8	20.1					14.1	11.9	17.9	3.3	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.5	0.1					0.9	0.1	3.2	0.2	
Delay (s)		24.3	20.2					14.9	12.0	21.2	3.5	
Level of Service		C	C					B	B	C	A	
Approach Delay (s)		22.7			0.0			13.9			10.5	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.5%	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	4.0	4.0	
Lane Util. Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1793	1599					1881	1599	1770	1863	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1793	1599					1881	1599	1770	1863	
Volume (vph)	118	2	103	0	0	0	0	323	261	235	509	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	126	2	110	0	0	0	0	344	278	250	541	0
RTOR Reduction (vph)	0	0	94	0	0	0	0	0	160	0	0	0
Lane Group Flow (vph)	0	128	16	0	0	0	0	344	118	250	541	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		7.9	7.9					22.7	22.7	10.9	37.6	
Effective Green, g (s)		7.9	7.9					22.7	22.7	10.9	37.6	
Actuated g/C Ratio		0.15	0.15					0.42	0.42	0.20	0.70	
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)		265	236					798	678	361	1309	
v/s Ratio Prot								0.18		c0.14	c0.29	
v/s Ratio Perm		0.07	0.01						0.07			
v/c Ratio		0.48	0.07					0.43	0.17	0.69	0.41	
Uniform Delay, d1		20.9	19.6					10.9	9.6	19.7	3.3	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.4	0.1					0.4	0.1	5.7	0.2	
Delay (s)		22.3	19.8					11.2	9.7	25.4	3.5	
Level of Service		C	B					B	A	C	A	
Approach Delay (s)		21.1			0.0			10.5			10.5	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	53.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	50	137	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	53	144	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	197	144	144			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	197	144	144			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	792	903	1438			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	53	144
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1438	1700
Volume to Capacity	0.00	0.00	0.08
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	10.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	109	61	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	115	64	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	179	64	64			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	179	64	64			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	811	1000	1538			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	115	64
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1538	1700
Volume to Capacity	0.00	0.00	0.04
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	9.1%	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)	7	0	9	56	0	60
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	9	0	11	70	0	75
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	121	46			81	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	121	46			81	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	879	1029			1529	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	81	75
Volume Left	9	0	0
Volume Right	0	70	0
cSH	879	1700	1529
Volume to Capacity	0.01	0.05	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.1	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.1	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	13.9%	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)	56	0	47	6	0	19
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	76	0	64	8	0	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	93	68			72	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	93	68			72	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	100			100	
cM capacity (veh/h)	912	1001			1541	

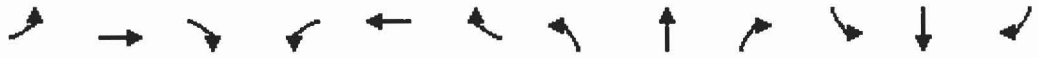
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	76	72	26
Volume Left	76	0	0
Volume Right	0	8	0
cSH	912	1700	1541
Volume to Capacity	0.08	0.04	0.00
Queue Length 95th (ft)	7	0	0
Control Delay (s)	9.3	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.3	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	330	0	0	376	50	0	0	1	55	0	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	355	0	0	404	54	0	0	1	59	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1124							
pX, platoon unblocked												
vC, conflicting volume	458			355			817	832	355	806	805	431
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	458			355			817	832	355	806	805	431
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	80	100	98
cM capacity (veh/h)	1092			1177			289	303	691	300	315	628

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	365	458	1	71
Volume Left	10	0	0	59
Volume Right	0	54	1	12
cSH	1092	1177	691	329
Volume to Capacity	0.01	0.00	0.00	0.22
Queue Length 95th (ft)	1	0	0	20
Control Delay (s)	0.3	0.0	10.2	18.9
Lane LOS	A		B	C
Approach Delay (s)	0.3	0.0	10.2	18.9
Approach LOS			B	C

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	484	3	0	345	50	0	0	1	61	0	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	538	3	0	383	56	0	0	1	68	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1124							
pX, platoon unblocked												
vC, conflicting volume	439			541			967	987	539	961	961	411
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	439			541			967	987	539	961	961	411
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	71	100	99
cM capacity (veh/h)	1126			1027			232	248	546	234	254	639

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	546	439	1	76
Volume Left	4	0	0	68
Volume Right	3	56	1	8
cSH	1126	1027	546	250
Volume to Capacity	0.00	0.00	0.00	0.30
Queue Length 95th (ft)	0	0	0	31
Control Delay (s)	0.1	0.0	11.6	25.5
Lane LOS	A		B	D
Approach Delay (s)	0.1	0.0	11.6	25.5
Approach LOS			B	D

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	378	15	20	395	19	21	1	23	4	1	3
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)	1	411	16	22	429	21	23	1	25	4	1	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					685							
pX, platoon unblocked												
vC, conflicting volume	450			427			898	915	419	922	912	440
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	450			427			898	915	419	922	912	440
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			91	100	96	98	100	99
cM capacity (veh/h)	1100			1116			251	264	628	238	270	622

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	1	427	22	450	49	9
Volume Left	1	0	22	0	23	4
Volume Right	0	16	0	21	25	3
cSH	1100	1700	1116	1700	363	316
Volume to Capacity	0.00	0.25	0.02	0.26	0.13	0.03
Queue Length 95th (ft)	0	0	1	0	12	2
Control Delay (s)	8.3	0.0	8.3	0.0	16.5	16.7
Lane LOS	A		A		C	C
Approach Delay (s)	0.0		0.4		16.5	16.7
Approach LOS					C	C

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	460	76	60	312	12	68	1	76	58	3	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	489	81	64	332	13	72	1	81	62	3	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					685							
pX, platoon unblocked												
vC, conflicting volume	345			570			1002	1011	530	1045	1045	338
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	345			570			1002	1011	530	1045	1045	338
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			65	100	85	63	99	100
cM capacity (veh/h)	1220			1002			208	224	551	168	215	709

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	4	570	64	345	154	67
Volume Left	4	0	64	0	72	62
Volume Right	0	81	0	13	81	2
cSH	1220	1700	1002	1700	309	174
Volume to Capacity	0.00	0.34	0.06	0.20	0.50	0.38
Queue Length 95th (ft)	0	0	5	0	66	42
Control Delay (s)	8.0	0.0	8.8	0.0	27.7	38.0
Lane LOS	A		A		D	E
Approach Delay (s)	0.1		1.4		27.7	38.0
Approach LOS					D	E

Intersection Summary				
Average Delay	6.2			
Intersection Capacity Utilization	50.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	19	362	8	68	390	29	3	6	50	102	4	54
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)	21	393	9	74	424	32	3	7	54	111	4	59
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					310							
pX, platoon unblocked												
vC, conflicting volume	455			402			1072	1042	398	1080	1031	440
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	455			402			1072	1042	398	1080	1031	440
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	98			93			98	97	91	33	98	91
cM capacity (veh/h)	1095			1135			160	204	635	165	216	622

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	21	402	74	455	10	54	174
Volume Left	21	0	74	0	3	0	111
Volume Right	0	9	0	32	0	54	59
cSH	1095	1700	1135	1700	187	635	221
Volume to Capacity	0.02	0.24	0.07	0.27	0.05	0.09	0.79
Queue Length 95th (ft)	1	0	5	0	4	7	141
Control Delay (s)	8.4	0.0	8.4	0.0	25.3	11.2	63.0
Lane LOS	A		A		D	B	F
Approach Delay (s)	0.4		1.2		13.4		63.0
Approach LOS					B		F

Intersection Summary			
Average Delay	10.6		
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	68	491	25	157	341	52	20	12	155	36	8	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	72	522	27	167	363	55	21	13	165	38	9	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					310							
pX, platoon unblocked	0.99						0.99	0.99		0.99	0.99	0.99
vC, conflicting volume	418			549			1406	1432	536	1563	1418	390
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	415			549			1408	1435	536	1566	1420	387
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			84			76	88	70	20	92	96
cM capacity (veh/h)	1138			1021			87	104	545	48	107	662

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	72	549	167	418	34	165	71
Volume Left	72	0	167	0	21	0	38
Volume Right	0	27	0	55	0	165	24
cSH	1138	1700	1021	1700	93	545	78
Volume to Capacity	0.06	0.32	0.16	0.25	0.37	0.30	0.91
Queue Length 95th (ft)	5	0	15	0	36	32	119
Control Delay (s)	8.4	0.0	9.2	0.0	64.5	14.4	171.0
Lane LOS	A		A		F	B	F
Approach Delay (s)	1.0		2.6		23.0		171.0
Approach LOS					C		F

Intersection Summary			
Average Delay	12.8		
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
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)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1827	1553	1736	1827	1703	1524
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1827	1553	1736	1827	1703	1524
Volume (vph)	43	479	434	71	408	242
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	46	515	467	76	439	260
RTOR Reduction (vph)	0	0	0	0	0	50
Lane Group Flow (vph)	46	515	467	76	439	210
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Turn Type		custom	Prot			custom
Protected Phases	4	4 5 7	3	8	5 6 7 3 5 6 7	
Permitted Phases						5 6 7
Actuated Green, G (s)	14.1	77.2	20.1	37.2	69.1	93.2
Effective Green, g (s)	14.1	77.2	20.1	38.2	69.1	93.2
Actuated g/C Ratio	0.12	0.67	0.17	0.33	0.60	0.81
Clearance Time (s)	4.0		4.0	5.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	223	1040	303	605	1021	1232
v/s Ratio Prot	0.03	c0.33	c0.27	0.04	c0.26	0.14
v/s Ratio Perm						
v/c Ratio	0.21	0.50	1.54	0.13	0.43	0.17
Uniform Delay, d1	45.6	9.4	47.6	26.9	12.5	2.5
Progression Factor	1.00	1.00	1.00	1.00	0.28	0.00
Incremental Delay, d2	0.5	0.4	259.4	0.1	0.2	0.0
Delay (s)	46.0	9.8	307.0	27.0	3.7	0.0
Level of Service	D	A	F	C	A	A
Approach Delay (s)	12.8			267.8	2.4	
Approach LOS	B			F	A	

Intersection Summary			
HCM Average Control Delay	85.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	115.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.4%	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	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1881	1599	1787	1881	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1881	1599	1787	1881	1770	1583
Volume (vph)	124	552	352	109	434	335
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	132	587	374	116	462	356
RTOR Reduction (vph)	0	0	0	0	0	47
Lane Group Flow (vph)	132	587	374	116	462	309
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type		custom	Prot			custom
Protected Phases	4	4 5 7	3	8	5 6 7 3	5 6 7
Permitted Phases						5 6 7
Actuated Green, G (s)	14.1	79.4	20.0	37.1	71.4	95.4
Effective Green, g (s)	14.1	79.4	20.0	38.1	71.4	95.4
Actuated g/C Ratio	0.12	0.68	0.17	0.32	0.61	0.81
Clearance Time (s)	4.0		4.0	5.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	226	1081	304	610	1076	1285
v/s Ratio Prot	0.07	c0.37	c0.21	0.06	c0.26	0.20
v/s Ratio Perm						
v/c Ratio	0.58	0.54	1.23	0.19	0.43	0.24
Uniform Delay, d1	48.9	9.8	48.8	28.6	12.2	2.6
Progression Factor	1.00	1.00	1.00	1.00	0.35	0.00
Incremental Delay, d2	3.8	0.6	129.0	0.2	0.2	0.1
Delay (s)	52.7	10.3	177.8	28.7	4.5	0.1
Level of Service	D	B	F	C	A	A
Approach Delay (s)	18.1			142.5	2.6	
Approach LOS	B			F	A	

Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	117.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.3%	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												
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	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.95	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1742	1553	1736	1827			3335	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1742	1553	1736	1827			3335	
Volume (vph)	0	0	0	148	5	239	138	385	0	0	608	289
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	163	5	263	152	423	0	0	668	318
RTOR Reduction (vph)	0	0	0	0	0	211	0	0	0	0	48	0
Lane Group Flow (vph)	0	0	0	0	168	52	152	423	0	0	938	0
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	4%	4%	4%	3%	3%	3%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					22.6	22.6	11.7	32.5			69.0	
Effective Green, g (s)					22.6	22.6	11.7	32.5			69.0	
Actuated g/C Ratio					0.20	0.20	0.10	0.28			0.60	
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)					341	304	176	515			1996	
v/s Ratio Prot					c0.10	0.03	0.09	c0.23			c0.28	
v/s Ratio Perm												
v/c Ratio					0.49	0.17	0.86	0.82			0.47	
Uniform Delay, d1					41.2	38.5	51.0	38.7			12.9	
Progression Factor					1.00	1.00	1.00	1.00			0.79	
Incremental Delay, d2					1.1	0.3	32.8	10.2			0.1	
Delay (s)					42.4	38.8	83.8	48.8			10.3	
Level of Service					D	D	F	D			B	
Approach Delay (s)		0.0			40.2			58.1			10.3	
Approach LOS		A			D			E			B	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	115.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.2%	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			4.0	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.96	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1811	1615	1787	1881			3430	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1811	1615	1787	1881			3430	
Volume (vph)	0	0	0	201	3	376	72	411	0	0	658	242
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	226	3	422	81	462	0	0	739	272
RTOR Reduction (vph)	0	0	0	0	0	339	0	0	0	0	30	0
Lane Group Flow (vph)	0	0	0	0	229	83	81	462	0	0	981	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					23.2	23.2	10.0	34.1			72.3	
Effective Green, g (s)					23.2	23.2	10.0	34.1			72.3	
Actuated g/C Ratio					0.20	0.20	0.09	0.29			0.62	
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)					358	319	152	546			2111	
v/s Ratio Prot					c0.13	0.05	0.05	c0.25			c0.29	
v/s Ratio Perm												
v/c Ratio					0.64	0.26	0.53	0.85			0.46	
Uniform Delay, d1					43.3	39.9	51.5	39.2			12.2	
Progression Factor					1.00	1.00	1.00	1.00			0.98	
Incremental Delay, d2					3.7	0.4	3.6	11.6			0.1	
Delay (s)					47.0	40.3	55.1	50.8			12.1	
Level of Service					D	D	E	D			B	
Approach Delay (s)		0.0			42.7			51.4			12.1	
Approach LOS		A			D			D			B	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	117.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1740	1553					1827	1553	1752	1845	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1740	1553					1827	1553	1752	1845	
Volume (vph)	162	1	98	0	0	0	0	363	216	301	446	0
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)	176	1	107	0	0	0	0	395	235	327	485	0
RTOR Reduction (vph)	0	0	90	0	0	0	0	0	151	0	0	0
Lane Group Flow (vph)	0	177	17	0	0	0	0	395	84	327	485	0
Heavy Vehicles (%)	4%	4%	4%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		9.1	9.1					20.9	20.9	16.2	41.1	
Effective Green, g (s)		9.1	9.1					20.9	20.9	16.2	41.1	
Actuated g/C Ratio		0.16	0.16					0.36	0.36	0.28	0.71	
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)		272	243					656	558	488	1303	
v/s Ratio Prot								c0.22		c0.19	0.26	
v/s Ratio Perm		0.10	0.01						0.05			
v/c Ratio		0.65	0.07					0.60	0.15	0.67	0.37	
Uniform Delay, d1		23.1	20.9					15.3	12.6	18.6	3.4	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		5.5	0.1					1.6	0.1	3.6	0.2	
Delay (s)		28.5	21.1					16.8	12.8	22.2	3.6	
Level of Service		C	C					B	B	C	A	
Approach Delay (s)		25.7			0.0			15.3			11.1	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	58.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.0%	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)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1793	1599					1881	1599	1770	1863	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1793	1599					1881	1599	1770	1863	
Volume (vph)	127	2	124	0	0	0	0	338	284	285	546	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	135	2	132	0	0	0	0	360	302	303	581	0
RTOR Reduction (vph)	0	0	113	0	0	0	0	0	190	0	0	0
Lane Group Flow (vph)	0	137	19	0	0	0	0	360	112	303	581	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		8.0	8.0					20.2	20.2	14.5	38.7	
Effective Green, g (s)		8.0	8.0					20.2	20.2	14.5	38.7	
Actuated g/C Ratio		0.15	0.15					0.37	0.37	0.27	0.71	
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)		262	234					695	590	469	1318	
v/s Ratio Prot								c0.19		c0.17	0.31	
v/s Ratio Perm		0.08	0.01						0.07			
v/c Ratio		0.52	0.08					0.52	0.19	0.65	0.44	
Uniform Delay, d1		21.6	20.2					13.5	11.7	17.8	3.4	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.9	0.2					0.7	0.2	3.1	0.2	
Delay (s)		23.5	20.3					14.1	11.9	20.9	3.6	
Level of Service		C	C					B	B	C	A	
Approach Delay (s)		21.9			0.0			13.1			9.5	
Approach LOS		C			A			B			A	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	54.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	55	160	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	58	168	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	226	168	168			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	226	168	168			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	762	876	1409			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	58	168
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1409	1700
Volume to Capacity	0.00	0.00	0.10
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	11.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	132	67	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	139	71	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	209	71	71			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	209	71	71			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	779	992	1530			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	139	71
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1530	1700
Volume to Capacity	0.00	0.00	0.04
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	10.3%	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)	7	0	9	56	0	60
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	9	0	11	70	0	75
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	121	46			81	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	121	46			81	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	879	1029			1529	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	81	75
Volume Left	9	0	0
Volume Right	0	70	0
cSH	879	1700	1529
Volume to Capacity	0.01	0.05	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.1	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.1	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	13.9%	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)	56	0	47	6	0	19
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	76	0	64	8	0	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	93	68			72	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	93	68			72	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	100			100	
cM capacity (veh/h)	912	1001			1541	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	76	72	26
Volume Left	76	0	0
Volume Right	0	8	0
cSH	912	1700	1541
Volume to Capacity	0.08	0.04	0.00
Queue Length 95th (ft)	7	0	0
Control Delay (s)	9.3	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.3	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	342	0	0	384	50	0	0	1	55	0	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	368	0	0	413	54	0	0	1	59	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1124							
pX, platoon unblocked												
vC, conflicting volume	467			368			839	854	368	828	827	440
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	467			368			839	854	368	828	827	440
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	80	100	98
cM capacity (veh/h)	1084			1164			279	295	680	290	306	622

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	377	467	1	71
Volume Left	10	0	0	59
Volume Right	0	54	1	12
cSH	1084	1164	680	318
Volume to Capacity	0.01	0.00	0.00	0.22
Queue Length 95th (ft)	1	0	0	21
Control Delay (s)	0.3	0.0	10.3	19.5
Lane LOS	A		B	C
Approach Delay (s)	0.3	0.0	10.3	19.5
Approach LOS			B	C

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	42.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	498	3	0	361	50	0	0	1	61	0	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	553	3	0	401	56	0	0	1	68	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1124							
pX, platoon unblocked												
vC, conflicting volume	457			557			1001	1021	555	994	994	429
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	457			557			1001	1021	555	994	994	429
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	69	100	99
cM capacity (veh/h)	1109			1014			220	237	535	222	243	624

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	561	457	1	76
Volume Left	4	0	0	68
Volume Right	3	56	1	8
cSH	1109	1014	535	238
Volume to Capacity	0.00	0.00	0.00	0.32
Queue Length 95th (ft)	0	0	0	33
Control Delay (s)	0.1	0.0	11.7	27.0
Lane LOS	A		B	D
Approach Delay (s)	0.1	0.0	11.7	27.0
Approach LOS			B	D

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	390	15	20	403	19	21	1	23	4	1	3
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)	1	424	16	22	438	21	23	1	25	4	1	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					685							
pX, platoon unblocked												
vC, conflicting volume	459			440			920	936	432	943	934	448
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	459			440			920	936	432	943	934	448
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			91	100	96	98	100	99
cM capacity (veh/h)	1092			1104			243	256	617	230	262	615

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	1	440	22	459	49	9
Volume Left	1	0	22	0	23	4
Volume Right	0	16	0	21	25	3
cSH	1092	1700	1104	1700	352	307
Volume to Capacity	0.00	0.26	0.02	0.27	0.14	0.03
Queue Length 95th (ft)	0	0	2	0	12	2
Control Delay (s)	8.3	0.0	8.3	0.0	16.9	17.1
Lane LOS	A		A		C	C
Approach Delay (s)	0.0		0.4		16.9	17.1
Approach LOS					C	C

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	474	76	60	328	12	68	1	76	58	3	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	504	81	64	349	13	72	1	81	62	3	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					685							
pX, platoon unblocked												
vC, conflicting volume	362			585			1034	1043	545	1077	1077	355
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	362			585			1034	1043	545	1077	1077	355
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			63	100	85	61	98	100
cM capacity (veh/h)	1202			990			198	215	540	159	206	693

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	4	585	64	362	154	67
Volume Left	4	0	64	0	72	62
Volume Right	0	81	0	13	81	2
cSH	1202	1700	990	1700	296	165
Volume to Capacity	0.00	0.34	0.06	0.21	0.52	0.41
Queue Length 95th (ft)	0	0	5	0	70	45
Control Delay (s)	8.0	0.0	8.9	0.0	29.6	40.9
Lane LOS	A		A		D	E
Approach Delay (s)	0.1		1.3		29.6	40.9
Approach LOS					D	E

Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	50.7%	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)	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	1.00			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.96			1.00	0.85	1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1849		1770	1783			1807	1583	1805	1666	
Flt Permitted	0.43	1.00		0.41	1.00			0.97	1.00	0.95	1.00	
Satd. Flow (perm)	802	1849		758	1783			1807	1583	1805	1666	
Volume (vph)	82	491	25	157	341	136	20	12	155	96	8	39
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	87	522	27	167	363	145	21	13	165	102	9	41
RTOR Reduction (vph)	0	1	0	0	6	0	0	0	154	0	37	0
Lane Group Flow (vph)	87	548	0	167	502	0	0	34	11	102	13	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Split		Perm	Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2			6					4			
Actuated Green, G (s)	88.1	88.1		88.1	88.1			8.1	8.1	11.8	11.8	
Effective Green, g (s)	88.1	88.1		88.1	88.1			8.1	8.1	11.8	11.8	
Actuated g/C Ratio	0.73	0.73		0.73	0.73			0.07	0.07	0.10	0.10	
Clearance Time (s)	4.0	4.0		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	3.0	3.0	
Lane Grp Cap (vph)	589	1357		556	1309			122	107	177	164	
v/s Ratio Prot		c0.30			0.28			c0.02		c0.06	0.01	
v/s Ratio Perm	0.11			0.22					0.01			
v/c Ratio	0.15	0.40		0.30	0.38			0.28	0.10	0.58	0.08	
Uniform Delay, d1	4.8	6.0		5.4	5.9			53.2	52.5	51.7	49.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.9		1.4	0.9			1.2	0.4	4.5	0.2	
Delay (s)	5.3	6.9		6.8	6.8			54.4	53.0	56.2	49.4	
Level of Service	A	A		A	A			D	D	E	D	
Approach Delay (s)		6.7			6.8			53.2			54.0	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.0%	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												
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	1.00			1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.96			1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1736	1821		1703	1724			1702	1468	1805	1631	
Flt Permitted	0.40	1.00		0.49	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (perm)	722	1821		886	1724			1702	1468	1805	1631	
Volume (vph)	31	362	8	68	390	133	3	6	50	131	4	62
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	393	9	74	424	145	3	7	54	142	4	67
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	51	0	59	0
Lane Group Flow (vph)	34	402	0	74	563	0	0	10	3	142	12	0
Heavy Vehicles (%)	4%	4%	4%	6%	6%	6%	10%	10%	10%	0%	0%	0%
Turn Type	Perm			Perm			Split		Perm	Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2			6					4			
Actuated Green, G (s)	88.0	88.0		88.0	88.0			5.6	5.6	14.4	14.4	
Effective Green, g (s)	88.0	88.0		88.0	88.0			5.6	5.6	14.4	14.4	
Actuated g/C Ratio	0.73	0.73		0.73	0.73			0.05	0.05	0.12	0.12	
Clearance Time (s)	4.0	4.0		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	3.0	3.0	
Lane Grp Cap (vph)	529	1335		650	1264			79	69	217	196	
v/s Ratio Prot		0.22			c0.33			c0.01		c0.08	0.01	
v/s Ratio Perm	0.05			0.08					0.00			
v/c Ratio	0.06	0.30		0.11	0.45			0.13	0.04	0.65	0.06	
Uniform Delay, d1	4.5	5.5		4.7	6.3			54.9	54.6	50.4	46.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.6		0.4	1.1			0.7	0.2	6.9	0.1	
Delay (s)	4.7	6.1		5.0	7.5			55.6	54.8	57.3	46.9	
Level of Service	A	A		A	A			E	D	E	D	
Approach Delay (s)		5.9			7.2			55.0			53.9	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.9%	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	4.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.96	0.95	1.00
Satd. Flow (prot)	1827	1553	1649	1674	1703	1524
Flt Permitted	1.00	1.00	0.95	0.96	0.95	1.00
Satd. Flow (perm)	1827	1553	1649	1674	1703	1524
Volume (vph)	43	508	458	71	512	242
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	46	546	492	76	551	260
RTOR Reduction (vph)	0	0	0	0	0	49
Lane Group Flow (vph)	46	546	277	291	551	211
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Turn Type		custom	Split			custom
Protected Phases	4	4 5 7	3	3	5 6 7 3	5 6 7
Permitted Phases						5 6 7
Actuated Green, G (s)	14.0	79.2	20.0	20.0	71.2	95.2
Effective Green, g (s)	14.0	79.2	20.0	20.0	71.2	95.2
Actuated g/C Ratio	0.12	0.68	0.17	0.17	0.61	0.81
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	218	1049	281	286	1035	1238
v/s Ratio Prot	0.03	c0.35	0.17	c0.17	c0.32	0.14
v/s Ratio Perm						
v/c Ratio	0.21	0.52	0.99	1.02	0.53	0.17
Uniform Delay, d1	46.6	9.5	48.5	48.6	13.3	2.4
Progression Factor	1.00	1.00	1.00	1.00	0.34	0.00
Incremental Delay, d2	0.5	0.5	49.3	57.8	0.4	0.1
Delay (s)	47.1	10.0	97.8	106.4	5.0	0.1
Level of Service	D	A	F	F	A	A
Approach Delay (s)	12.9			102.2	3.4	
Approach LOS	B			F	A	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	117.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	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	4.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (prot)	1881	1599	1698	1738	1770	1583
Flt Permitted	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (perm)	1881	1599	1698	1738	1770	1583
Volume (vph)	124	612	381	109	518	335
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	132	651	405	116	551	356
RTOR Reduction (vph)	0	0	0	0	0	46
Lane Group Flow (vph)	132	651	254	267	551	310
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type		custom	Split			custom
Protected Phases	4	4 5 7	3	3	5 6 7	3 5 6 7
Permitted Phases						5 6 7
Actuated Green, G (s)	14.0	82.0	20.0	20.0	74.0	98.0
Effective Green, g (s)	14.0	82.0	20.0	20.0	74.0	98.0
Actuated g/C Ratio	0.12	0.68	0.17	0.17	0.62	0.82
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	219	1093	283	290	1092	1293
v/s Ratio Prot	0.07	c0.41	0.15	c0.15	c0.31	0.20
v/s Ratio Perm						
v/c Ratio	0.60	0.60	0.90	0.92	0.50	0.24
Uniform Delay, d1	50.4	10.1	49.0	49.2	12.8	2.5
Progression Factor	1.00	1.00	1.00	1.00	0.32	0.00
Incremental Delay, d2	4.6	0.9	28.4	32.8	0.2	0.1
Delay (s)	55.0	11.0	77.4	82.0	4.4	0.1
Level of Service	D	B	E	F	A	A
Approach Delay (s)	18.4			79.7	2.7	
Approach LOS	B			E	A	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.6%	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												
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	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.95	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1742	1553	1736	1827			3337	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1742	1553	1736	1827			3337	
Volume (vph)	0	0	0	148	5	279	138	385	0	0	646	304
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	163	5	307	152	423	0	0	710	334
RTOR Reduction (vph)	0	0	0	0	0	245	0	0	0	0	47	0
Lane Group Flow (vph)	0	0	0	0	168	62	152	423	0	0	997	0
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	4%	4%	4%	3%	3%	3%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					23.7	23.7	11.8	33.5			69.7	
Effective Green, g (s)					23.7	23.7	11.8	33.5			69.7	
Actuated g/C Ratio					0.20	0.20	0.10	0.29			0.59	
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)					352	314	175	522			1985	
v/s Ratio Prot					c0.10	0.04	0.09	c0.23			c0.30	
v/s Ratio Perm												
v/c Ratio					0.48	0.20	0.87	0.81			0.50	
Uniform Delay, d1					41.3	38.8	51.9	38.9			13.7	
Progression Factor					1.00	1.00	1.00	1.00			0.80	
Incremental Delay, d2					1.0	0.3	33.6	9.3			0.1	
Delay (s)					42.3	39.2	85.6	48.1			11.2	
Level of Service					D	D	F	D			B	
Approach Delay (s)		0.0			40.3			58.0			11.2	
Approach LOS		A			D			E			B	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	117.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.7%	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			4.0	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.96	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1811	1615	1787	1881			3428	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1811	1615	1787	1881			3428	
Volume (vph)	0	0	0	201	3	401	72	470	0	0	747	280
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	226	3	451	81	528	0	0	839	315
RTOR Reduction (vph)	0	0	0	0	0	361	0	0	0	0	31	0
Lane Group Flow (vph)	0	0	0	0	229	90	81	528	0	0	1123	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					24.0	24.0	10.1	36.0			73.9	
Effective Green, g (s)					24.0	24.0	10.1	36.0			73.9	
Actuated g/C Ratio					0.20	0.20	0.08	0.30			0.62	
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)					362	323	150	564			2111	
v/s Ratio Prot					c0.13	0.06	0.05	c0.28			c0.33	
v/s Ratio Perm												
v/c Ratio					0.63	0.28	0.54	0.94			0.53	
Uniform Delay, d1					44.0	40.7	52.7	40.9			13.2	
Progression Factor					1.00	1.00	1.00	1.00			1.02	
Incremental Delay, d2					3.6	0.5	3.9	23.1			0.2	
Delay (s)					47.5	41.1	56.6	63.9			13.7	
Level of Service					D	D	E	E			B	
Approach Delay (s)		0.0			43.3			63.0			13.7	
Approach LOS		A			D			E			B	

Intersection Summary			
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	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												
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		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1740	1553					1827	1553	1752	1845	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1740	1553					1827	1553	1752	1845	
Volume (vph)	194	1	98	0	0	0	0	395	216	317	468	0
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)	211	1	107	0	0	0	0	429	235	345	509	0
RTOR Reduction (vph)	0	0	90	0	0	0	0	0	151	0	0	0
Lane Group Flow (vph)	0	212	17	0	0	0	0	429	84	345	509	0
Heavy Vehicles (%)	4%	4%	4%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		10.0	10.0					22.2	22.2	17.6	43.8	
Effective Green, g (s)		10.0	10.0					22.2	22.2	17.6	43.8	
Actuated g/C Ratio		0.16	0.16					0.36	0.36	0.28	0.71	
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)		282	251					656	558	499	1308	
v/s Ratio Prot								c0.23		c0.20	0.28	
v/s Ratio Perm		0.12	0.01						0.05			
v/c Ratio		0.75	0.07					0.65	0.15	0.69	0.39	
Uniform Delay, d1		24.7	22.0					16.6	13.4	19.7	3.6	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		10.8	0.1					2.3	0.1	4.1	0.2	
Delay (s)		35.5	22.1					18.9	13.5	23.8	3.8	
Level of Service		D	C					B	B	C	A	
Approach Delay (s)		31.0			0.0			17.0			11.9	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	61.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.2%	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												
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		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1793	1599					1881	1599	1770	1863	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1793	1599					1881	1599	1770	1863	
Volume (vph)	151	2	124	0	0	0	0	373	284	330	590	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	161	2	132	0	0	0	0	397	302	351	628	0
RTOR Reduction (vph)	0	0	112	0	0	0	0	0	195	0	0	0
Lane Group Flow (vph)	0	163	20	0	0	0	0	397	107	351	628	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		8.7	8.7					20.5	20.5	16.9	41.4	
Effective Green, g (s)		8.7	8.7					20.5	20.5	16.9	41.4	
Actuated g/C Ratio		0.15	0.15					0.35	0.35	0.29	0.71	
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)		268	239					664	564	515	1328	
v/s Ratio Prot								c0.21		c0.20	0.34	
v/s Ratio Perm		0.09	0.01						0.07			
v/c Ratio		0.61	0.08					0.60	0.19	0.68	0.47	
Uniform Delay, d1		23.1	21.3					15.4	13.0	18.2	3.6	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		3.9	0.1					1.5	0.2	3.7	0.3	
Delay (s)		27.0	21.4					16.9	13.2	21.9	3.9	
Level of Service		C	C					B	B	C	A	
Approach Delay (s)		24.5			0.0			15.3			10.4	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	58.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	50	137	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	53	144	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	197	144	144			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	197	144	144			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	792	903	1438			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	53	144
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1438	1700
Volume to Capacity	0.00	0.00	0.08
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	10.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	132	67	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	139	71	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	209	71	71			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	209	71	71			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	779	992	1530			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	139	71
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1530	1700
Volume to Capacity	0.00	0.00	0.04
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	10.3%	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)	7	0	9	56	0	60
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	9	0	11	70	0	75
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	121	46			81	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	121	46			81	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	879	1029			1529	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	81	75
Volume Left	9	0	0
Volume Right	0	70	0
cSH	879	1700	1529
Volume to Capacity	0.01	0.05	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.1	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.1	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	13.9%	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)	56	0	47	6	0	19
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	76	0	64	8	0	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	93	68			72	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	93	68			72	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	100			100	
cM capacity (veh/h)	912	1001			1541	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	76	72	26
Volume Left	76	0	0
Volume Right	0	8	0
cSH	912	1700	1541
Volume to Capacity	0.08	0.04	0.00
Queue Length 95th (ft)	7	0	0
Control Delay (s)	9.3	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.3	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	339	0	0	377	50	0	0	1	55	0	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	365	0	0	405	54	0	0	1	59	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1124							
pX, platoon unblocked												
vC, conflicting volume	459			365			828	843	365	817	816	432
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	459			365			828	843	365	817	816	432
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	80	100	98
cM capacity (veh/h)	1091			1167			284	299	683	295	311	628

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	374	459	1	71
Volume Left	10	0	0	59
Volume Right	0	54	1	12
cSH	1091	1167	683	324
Volume to Capacity	0.01	0.00	0.00	0.22
Queue Length 95th (ft)	1	0	0	21
Control Delay (s)	0.3	0.0	10.3	19.2
Lane LOS	A		B	C
Approach Delay (s)	0.3	0.0	10.3	19.2
Approach LOS			B	C

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	486	3	0	351	50	0	0	1	61	0	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	540	3	0	390	56	0	0	1	68	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1124							
pX, platoon unblocked												
vC, conflicting volume	446			543			976	996	542	969	970	418
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	446			543			976	996	542	969	970	418
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	71	100	99
cM capacity (veh/h)	1120			1026			229	245	545	231	251	633

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	548	446	1	76
Volume Left	4	0	0	68
Volume Right	3	56	1	8
cSH	1120	1026	545	247
Volume to Capacity	0.00	0.00	0.00	0.31
Queue Length 95th (ft)	0	0	0	31
Control Delay (s)	0.1	0.0	11.6	25.9
Lane LOS	A		B	D
Approach Delay (s)	0.1	0.0	11.6	25.9
Approach LOS			B	D

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	378	15	20	395	146	21	8	23	21	2	4
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)	11	411	16	22	429	159	23	9	25	23	2	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					685							
pX, platoon unblocked												
vC, conflicting volume	588			427			919	1072	419	1014	1001	509
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	588			427			919	1072	419	1014	1001	509
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			90	96	96	89	99	99
cM capacity (veh/h)	977			1116			239	211	628	199	237	568

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	11	427	22	588	57	29
Volume Left	11	0	22	0	23	23
Volume Right	0	16	0	159	25	4
cSH	977	1700	1116	1700	320	223
Volume to Capacity	0.01	0.25	0.02	0.35	0.18	0.13
Queue Length 95th (ft)	1	0	1	0	16	11
Control Delay (s)	8.7	0.0	8.3	0.0	18.6	23.6
Lane LOS	A		A		C	C
Approach Delay (s)	0.2		0.3		18.6	23.6
Approach LOS					C	C

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	460	76	60	312	35	68	2	76	169	9	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	6	489	81	64	332	37	72	2	81	180	10	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					685							
pX, platoon unblocked												
vC, conflicting volume	369			570			1015	1039	530	1062	1061	351
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	369			570			1015	1039	530	1062	1061	351
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			94			63	99	85	0	95	99
cM capacity (veh/h)	1195			1002			197	216	551	163	210	697

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	6	570	64	369	155	198
Volume Left	6	0	64	0	72	180
Volume Right	0	81	0	37	81	9
cSH	1195	1700	1002	1700	296	170
Volume to Capacity	0.01	0.34	0.06	0.22	0.52	1.16
Queue Length 95th (ft)	0	0	5	0	71	263
Control Delay (s)	8.0	0.0	8.8	0.0	29.8	173.6
Lane LOS	A		A		D	F
Approach Delay (s)	0.1		1.3		29.8	173.6
Approach LOS					D	F

Intersection Summary				
Average Delay	29.1			
Intersection Capacity Utilization	59.1%	ICU Level of Service		B
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	33	377	8	68	504	29	3	6	50	102	4	56
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)	36	410	9	74	548	32	3	7	54	111	4	61
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					310							
pX, platoon unblocked												
vC, conflicting volume	579			418			1245	1213	414	1251	1202	564
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	579			418			1245	1213	414	1251	1202	564
tC, single (s)	4.1			4.2			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	96			93			97	96	91	10	97	88
cM capacity (veh/h)	985			1119			116	158	621	123	168	529

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	36	418	74	579	10	54	111	65
Volume Left	36	0	74	0	3	0	111	0
Volume Right	0	9	0	32	0	54	0	61
cSH	985	1700	1119	1700	141	621	123	463
Volume to Capacity	0.04	0.25	0.07	0.34	0.07	0.09	0.90	0.14
Queue Length 95th (ft)	3	0	5	0	6	7	143	12
Control Delay (s)	8.8	0.0	8.4	0.0	32.4	11.3	122.8	14.1
Lane LOS	A		A		D	B	F	B
Approach Delay (s)	0.7		1.0		14.6		82.5	
Approach LOS					B		F	

Intersection Summary			
Average Delay	12.2		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	80	590	25	157	361	52	20	12	155	36	8	26
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	85	628	27	167	384	55	21	13	165	38	9	28
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					310							
pX, platoon unblocked												
vC, conflicting volume	439			654			1561	1585	641	1715	1570	412
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	439			654			1561	1585	641	1715	1570	412
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			82			68	84	65	0	90	96
cM capacity (veh/h)	1121			933			66	82	475	34	85	645

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	85	654	167	439	34	165	38	36
Volume Left	85	0	167	0	21	0	38	0
Volume Right	0	27	0	55	0	165	0	28
cSH	1121	1700	933	1700	71	475	34	252
Volume to Capacity	0.08	0.38	0.18	0.26	0.48	0.35	1.13	0.14
Queue Length 95th (ft)	6	0	16	0	49	38	102	12
Control Delay (s)	8.5	0.0	9.7	0.0	95.6	16.6	376.7	21.6
Lane LOS	A		A		F	C	F	C
Approach Delay (s)	1.0		2.7		30.1		204.2	
Approach LOS					D		F	

Intersection Summary				
Average Delay	14.5			
Intersection Capacity Utilization	59.9%	ICU Level of Service	B	
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)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (prot)	1827	1553	1649	1678	1703	1524
Flt Permitted	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (perm)	1827	1553	1649	1678	1703	1524
Volume (vph)	45	493	434	85	508	242
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	48	530	467	91	546	260
RTOR Reduction (vph)	0	0	0	0	0	48
Lane Group Flow (vph)	48	530	272	286	546	212
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Turn Type		custom	Split			custom
Protected Phases	4	4 5 7	3	3	5 6 7	3 5 6 7
Permitted Phases						5 6 7
Actuated Green, G (s)	14.0	80.4	20.0	20.0	72.4	96.4
Effective Green, g (s)	14.0	80.4	20.0	20.0	72.4	96.4
Actuated g/C Ratio	0.12	0.68	0.17	0.17	0.61	0.81
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	216	1055	279	283	1041	1241
v/s Ratio Prot	0.03	c0.34	0.16	c0.17	c0.32	0.14
v/s Ratio Perm						
v/c Ratio	0.22	0.50	0.97	1.01	0.52	0.17
Uniform Delay, d1	47.3	9.3	49.0	49.2	13.2	2.4
Progression Factor	1.00	1.00	1.00	1.00	0.27	0.00
Incremental Delay, d2	0.5	0.4	46.6	56.2	0.3	0.0
Delay (s)	47.8	9.6	95.5	105.4	3.9	0.0
Level of Service	D	A	F	F	A	A
Approach Delay (s)	12.8			100.6	2.7	
Approach LOS	B			F	A	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	118.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.7%	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	4.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (prot)	1881	1599	1698	1741	1770	1583
Flt Permitted	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (perm)	1881	1599	1698	1741	1770	1583
Volume (vph)	137	639	352	112	451	335
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	146	680	374	119	480	356
RTOR Reduction (vph)	0	0	0	0	0	39
Lane Group Flow (vph)	146	680	240	253	480	317
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type		custom	Split			custom
Protected Phases	4	4 5 7	3	3	5 6 7	3 5 6 7
Permitted Phases						5 6 7
Actuated Green, G (s)	14.0	80.4	20.0	20.0	72.4	96.4
Effective Green, g (s)	14.0	80.4	20.0	20.0	72.4	96.4
Actuated g/C Ratio	0.12	0.68	0.17	0.17	0.61	0.81
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	222	1086	287	294	1082	1289
v/s Ratio Prot	0.08	c0.43	0.14	c0.15	c0.27	0.20
v/s Ratio Perm						
v/c Ratio	0.66	0.63	0.84	0.86	0.44	0.25
Uniform Delay, d1	49.9	10.6	47.6	47.8	12.3	2.6
Progression Factor	1.00	1.00	1.00	1.00	0.35	0.00
Incremental Delay, d2	6.9	1.1	18.6	21.8	0.2	0.1
Delay (s)	56.8	11.7	66.2	69.6	4.5	0.1
Level of Service	E	B	E	E	A	A
Approach Delay (s)	19.7			68.0	2.6	
Approach LOS	B			E	A	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	118.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.9%	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												
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	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.95	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1742	1553	1736	1827			3335	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1742	1553	1736	1827			3335	
Volume (vph)	0	0	0	148	5	289	138	435	0	0	617	294
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	163	5	318	152	478	0	0	678	323
RTOR Reduction (vph)	0	0	0	0	0	254	0	0	0	0	48	0
Lane Group Flow (vph)	0	0	0	0	168	64	152	478	0	0	953	0
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	4%	4%	4%	3%	3%	3%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					23.7	23.7	11.9	34.7			70.8	
Effective Green, g (s)					23.7	23.7	11.9	34.7			70.8	
Actuated g/C Ratio					0.20	0.20	0.10	0.29			0.60	
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)					349	311	174	535			1994	
v/s Ratio Prot					c0.10	0.04	0.09	c0.26			c0.29	
v/s Ratio Perm												
v/c Ratio					0.48	0.20	0.87	0.89			0.48	
Uniform Delay, d1					41.9	39.5	52.5	40.1			13.4	
Progression Factor					1.00	1.00	1.00	1.00			0.81	
Incremental Delay, d2					1.0	0.3	35.0	17.1			0.1	
Delay (s)					43.0	39.8	87.5	57.2			10.9	
Level of Service					D	D	F	E			B	
Approach Delay (s)		0.0			40.9			64.5			10.9	
Approach LOS		A			D			E			B	

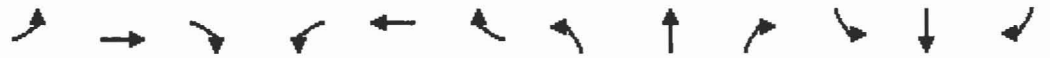
Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	118.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.96	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1811	1615	1787	1881			3426	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1811	1615	1787	1881			3426	
Volume (vph)	0	0	0	201	3	385	72	420	0	0	714	273
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	226	3	433	81	472	0	0	802	307
RTOR Reduction (vph)	0	0	0	0	0	346	0	0	0	0	32	0
Lane Group Flow (vph)	0	0	0	0	229	87	81	472	0	0	1077	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					23.7	23.7	10.0	34.7			72.7	
Effective Green, g (s)					23.7	23.7	10.0	34.7			72.7	
Actuated g/C Ratio					0.20	0.20	0.08	0.29			0.61	
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)					363	323	151	551			2104	
v/s Ratio Prot					c0.13	0.05	0.05	c0.25			c0.31	
v/s Ratio Perm												
v/c Ratio					0.63	0.27	0.54	0.86			0.51	
Uniform Delay, d1					43.3	40.0	52.0	39.5			12.9	
Progression Factor					1.00	1.00	1.00	1.00			1.10	
Incremental Delay, d2					3.6	0.4	3.6	12.4			0.2	
Delay (s)					46.9	40.5	55.6	51.9			14.3	
Level of Service					D	D	E	D			B	
Approach Delay (s)		0.0			42.7			52.5			14.3	
Approach LOS		A			D			D			B	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	118.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.7%	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	4.0	4.0	
Lane Util. Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1740	1553					1827	1553	1752	1845	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1740	1553					1827	1553	1752	1845	
Volume (vph)	199	1	98	0	0	0	0	377	216	308	448	0
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)	216	1	107	0	0	0	0	410	235	335	487	0
RTOR Reduction (vph)	0	0	89	0	0	0	0	0	152	0	0	0
Lane Group Flow (vph)	0	217	18	0	0	0	0	410	83	335	487	0
Heavy Vehicles (%)	4%	4%	4%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		10.0	10.0					21.4	21.4	17.3	42.7	
Effective Green, g (s)		10.0	10.0					21.4	21.4	17.3	42.7	
Actuated g/C Ratio		0.16	0.16					0.35	0.35	0.29	0.70	
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)		287	256					644	548	499	1298	
v/s Ratio Prot								c0.22		c0.19	0.26	
v/s Ratio Perm		0.12	0.01						0.05			
v/c Ratio		0.76	0.07					0.64	0.15	0.67	0.38	
Uniform Delay, d1		24.2	21.4					16.4	13.4	19.2	3.6	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		10.8	0.1					2.1	0.1	3.5	0.2	
Delay (s)		35.0	21.5					18.5	13.6	22.7	3.8	
Level of Service		C	C					B	B	C	A	
Approach Delay (s)		30.5			0.0			16.7			11.5	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.2%	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												
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		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1793	1599					1881	1599	1770	1863	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1793	1599					1881	1599	1770	1863	
Volume (vph)	133	2	124	0	0	0	0	341	284	329	558	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	141	2	132	0	0	0	0	363	302	350	594	0
RTOR Reduction (vph)	0	0	113	0	0	0	0	0	197	0	0	0
Lane Group Flow (vph)	0	143	19	0	0	0	0	363	105	350	594	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		8.1	8.1					19.4	19.4	16.4	39.8	
Effective Green, g (s)		8.1	8.1					19.4	19.4	16.4	39.8	
Actuated g/C Ratio		0.14	0.14					0.35	0.35	0.29	0.71	
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)		260	232					653	555	519	1326	
v/s Ratio Prot								c0.19		c0.20	0.32	
v/s Ratio Perm		0.08	0.01						0.07			
v/c Ratio		0.55	0.08					0.56	0.19	0.67	0.45	
Uniform Delay, d1		22.2	20.7					14.8	12.8	17.4	3.4	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.5	0.2					1.0	0.2	3.5	0.2	
Delay (s)		24.7	20.8					15.8	12.9	20.9	3.6	
Level of Service		C	C					B	B	C	A	
Approach Delay (s)		22.9			0.0			14.5			10.0	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	2	2	14	55	160	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2	2	15	58	168	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	263	176	183			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	263	176	183			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	718	867	1392			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	4	73	183
Volume Left	2	15	0
Volume Right	2	0	15
cSH	786	1392	1700
Volume to Capacity	0.01	0.01	0.11
Queue Length 95th (ft)	0	1	0
Control Delay (s)	9.6	1.6	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	1.6	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	12	12	3	132	67	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	13	13	3	139	71	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	217	72	74			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	217	72	74			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	769	990	1526			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	142	74
Volume Left	13	3	0
Volume Right	13	0	3
cSH	866	1526	1700
Volume to Capacity	0.03	0.00	0.04
Queue Length 95th (ft)	2	0	0
Control Delay (s)	9.3	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.3	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	19.4%	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)	7	0	9	56	0	60
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	9	0	11	70	0	75
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	121	46			81	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	121	46			81	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	879	1029			1529	

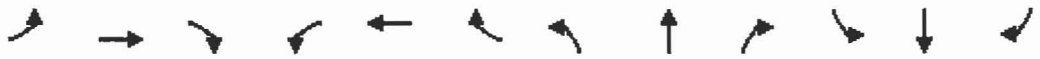
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	81	75
Volume Left	9	0	0
Volume Right	0	70	0
cSH	879	1700	1529
Volume to Capacity	0.01	0.05	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.1	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.1	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	13.9%	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)	56	0	47	6	0	19
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	76	0	64	8	0	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	93	68			72	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	93	68			72	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	100			100	
cM capacity (veh/h)	912	1001			1541	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	76	72	26
Volume Left	76	0	0
Volume Right	0	8	0
cSH	912	1700	1541
Volume to Capacity	0.08	0.04	0.00
Queue Length 95th (ft)	7	0	0
Control Delay (s)	9.3	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.3	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	349	0	0	385	50	0	0	1	55	0	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	375	0	0	414	54	0	0	1	59	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					814							
pX, platoon unblocked												
vC, conflicting volume	468			375			847	862	375	837	835	441
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	468			375			847	862	375	837	835	441
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	79	100	98
cM capacity (veh/h)	1083			1156			275	291	673	286	303	621

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	385	468	1	71
Volume Left	10	0	0	59
Volume Right	0	54	1	12
cSH	1083	1156	673	314
Volume to Capacity	0.01	0.00	0.00	0.23
Queue Length 95th (ft)	1	0	0	21
Control Delay (s)	0.3	0.0	10.4	19.8
Lane LOS	A		B	C
Approach Delay (s)	0.3	0.0	10.4	19.8
Approach LOS			B	C

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	504	3	0	367	50	0	0	1	61	0	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	560	3	0	408	56	0	0	1	68	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					814							
pX, platoon unblocked												
vC, conflicting volume	463			563			1014	1034	562	1007	1008	436
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	463			563			1014	1034	562	1007	1008	436
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	69	100	99
cM capacity (veh/h)	1103			1008			216	233	531	217	239	619

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	568	463	1	76
Volume Left	4	0	0	68
Volume Right	3	56	1	8
cSH	1103	1008	531	233
Volume to Capacity	0.00	0.00	0.00	0.32
Queue Length 95th (ft)	0	0	0	34
Control Delay (s)	0.1	0.0	11.8	27.7
Lane LOS	A		B	D
Approach Delay (s)	0.1	0.0	11.8	27.7
Approach LOS			B	D

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	8	390	15	20	403	119	21	8	23	17	2	4
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)	9	424	16	22	438	129	23	9	25	18	2	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked	0.86						0.86	0.86		0.86	0.86	0.86
vC, conflicting volume	567			440			936	1060	432	1017	1004	503
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	497			440			926	1070	432	1020	1004	422
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			89	95	96	89	99	99
cM capacity (veh/h)	909			1104			204	182	617	169	203	547

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	9	440	22	567	57	25
Volume Left	9	0	22	0	23	18
Volume Right	0	16	0	129	25	4
cSH	909	1700	1104	1700	282	195
Volume to Capacity	0.01	0.26	0.02	0.33	0.20	0.13
Queue Length 95th (ft)	1	0	2	0	18	11
Control Delay (s)	9.0	0.0	8.3	0.0	20.9	26.2
Lane LOS	A		A		C	D
Approach Delay (s)	0.2		0.3		20.9	26.2
Approach LOS					C	D

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	38.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	474	76	60	328	24	68	2	76	155	9	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	11	504	81	64	349	26	72	2	81	165	10	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked	0.97						0.97	0.97		0.97	0.97	0.97
vC, conflicting volume	374			585			1056	1068	545	1097	1096	362
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	355			585			1058	1070	545	1100	1099	342
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			94			59	99	85	0	95	99
cM capacity (veh/h)	1173			990			177	200	540	148	193	684

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	11	585	64	374	155	183
Volume Left	11	0	64	0	72	165
Volume Right	0	81	0	26	81	9
cSH	1173	1700	990	1700	273	155
Volume to Capacity	0.01	0.34	0.06	0.22	0.57	1.18
Queue Length 95th (ft)	1	0	5	0	81	255
Control Delay (s)	8.1	0.0	8.9	0.0	34.2	185.8
Lane LOS	A		A		D	F
Approach Delay (s)	0.1		1.3		34.2	185.8
Approach LOS					D	F

Intersection Summary				
Average Delay	29.1			
Intersection Capacity Utilization	59.1%	ICU Level of Service	B	
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	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1736	1821		1703	1730			1702	1468	1805	1631	
Flt Permitted	0.33	1.00		0.48	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (perm)	596	1821		867	1730			1702	1468	1805	1631	
Volume (vph)	31	375	8	68	490	147	3	6	50	133	4	62
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	408	9	74	533	160	3	7	54	145	4	67
RTOR Reduction (vph)	0	1	0	0	7	0	0	0	51	0	59	0
Lane Group Flow (vph)	34	416	0	74	686	0	0	10	3	145	12	0
Heavy Vehicles (%)	4%	4%	4%	6%	6%	6%	10%	10%	10%	0%	0%	0%
Turn Type	Perm			Perm			Split		Perm	Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2			6					4			
Actuated Green, G (s)	87.4	87.4		87.4	87.4			5.7	5.7	14.9	14.9	
Effective Green, g (s)	87.4	87.4		87.4	87.4			5.7	5.7	14.9	14.9	
Actuated g/C Ratio	0.73	0.73		0.73	0.73			0.05	0.05	0.12	0.12	
Clearance Time (s)	4.0	4.0		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	3.0	3.0	
Lane Grp Cap (vph)	434	1326		631	1260			81	70	224	203	
v/s Ratio Prot		0.23			c0.40			c0.01		c0.08	0.01	
v/s Ratio Perm	0.06			0.09					0.00			
v/c Ratio	0.08	0.31		0.12	0.54			0.12	0.04	0.65	0.06	
Uniform Delay, d1	4.7	5.7		4.8	7.3			54.8	54.5	50.0	46.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.6		0.4	1.7			0.7	0.2	6.3	0.1	
Delay (s)	5.0	6.4		5.2	9.0			55.4	54.7	56.3	46.5	
Level of Service	A	A		A	A			E	D	E	D	
Approach Delay (s)		6.3			8.7			54.9			53.1	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.1%	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												
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	1.00			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.96			1.00	0.85	1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1851		1770	1783			1807	1583	1805	1666	
Flt Permitted	0.42	1.00		0.35	1.00			0.97	1.00	0.95	1.00	
Satd. Flow (perm)	784	1851		645	1783			1807	1583	1805	1666	
Volume (vph)	82	588	25	157	350	139	20	12	155	108	8	39
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	87	626	27	167	372	148	21	13	165	115	9	41
RTOR Reduction (vph)	0	1	0	0	8	0	0	0	154	0	37	0
Lane Group Flow (vph)	87	652	0	167	512	0	0	34	11	115	13	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Split		Perm	Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2			6					4			
Actuated Green, G (s)	87.1	87.1		87.1	87.1			8.2	8.2	12.7	12.7	
Effective Green, g (s)	87.1	87.1		87.1	87.1			8.2	8.2	12.7	12.7	
Actuated g/C Ratio	0.73	0.73		0.73	0.73			0.07	0.07	0.11	0.11	
Clearance Time (s)	4.0	4.0		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	3.0	3.0	
Lane Grp Cap (vph)	569	1344		468	1294			123	108	191	176	
v/s Ratio Prot		c0.35			0.29			c0.02		c0.06	0.01	
v/s Ratio Perm	0.11			0.26					0.01			
v/c Ratio	0.15	0.49		0.36	0.40			0.28	0.10	0.60	0.08	
Uniform Delay, d1	5.1	7.0		6.1	6.3			53.1	52.5	51.2	48.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	1.3		2.1	0.9			1.2	0.4	5.3	0.2	
Delay (s)	5.6	8.2		8.2	7.2			54.3	52.9	56.5	48.5	
Level of Service	A	A		A	A			D	D	E	D	
Approach Delay (s)		7.9			7.5			53.1			54.1	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.8%	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	4.0
Lane Util. Factor	1.00	0.88	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (prot)	1827	2733	1649	1677	1703	1524
Flt Permitted	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (perm)	1827	2733	1649	1677	1703	1524
Volume (vph)	45	522	458	85	612	242
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	48	561	492	91	658	260
RTOR Reduction (vph)	0	0	0	0	0	39
Lane Group Flow (vph)	48	561	284	299	658	221
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Turn Type		custom	Split			custom
Protected Phases	4	4 5 7	3	3	5 6 7 3	5 6 7
Permitted Phases						5 6 7
Actuated Green, G (s)	10.0	77.2	23.8	23.8	73.2	101.0
Effective Green, g (s)	10.0	77.2	23.8	23.8	73.2	101.0
Actuated g/C Ratio	0.08	0.65	0.20	0.20	0.62	0.85
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	154	1773	330	335	1048	1293
v/s Ratio Prot	0.03	c0.21	0.17	c0.18	c0.39	0.14
v/s Ratio Perm						
v/c Ratio	0.31	0.32	0.86	0.89	0.63	0.17
Uniform Delay, d1	51.3	9.2	46.0	46.4	14.4	1.6
Progression Factor	1.00	1.00	1.00	1.00	0.33	0.00
Incremental Delay, d2	1.2	0.1	19.9	24.4	0.8	0.0
Delay (s)	52.4	9.3	65.8	70.8	5.6	0.0
Level of Service	D	A	E	E	A	A
Approach Delay (s)	12.7			68.4	4.0	
Approach LOS	B			E	A	

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.2%	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	4.0
Lane Util. Factor	1.00	0.88	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (prot)	1881	2814	1698	1739	1770	1583
Flt Permitted	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (perm)	1881	2814	1698	1739	1770	1583
Volume (vph)	137	699	381	112	535	335
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	146	744	405	119	569	356
RTOR Reduction (vph)	0	0	0	0	0	39
Lane Group Flow (vph)	146	744	255	269	569	317
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type		custom	Split			custom
Protected Phases	4	4 5 7	3	3	5 6 7 3 5 6 7	
Permitted Phases						5 6 7
Actuated Green, G (s)	14.0	82.0	20.0	20.0	74.0	98.0
Effective Green, g (s)	14.0	82.0	20.0	20.0	74.0	98.0
Actuated g/C Ratio	0.12	0.68	0.17	0.17	0.62	0.82
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	219	1923	283	290	1092	1293
v/s Ratio Prot	c0.08	0.26	0.15	c0.15	c0.32	0.20
v/s Ratio Perm						
v/c Ratio	0.67	0.39	0.90	0.93	0.52	0.25
Uniform Delay, d1	50.8	8.2	49.0	49.3	13.0	2.5
Progression Factor	1.00	1.00	1.00	1.00	0.32	0.00
Incremental Delay, d2	7.5	0.1	29.3	34.0	0.2	0.1
Delay (s)	58.2	8.3	78.4	83.2	4.4	0.1
Level of Service	E	A	E	F	A	A
Approach Delay (s)	16.5			80.9	2.7	
Approach LOS	B			F	A	

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.3%	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												
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	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.95	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1742	1553	1736	1827			3336	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1742	1553	1736	1827			3336	
Volume (vph)	0	0	0	148	5	329	138	435	0	0	655	309
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	163	5	362	152	478	0	0	720	340
RTOR Reduction (vph)	0	0	0	0	0	289	0	0	0	0	47	0
Lane Group Flow (vph)	0	0	0	0	168	73	152	478	0	0	1013	0
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	4%	4%	4%	3%	3%	3%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					24.0	24.0	11.9	35.2			71.1	
Effective Green, g (s)					24.0	24.0	11.9	35.2			71.1	
Actuated g/C Ratio					0.20	0.20	0.10	0.30			0.60	
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)					351	313	174	540			1993	
v/s Ratio Prot					c0.10	0.05	0.09	c0.26			c0.30	
v/s Ratio Perm												
v/c Ratio					0.48	0.23	0.87	0.89			0.51	
Uniform Delay, d1					42.0	39.8	52.8	40.0			13.8	
Progression Factor					1.00	1.00	1.00	1.00			0.89	
Incremental Delay, d2					1.0	0.4	35.0	15.9			0.2	
Delay (s)					43.0	40.2	87.8	55.9			12.5	
Level of Service					D	D	F	E			B	
Approach Delay (s)		0.0			41.1			63.6			12.5	
Approach LOS		A			D			E			B	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.96	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1811	1615	1787	1881			3425	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1811	1615	1787	1881			3425	
Volume (vph)	0	0	0	201	3	410	72	479	0	0	803	311
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	226	3	461	81	538	0	0	902	349
RTOR Reduction (vph)	0	0	0	0	0	369	0	0	0	0	33	0
Lane Group Flow (vph)	0	0	0	0	229	92	81	538	0	0	1218	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					24.0	24.0	10.1	36.0			73.9	
Effective Green, g (s)					24.0	24.0	10.1	36.0			73.9	
Actuated g/C Ratio					0.20	0.20	0.08	0.30			0.62	
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)					362	323	150	564			2109	
v/s Ratio Prot					c0.13	0.06	0.05	c0.29			c0.36	
v/s Ratio Perm												
v/c Ratio					0.63	0.29	0.54	0.95			0.58	
Uniform Delay, d1					44.0	40.7	52.7	41.2			13.7	
Progression Factor					1.00	1.00	1.00	1.00			0.89	
Incremental Delay, d2					3.6	0.5	3.9	26.6			0.3	
Delay (s)					47.5	41.2	56.6	67.8			12.5	
Level of Service					D	D	E	E			B	
Approach Delay (s)		0.0			43.3			66.3			12.5	
Approach LOS		A			D			E			B	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1740	1553					1827	1553	1752	1845	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1740	1553					1827	1553	1752	1845	
Volume (vph)	231	1	98	0	0	0	0	409	216	324	470	0
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)	251	1	107	0	0	0	0	445	235	352	511	0
RTOR Reduction (vph)	0	0	84	0	0	0	0	0	161	0	0	0
Lane Group Flow (vph)	0	252	23	0	0	0	0	445	74	352	511	0
Heavy Vehicles (%)	4%	4%	4%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		13.7	13.7					20.3	20.3	18.4	42.7	
Effective Green, g (s)		13.7	13.7					20.3	20.3	18.4	42.7	
Actuated g/C Ratio		0.21	0.21					0.32	0.32	0.29	0.66	
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)		370	330					576	490	501	1223	
v/s Ratio Prot								c0.24		c0.20	0.28	
v/s Ratio Perm		0.14	0.01						0.05			
v/c Ratio		0.68	0.07					0.77	0.15	0.70	0.42	
Uniform Delay, d1		23.3	20.3					20.0	15.9	20.6	5.1	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		5.1	0.1					6.4	0.1	4.4	0.2	
Delay (s)		28.4	20.3					26.3	16.0	25.0	5.3	
Level of Service		C	C					C	B	C	A	
Approach Delay (s)		26.0			0.0			22.8			13.3	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	64.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.9%	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												
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		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1793	1599					1881	1599	1770	1863	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1793	1599					1881	1599	1770	1863	
Volume (vph)	157	2	124	0	0	0	0	376	284	374	602	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	167	2	132	0	0	0	0	400	302	398	640	0
RTOR Reduction (vph)	0	0	113	0	0	0	0	0	201	0	0	0
Lane Group Flow (vph)	0	169	19	0	0	0	0	400	101	398	640	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		8.8	8.8					20.1	20.1	19.2	43.3	
Effective Green, g (s)		8.8	8.8					20.1	20.1	19.2	43.3	
Actuated g/C Ratio		0.15	0.15					0.33	0.33	0.32	0.72	
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)		263	234					629	535	565	1342	
v/s Ratio Prot								c0.21		c0.22	0.34	
v/s Ratio Perm		0.09	0.01						0.06			
v/c Ratio		0.64	0.08					0.64	0.19	0.70	0.48	
Uniform Delay, d1		24.2	22.2					16.9	14.2	18.0	3.6	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		5.3	0.2					2.1	0.2	4.0	0.3	
Delay (s)		29.5	22.3					19.0	14.4	21.9	3.8	
Level of Service		C	C					B	B	C	A	
Approach Delay (s)		26.3			0.0			17.0			10.8	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	60.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	2	2	14	115	184	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2	2	15	121	194	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				457		
pX, platoon unblocked						
vC, conflicting volume	352	201	208			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	352	201	208			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	639	840	1362			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	4	136	208
Volume Left	2	15	0
Volume Right	2	0	15
cSH	726	1362	1700
Volume to Capacity	0.01	0.01	0.12
Queue Length 95th (ft)	0	1	0
Control Delay (s)	10.0	0.9	0.0
Lane LOS	A	A	
Approach Delay (s)	10.0	0.9	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	12	12	3	186	109	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	13	13	3	196	115	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				457		
pX, platoon unblocked						
vC, conflicting volume	318	116	118			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	318	116	118			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	673	936	1470			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	199	118
Volume Left	13	3	0
Volume Right	13	0	3
cSH	783	1470	1700
Volume to Capacity	0.03	0.00	0.07
Queue Length 95th (ft)	2	0	0
Control Delay (s)	9.7	0.1	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	0.1	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	22.2%	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)	7	0	9	56	0	60
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	9	0	11	70	0	75
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	121	46			81	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	121	46			81	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	879	1029			1529	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	81	75
Volume Left	9	0	0
Volume Right	0	70	0
cSH	879	1700	1529
Volume to Capacity	0.01	0.05	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.1	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.1	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	13.9%	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)	56	0	47	6	0	19
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	76	0	64	8	0	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	93	68			72	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	93	68			72	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	100			100	
cM capacity (veh/h)	912	1001			1541	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	76	72	26
Volume Left	76	0	0
Volume Right	0	8	0
cSH	912	1700	1541
Volume to Capacity	0.08	0.04	0.00
Queue Length 95th (ft)	7	0	0
Control Delay (s)	9.3	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.3	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	350	0	0	379	50	0	0	1	55	0	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	376	0	0	408	54	0	0	1	59	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					814							
pX, platoon unblocked												
vC, conflicting volume	461			376			842	857	376	831	830	434
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	461			376			842	857	376	831	830	434
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	80	100	98
cM capacity (veh/h)	1089			1155			278	293	672	289	305	626

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	386	461	1	71
Volume Left	10	0	0	59
Volume Right	0	54	1	12
cSH	1089	1155	672	317
Volume to Capacity	0.01	0.00	0.00	0.22
Queue Length 95th (ft)	1	0	0	21
Control Delay (s)	0.3	0.0	10.4	19.6
Lane LOS	A		B	C
Approach Delay (s)	0.3	0.0	10.4	19.6
Approach LOS			B	C

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	488	3	0	362	50	0	0	1	61	0	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	542	3	0	402	56	0	0	1	68	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					814							
pX, platoon unblocked												
vC, conflicting volume	458			546			991	1011	544	984	984	430
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	458			546			991	1011	544	984	984	430
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	70	100	99
cM capacity (veh/h)	1108			1024			224	241	543	225	246	623

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	550	458	1	76
Volume Left	4	0	0	68
Volume Right	3	56	1	8
cSH	1108	1024	543	241
Volume to Capacity	0.00	0.00	0.00	0.31
Queue Length 95th (ft)	0	0	0	32
Control Delay (s)	0.1	0.0	11.6	26.6
Lane LOS	A		B	D
Approach Delay (s)	0.1	0.0	11.6	26.6
Approach LOS			B	D

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	21	378	15	20	395	158	21	21	23	22	4	6
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)	23	411	16	22	429	172	23	23	25	24	4	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked	0.82						0.82	0.82		0.82	0.82	0.82
vC, conflicting volume	601			427			946	1109	419	1052	1032	515
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	515			427			935	1133	419	1063	1038	411
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			98			88	85	96	83	98	99
cM capacity (veh/h)	856			1116			187	157	628	138	183	531

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	23	427	22	601	71	35
Volume Left	23	0	22	0	23	24
Volume Right	0	16	0	172	25	7
cSH	856	1700	1116	1700	230	166
Volume to Capacity	0.03	0.25	0.02	0.35	0.31	0.21
Queue Length 95th (ft)	2	0	1	0	31	19
Control Delay (s)	9.3	0.0	8.3	0.0	27.4	32.4
Lane LOS	A		A		D	D
Approach Delay (s)	0.5		0.3		27.4	32.4
Approach LOS					D	D

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	8	460	76	60	312	36	68	5	76	179	20	19
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	9	489	81	64	332	38	72	5	81	190	21	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked	0.93						0.93	0.93		0.93	0.93	0.93
vC, conflicting volume	370			570			1037	1045	530	1069	1066	351
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	323			570			1040	1048	530	1074	1071	302
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			94			56	97	85	0	89	97
cM capacity (veh/h)	1155			1002			164	198	551	147	192	690

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	9	570	64	370	159	232
Volume Left	9	0	64	0	72	190
Volume Right	0	81	0	38	81	20
cSH	1155	1700	1002	1700	257	161
Volume to Capacity	0.01	0.34	0.06	0.22	0.62	1.44
Queue Length 95th (ft)	1	0	5	0	92	369
Control Delay (s)	8.1	0.0	8.8	0.0	39.0	281.8
Lane LOS	A		A		E	F
Approach Delay (s)	0.1		1.3		39.0	281.8
Approach LOS					E	F

Intersection Summary			
Average Delay	51.4		
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
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	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.96			1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1736	1821		1703	1717			1702	1468	1805	1633	
Flt Permitted	0.27	1.00		0.48	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (perm)	500	1821		863	1717			1702	1468	1805	1633	
Volume (vph)	19	380	8	68	529	207	3	6	50	127	4	54
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)	21	413	9	74	575	225	3	7	54	138	4	59
RTOR Reduction (vph)	0	1	0	0	8	0	0	0	51	0	52	0
Lane Group Flow (vph)	21	421	0	74	792	0	0	10	3	138	11	0
Heavy Vehicles (%)	4%	4%	4%	6%	6%	6%	10%	10%	10%	0%	0%	0%
Turn Type	Perm			Perm			Split		Perm	Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2			6					4			
Actuated Green, G (s)	87.9	87.9		87.9	87.9			5.7	5.7	14.4	14.4	
Effective Green, g (s)	87.9	87.9		87.9	87.9			5.7	5.7	14.4	14.4	
Actuated g/C Ratio	0.73	0.73		0.73	0.73			0.05	0.05	0.12	0.12	
Clearance Time (s)	4.0	4.0		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	3.0	3.0	
Lane Grp Cap (vph)	366	1334		632	1258			81	70	217	196	
v/s Ratio Prot		0.23			c0.46			c0.01		c0.08	0.01	
v/s Ratio Perm	0.04			0.09					0.00			
v/c Ratio	0.06	0.32		0.12	0.63			0.12	0.04	0.64	0.06	
Uniform Delay, d1	4.5	5.6		4.7	8.0			54.8	54.5	50.3	46.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.6		0.4	2.4			0.7	0.2	6.0	0.1	
Delay (s)	4.8	6.2		5.1	10.4			55.4	54.7	56.3	46.9	
Level of Service	A	A		A	B			E	D	E	D	
Approach Delay (s)		6.1			9.9			54.9			53.3	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.5%	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)	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	1.00			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97			1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1852		1770	1811			1807	1583	1805	1693	
Flt Permitted	0.43	1.00		0.31	1.00			0.97	1.00	0.95	1.00	
Satd. Flow (perm)	802	1852		578	1811			1807	1583	1805	1693	
Volume (vph)	68	612	25	157	365	84	20	12	155	191	8	23
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	72	651	27	167	388	89	21	13	165	203	9	24
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	154	0	20	0
Lane Group Flow (vph)	72	677	0	167	472	0	0	34	11	203	13	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Split		Perm	Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2			6					4			
Actuated Green, G (s)	81.3	81.3		81.3	81.3			8.2	8.2	18.5	18.5	
Effective Green, g (s)	81.3	81.3		81.3	81.3			8.2	8.2	18.5	18.5	
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.07	0.07	0.15	0.15	
Clearance Time (s)	4.0	4.0		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	3.0	3.0	
Lane Grp Cap (vph)	543	1255		392	1227			123	108	278	261	
v/s Ratio Prot		c0.37			0.26			c0.02		c0.11	0.01	
v/s Ratio Perm	0.09			0.29					0.01			
v/c Ratio	0.13	0.54		0.43	0.38			0.28	0.10	0.73	0.05	
Uniform Delay, d1	6.9	9.8		8.8	8.4			53.1	52.5	48.4	43.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	1.7		3.4	0.9			1.2	0.4	9.5	0.1	
Delay (s)	7.4	11.5		12.1	9.3			54.3	52.9	57.8	43.3	
Level of Service	A	B		B	A			D	D	E	D	
Approach Delay (s)		11.1			10.1			53.1			55.8	
Approach LOS		B			B			D			E	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.7%	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	4.0
Lane Util. Factor	1.00	0.88	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (prot)	1827	2733	1649	1685	1703	1524
Flt Permitted	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (perm)	1827	2733	1649	1685	1703	1524
Volume (vph)	48	517	434	111	685	242
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	52	556	467	119	737	260
RTOR Reduction (vph)	0	0	0	0	0	40
Lane Group Flow (vph)	52	556	286	300	737	220
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Turn Type		custom	Split			custom
Protected Phases	4	4 5 7	3	3	5 6 7 3 5 6 7	
Permitted Phases						5 6 7
Actuated Green, G (s)	10.0	74.8	23.6	23.6	70.9	98.5
Effective Green, g (s)	10.0	74.8	23.6	23.6	70.9	98.5
Actuated g/C Ratio	0.09	0.64	0.20	0.20	0.61	0.85
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	157	1755	334	341	1036	1289
v/s Ratio Prot	0.03	c0.20	0.17	c0.18	c0.43	0.14
v/s Ratio Perm						
v/c Ratio	0.33	0.32	0.86	0.88	0.71	0.17
Uniform Delay, d1	50.1	9.4	44.8	45.1	15.7	1.6
Progression Factor	1.00	1.00	1.00	1.00	0.58	0.00
Incremental Delay, d2	1.2	0.1	18.9	21.8	1.9	0.1
Delay (s)	51.3	9.5	63.7	66.9	11.0	0.1
Level of Service	D	A	E	E	B	A
Approach Delay (s)	13.1			65.3	8.1	
Approach LOS	B			E	A	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	116.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.2%	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	4.0
Lane Util. Factor	1.00	0.88	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (prot)	1881	2814	1698	1742	1770	1583
Flt Permitted	1.00	1.00	0.95	0.97	0.95	1.00
Satd. Flow (perm)	1881	2814	1698	1742	1770	1583
Volume (vph)	159	793	352	116	483	335
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	169	844	374	123	514	356
RTOR Reduction (vph)	0	0	0	0	0	30
Lane Group Flow (vph)	169	844	242	255	514	326
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type		custom	Split			custom
Protected Phases	4	4 5 7	3	3	5 6 7 3	5 6 7
Permitted Phases						5 6 7
Actuated Green, G (s)	14.0	81.6	20.0	20.0	73.6	97.6
Effective Green, g (s)	14.0	81.6	20.0	20.0	73.6	97.6
Actuated g/C Ratio	0.12	0.68	0.17	0.17	0.62	0.82
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	220	1920	284	291	1089	1292
v/s Ratio Prot	c0.09	c0.30	0.14	c0.15	c0.29	0.21
v/s Ratio Perm						
v/c Ratio	0.77	0.44	0.85	0.88	0.47	0.25
Uniform Delay, d1	51.2	8.6	48.4	48.6	12.5	2.5
Progression Factor	1.00	1.00	1.00	1.00	0.35	0.03
Incremental Delay, d2	14.8	0.2	21.1	24.2	0.2	0.1
Delay (s)	66.0	8.8	69.4	72.8	4.5	0.1
Level of Service	E	A	E	E	A	A
Approach Delay (s)	18.3			71.2	2.7	
Approach LOS	B			E	A	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	119.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	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												
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	
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	
Frt					1.00	0.85	1.00	1.00			0.95	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1742	1553	1736	3471			3335	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1742	1553	1736	3471			3335	
Volume (vph)	0	0	0	148	5	377	138	524	0	0	632	303
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	163	5	414	152	576	0	0	695	333
RTOR Reduction (vph)	0	0	0	0	0	328	0	0	0	0	49	0
Lane Group Flow (vph)	0	0	0	0	168	86	152	576	0	0	979	0
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	4%	4%	4%	3%	3%	3%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					24.1	24.1	11.8	32.7			68.6	
Effective Green, g (s)					24.1	24.1	11.8	32.7			68.6	
Actuated g/C Ratio					0.21	0.21	0.10	0.28			0.59	
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)					360	321	176	974			1964	
v/s Ratio Prot					c0.10	0.06	c0.09	c0.17			c0.29	
v/s Ratio Perm												
v/c Ratio					0.47	0.27	0.86	0.59			0.50	
Uniform Delay, d1					40.6	38.8	51.6	36.1			13.9	
Progression Factor					1.00	1.00	1.00	1.00			0.91	
Incremental Delay, d2					1.0	0.4	32.8	1.0			0.2	
Delay (s)					41.5	39.2	84.3	37.1			12.8	
Level of Service					D	D	F	D			B	
Approach Delay (s)		0.0			39.9			47.0			12.8	
Approach LOS		A			D			D			B	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	116.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	
Frt					1.00	0.85	1.00	1.00			0.96	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1811	1615	1787	1881			3420	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1811	1615	1787	1881			3420	
Volume (vph)	0	0	0	201	3	400	72	436	0	0	813	328
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	226	3	449	81	490	0	0	913	369
RTOR Reduction (vph)	0	0	0	0	0	359	0	0	0	0	35	0
Lane Group Flow (vph)	0	0	0	0	229	90	81	490	0	0	1247	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					24.0	24.0	10.1	35.6			73.5	
Effective Green, g (s)					24.0	24.0	10.1	35.6			73.5	
Actuated g/C Ratio					0.20	0.20	0.08	0.30			0.61	
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)					363	324	151	560			2102	
v/s Ratio Prot					c0.13	0.06	0.05	c0.26			c0.36	
v/s Ratio Perm												
v/c Ratio					0.63	0.28	0.54	0.88			0.59	
Uniform Delay, d1					43.7	40.5	52.5	39.9			14.0	
Progression Factor					1.00	1.00	1.00	1.00			1.05	
Incremental Delay, d2					3.6	0.5	3.6	14.2			0.4	
Delay (s)					47.3	40.9	56.1	54.1			15.1	
Level of Service					D	D	E	D			B	
Approach Delay (s)		0.0			43.1			54.4			15.1	
Approach LOS		A			D			D			B	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	119.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	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												
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		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1740	1553					1827	1553	1752	1845	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1740	1553					1827	1553	1752	1845	
Volume (vph)	261	1	98	0	0	0	0	403	216	320	451	0
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)	284	1	107	0	0	0	0	438	235	348	490	0
RTOR Reduction (vph)	0	0	83	0	0	0	0	0	162	0	0	0
Lane Group Flow (vph)	0	285	24	0	0	0	0	438	73	348	490	0
Heavy Vehicles (%)	4%	4%	4%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		14.9	14.9					20.3	20.3	18.3	42.6	
Effective Green, g (s)		14.9	14.9					20.3	20.3	18.3	42.6	
Actuated g/C Ratio		0.23	0.23					0.31	0.31	0.28	0.65	
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)		396	353					566	481	489	1200	
v/s Ratio Prot								c0.24		c0.20	0.27	
v/s Ratio Perm		0.16	0.02						0.05			
v/c Ratio		0.72	0.07					0.77	0.15	0.71	0.41	
Uniform Delay, d1		23.4	19.9					20.5	16.4	21.2	5.5	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		6.2	0.1					6.5	0.1	4.9	0.2	
Delay (s)		29.5	19.9					27.0	16.5	26.1	5.7	
Level of Service		C	B					C	B	C	A	
Approach Delay (s)		26.9			0.0			23.4			14.1	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.7%	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												
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		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1793	1599					1881	1599	1770	1863	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1793	1599					1881	1599	1770	1863	
Volume (vph)	145	2	124	0	0	0	0	345	284	406	580	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	154	2	132	0	0	0	0	367	302	432	617	0
RTOR Reduction (vph)	0	0	113	0	0	0	0	0	207	0	0	0
Lane Group Flow (vph)	0	156	19	0	0	0	0	367	95	432	617	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		8.5	8.5					18.7	18.7	20.1	42.8	
Effective Green, g (s)		8.5	8.5					18.7	18.7	20.1	42.8	
Actuated g/C Ratio		0.14	0.14					0.32	0.32	0.34	0.72	
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)		257	229					593	504	600	1345	
v/s Ratio Prot								c0.20		c0.24	0.33	
v/s Ratio Perm		0.09	0.01						0.06			
v/c Ratio		0.61	0.08					0.62	0.19	0.72	0.46	
Uniform Delay, d1		23.8	22.0					17.3	14.8	17.1	3.4	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		4.0	0.2					1.9	0.2	4.1	0.2	
Delay (s)		27.9	22.2					19.2	15.0	21.3	3.7	
Level of Service		C	C					B	B	C	A	
Approach Delay (s)		25.3			0.0			17.3			10.9	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	59.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	5	25	178	55	160	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	26	187	58	168	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				457		
pX, platoon unblocked						
vC, conflicting volume	622	189	211			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	622	189	211			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	97	86			
cM capacity (veh/h)	388	852	1360			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	32	245	211
Volume Left	5	187	0
Volume Right	26	0	42
cSH	711	1360	1700
Volume to Capacity	0.04	0.14	0.12
Queue Length 95th (ft)	3	12	0
Control Delay (s)	10.3	6.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.3	6.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	34	155	32	132	67	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	36	163	34	139	71	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				457		
pX, platoon unblocked						
vC, conflicting volume	281	74	78			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	281	74	78			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	83	98			
cM capacity (veh/h)	694	987	1521			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	199	173	78
Volume Left	36	34	0
Volume Right	163	0	7
cSH	918	1521	1700
Volume to Capacity	0.22	0.02	0.05
Queue Length 95th (ft)	21	2	0
Control Delay (s)	10.0	1.6	0.0
Lane LOS	B	A	
Approach Delay (s)	10.0	1.6	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	33.5%	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)	7	0	9	56	0	60
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	9	0	11	70	0	75
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	121	46			81	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	121	46			81	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	879	1029			1529	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	81	75
Volume Left	9	0	0
Volume Right	0	70	0
cSH	879	1700	1529
Volume to Capacity	0.01	0.05	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.1	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.1	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	13.9%	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)	56	0	47	6	0	19
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	76	0	64	8	0	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	93	68			72	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	93	68			72	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	100			100	
cM capacity (veh/h)	912	1001			1541	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	76	72	26
Volume Left	76	0	0
Volume Right	0	8	0
cSH	912	1700	1541
Volume to Capacity	0.08	0.04	0.00
Queue Length 95th (ft)	7	0	0
Control Delay (s)	9.3	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.3	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	362	0	0	387	50	0	0	1	55	0	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	389	0	0	416	54	0	0	1	59	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					814							
pX, platoon unblocked	0.98						0.98	0.98		0.98	0.98	0.98
vC, conflicting volume	470			389			863	878	389	853	852	443
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	459			389			861	876	389	850	849	432
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	78	100	98
cM capacity (veh/h)	1070			1142			264	280	661	275	292	616

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	399	470	1	71
Volume Left	10	0	0	59
Volume Right	0	54	1	12
cSH	1070	1142	661	303
Volume to Capacity	0.01	0.00	0.00	0.23
Queue Length 95th (ft)	1	0	0	22
Control Delay (s)	0.3	0.0	10.5	20.5
Lane LOS	A		B	C
Approach Delay (s)	0.3	0.0	10.5	20.5
Approach LOS			B	C

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	503	3	0	378	50	0	0	1	61	0	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	4	559	3	0	420	56	0	0	1	68	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					814							
pX, platoon unblocked	1.00						1.00	1.00		1.00	1.00	1.00
vC, conflicting volume	476			562			1025	1045	561	1018	1019	448
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	473			562			1025	1045	561	1018	1019	445
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	68	100	99
cM capacity (veh/h)	1089			1009			211	229	531	213	234	608

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	567	476	1	76
Volume Left	4	0	0	68
Volume Right	3	56	1	8
cSH	1089	1009	531	228
Volume to Capacity	0.00	0.00	0.00	0.33
Queue Length 95th (ft)	0	0	0	35
Control Delay (s)	0.1	0.0	11.8	28.4
Lane LOS	A		B	D
Approach Delay (s)	0.1	0.0	11.8	28.4
Approach LOS			B	D

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	21	390	15	20	403	158	21	21	23	22	4	6
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)	23	424	16	22	438	172	23	23	25	24	4	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked	0.86						0.86	0.86		0.86	0.86	0.86
vC, conflicting volume	610			440			968	1131	432	1073	1053	524
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	549			440			963	1152	432	1085	1062	449
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			98			88	86	96	83	98	99
cM capacity (veh/h)	874			1104			188	161	617	140	186	531

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	23	440	22	610	71	35
Volume Left	23	0	22	0	23	24
Volume Right	0	16	0	172	25	7
cSH	874	1700	1104	1700	233	168
Volume to Capacity	0.03	0.26	0.02	0.36	0.30	0.21
Queue Length 95th (ft)	2	0	2	0	31	19
Control Delay (s)	9.2	0.0	8.3	0.0	27.1	31.9
Lane LOS	A		A		D	D
Approach Delay (s)	0.5		0.3		27.1	31.9
Approach LOS					D	D

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	8	474	76	60	328	36	68	5	76	179	20	19
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	9	504	81	64	349	38	72	5	81	190	21	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked	0.91						0.91	0.91		0.91	0.91	0.91
vC, conflicting volume	387			585			1069	1077	545	1101	1098	368
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	325			585			1076	1084	545	1111	1108	304
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			94			52	97	85	0	88	97
cM capacity (veh/h)	1126			990			150	184	540	134	179	672

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	9	585	64	387	159	190	41
Volume Left	9	0	64	0	72	190	0
Volume Right	0	81	0	38	81	0	20
cSH	1126	1700	990	1700	240	134	278
Volume to Capacity	0.01	0.34	0.06	0.23	0.66	1.42	0.15
Queue Length 95th (ft)	1	0	5	0	104	316	13
Control Delay (s)	8.2	0.0	8.9	0.0	45.2	286.7	20.2
Lane LOS	A		A		E	F	C
Approach Delay (s)	0.1		1.3		45.2	239.0	
Approach LOS					E	F	

Intersection Summary			
Average Delay	44.1		
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1736	1821		1703	1792	1524		1702	1468	1805	1631	
Flt Permitted	0.38	1.00		0.48	1.00	1.00		0.99	1.00	0.95	1.00	
Satd. Flow (perm)	702	1821		854	1792	1524		1702	1468	1805	1631	
Volume (vph)	31	380	8	68	529	311	3	6	50	156	4	62
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	413	9	74	575	338	3	7	54	170	4	67
RTOR Reduction (vph)	0	1	0	0	0	97	0	0	51	0	58	0
Lane Group Flow (vph)	34	421	0	74	575	241	0	10	3	170	13	0
Heavy Vehicles (%)	4%	4%	4%	6%	6%	6%	10%	10%	10%	0%	0%	0%
Turn Type	Perm			Perm		Perm	Split		Perm	Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2			6		6			4			
Actuated Green, G (s)	85.6	85.6		85.6	85.6	85.6		5.7	5.7	16.7	16.7	
Effective Green, g (s)	85.6	85.6		85.6	85.6	85.6		5.7	5.7	16.7	16.7	
Actuated g/C Ratio	0.71	0.71		0.71	0.71	0.71		0.05	0.05	0.14	0.14	
Clearance Time (s)	4.0	4.0		4.0	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	3.0	3.0	3.0	
Lane Grp Cap (vph)	501	1299		609	1278	1087		81	70	251	227	
v/s Ratio Prot		0.23			c0.32			c0.01		c0.09	0.01	
v/s Ratio Perm	0.05			0.09		0.16			0.00			
v/c Ratio	0.07	0.32		0.12	0.45	0.22		0.12	0.04	0.68	0.06	
Uniform Delay, d1	5.2	6.4		5.4	7.3	5.9		54.8	54.5	49.1	44.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.7		0.4	1.1	0.5		0.7	0.2	7.1	0.1	
Delay (s)	5.4	7.1		5.8	8.4	6.3		55.4	54.7	56.2	44.9	
Level of Service	A	A		A	A	A		E	D	E	D	
Approach Delay (s)		7.0			7.5			54.9			52.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Lane Util. Factor	1.00	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		1.00	0.85	1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1852		1770	1863	1583		1807	1583	1805	1666	
Flt Permitted	0.46	1.00		0.25	1.00	1.00		0.97	1.00	0.95	1.00	
Satd. Flow (perm)	865	1852		475	1863	1583		1807	1583	1805	1666	
Volume (vph)	82	612	25	157	365	168	20	12	155	251	8	39
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	87	651	27	167	388	179	21	13	165	267	9	41
RTOR Reduction (vph)	0	1	0	0	0	77	0	0	151	0	32	0
Lane Group Flow (vph)	87	677	0	167	388	102	0	34	14	267	18	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm		Perm	Split		Perm	Split		
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2			6		6			4			
Actuated Green, G (s)	51.5	51.5		51.5	51.5	51.5		7.7	7.7	18.8	18.8	
Effective Green, g (s)	51.5	51.5		51.5	51.5	51.5		7.7	7.7	18.8	18.8	
Actuated g/C Ratio	0.57	0.57		0.57	0.57	0.57		0.09	0.09	0.21	0.21	
Clearance Time (s)	4.0	4.0		4.0	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	3.0	3.0	3.0	
Lane Grp Cap (vph)	495	1060		272	1066	906		155	135	377	348	
v/s Ratio Prot		c0.37			0.21			c0.02		c0.15	0.01	
v/s Ratio Perm	0.10			0.35		0.06			0.01			
v/c Ratio	0.18	0.64		0.61	0.36	0.11		0.22	0.10	0.71	0.05	
Uniform Delay, d1	9.2	13.0		12.7	10.4	8.8		38.3	38.0	33.1	28.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.8	2.9		10.0	1.0	0.3		0.7	0.3	6.0	0.1	
Delay (s)	9.9	15.9		22.6	11.4	9.1		39.1	38.3	39.0	28.5	
Level of Service	A	B		C	B	A		D	D	D	C	
Approach Delay (s)		15.2			13.4			38.4			37.4	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.0%	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	1.00	0.88	0.95	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	1.00	1.00	0.95	0.97	0.96	
Satd. Flow (prot)	1827	2733	1649	1683	3231	
Flt Permitted	1.00	1.00	0.95	0.97	0.96	
Satd. Flow (perm)	1827	2733	1649	1683	3231	
Volume (vph)	48	546	458	111	789	242
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	52	587	492	119	848	260
RTOR Reduction (vph)	0	0	0	0	25	0
Lane Group Flow (vph)	52	587	298	313	1083	0
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Turn Type		custom	Split			
Protected Phases	4	4 5 7	3	3	5 6 7	
Permitted Phases						
Actuated Green, G (s)	10.0	76.1	24.0	24.0	72.1	
Effective Green, g (s)	10.0	76.1	24.0	24.0	72.1	
Actuated g/C Ratio	0.08	0.64	0.20	0.20	0.61	
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	155	1761	335	342	1973	
v/s Ratio Prot	0.03	c0.21	0.18	c0.19	c0.34	
v/s Ratio Perm						
v/c Ratio	0.34	0.33	0.89	0.92	0.55	
Uniform Delay, d1	50.9	9.5	45.8	46.1	13.5	
Progression Factor	1.00	1.00	1.00	1.00	0.40	
Incremental Delay, d2	1.3	0.1	23.7	28.0	0.3	
Delay (s)	52.2	9.6	69.4	74.1	5.6	
Level of Service	D	A	E	E	A	
Approach Delay (s)	13.1			71.8	5.6	
Approach LOS	B			E	A	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	118.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.0%	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	1.00	0.88	0.95	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.94	
Flt Protected	1.00	1.00	0.95	0.97	0.97	
Satd. Flow (prot)	1881	2814	1698	1740	3308	
Flt Permitted	1.00	1.00	0.95	0.97	0.97	
Satd. Flow (perm)	1881	2814	1698	1740	3308	
Volume (vph)	159	853	381	116	567	335
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	169	907	405	123	603	356
RTOR Reduction (vph)	0	0	0	0	78	0
Lane Group Flow (vph)	169	907	257	271	881	0
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type		custom	Split			
Protected Phases	4	4 5 7	3	3	5 6 7	
Permitted Phases						
Actuated Green, G (s)	14.0	80.4	20.0	20.0	72.5	
Effective Green, g (s)	14.0	80.4	20.0	20.0	72.5	
Actuated g/C Ratio	0.12	0.68	0.17	0.17	0.61	
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	222	1909	287	294	2024	
v/s Ratio Prot	c0.09	c0.32	0.15	c0.16	c0.27	
v/s Ratio Perm						
v/c Ratio	0.76	0.48	0.90	0.92	0.44	
Uniform Delay, d1	50.6	9.0	48.2	48.5	12.2	
Progression Factor	1.00	1.00	1.00	1.00	0.27	
Incremental Delay, d2	14.2	0.2	27.8	32.6	0.1	
Delay (s)	64.9	9.2	76.0	81.1	3.4	
Level of Service	E	A	E	F	A	
Approach Delay (s)	18.0			78.7	3.4	
Approach LOS	B			E	A	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	
Frt					1.00	0.85	1.00	1.00			0.95	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1742	1553	1736	3471			3336	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1742	1553	1736	3471			3336	
Volume (vph)	0	0	0	148	5	417	138	524	0	0	670	318
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	163	5	458	152	576	0	0	736	349
RTOR Reduction (vph)	0	0	0	0	0	365	0	0	0	0	48	0
Lane Group Flow (vph)	0	0	0	0	168	93	152	576	0	0	1037	0
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	4%	4%	4%	3%	3%	3%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					24.0	24.0	11.8	34.1			70.3	
Effective Green, g (s)					24.0	24.0	11.8	34.1			70.3	
Actuated g/C Ratio					0.20	0.20	0.10	0.29			0.60	
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)					354	316	173	1002			1986	
v/s Ratio Prot					c0.10	0.06	c0.09	c0.17			c0.31	
v/s Ratio Perm												
v/c Ratio					0.47	0.29	0.88	0.57			0.52	
Uniform Delay, d1					41.5	39.9	52.4	35.8			14.0	
Progression Factor					1.00	1.00	1.00	1.00			0.93	
Incremental Delay, d2					1.0	0.5	36.0	0.8			0.2	
Delay (s)					42.5	40.4	88.4	36.6			13.2	
Level of Service					D	D	F	D			B	
Approach Delay (s)		0.0			41.0			47.4			13.2	
Approach LOS		A			D			D			B	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	118.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	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			4.0	
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	
Frt					1.00	0.85	1.00	1.00			0.96	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1811	1615	1787	3574			3420	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1811	1615	1787	3574			3420	
Volume (vph)	0	0	0	201	3	425	72	495	0	0	902	366
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	226	3	478	81	556	0	0	1013	411
RTOR Reduction (vph)	0	0	0	0	0	381	0	0	0	0	35	0
Lane Group Flow (vph)	0	0	0	0	229	97	81	556	0	0	1389	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				7	7	7	1	5			2 3 4	
Permitted Phases												
Actuated Green, G (s)					24.0	24.0	10.0	34.4			72.5	
Effective Green, g (s)					24.0	24.0	10.0	34.4			72.5	
Actuated g/C Ratio					0.20	0.20	0.08	0.29			0.61	
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)					367	327	151	1038			2092	
v/s Ratio Prot					c0.13	0.06	0.05	c0.16			c0.41	
v/s Ratio Perm												
v/c Ratio					0.62	0.30	0.54	0.54			0.66	
Uniform Delay, d1					43.1	40.1	52.0	35.3			15.0	
Progression Factor					1.00	1.00	1.00	1.00			1.06	
Incremental Delay, d2					3.3	0.5	3.6	0.5			0.7	
Delay (s)					46.4	40.6	55.7	35.9			16.6	
Level of Service					D	D	E	D			B	
Approach Delay (s)		0.0			42.5			38.4			16.6	
Approach LOS		A			D			D			B	

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	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												
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		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1740	1553					1827	1553	1752	1845	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1740	1553					1827	1553	1752	1845	
Volume (vph)	293	1	98	0	0	0	0	435	216	336	473	0
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)	318	1	107	0	0	0	0	473	235	365	514	0
RTOR Reduction (vph)	0	0	82	0	0	0	0	0	160	0	0	0
Lane Group Flow (vph)	0	319	25	0	0	0	0	473	75	365	514	0
Heavy Vehicles (%)	4%	4%	4%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		16.9	16.9					22.6	22.6	19.6	46.2	
Effective Green, g (s)		16.9	16.9					22.6	22.6	19.6	46.2	
Actuated g/C Ratio		0.24	0.24					0.32	0.32	0.28	0.65	
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)		414	369					581	494	483	1199	
v/s Ratio Prot								c0.26		c0.21	0.28	
v/s Ratio Perm		0.18	0.02						0.05			
v/c Ratio		0.77	0.07					0.81	0.15	0.76	0.43	
Uniform Delay, d1		25.3	21.0					22.3	17.4	23.6	6.0	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		8.6	0.1					8.6	0.1	6.6	0.2	
Delay (s)		33.9	21.1					30.9	17.5	30.2	6.3	
Level of Service		C	C					C	B	C	A	
Approach Delay (s)		30.7			0.0			26.4			16.2	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	71.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.4%	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	4.0	4.0	
Lane Util. Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1793	1599					1881	1599	1770	1863	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1793	1599					1881	1599	1770	1863	
Volume (vph)	169	2	124	0	0	0	0	380	284	451	624	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	180	2	132	0	0	0	0	404	302	480	664	0
RTOR Reduction (vph)	0	0	113	0	0	0	0	0	209	0	0	0
Lane Group Flow (vph)	0	182	19	0	0	0	0	404	93	480	664	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4						2			
Actuated Green, G (s)		9.3	9.3					19.6	19.6	23.0	46.6	
Effective Green, g (s)		9.3	9.3					19.6	19.6	23.0	46.6	
Actuated g/C Ratio		0.15	0.15					0.31	0.31	0.36	0.73	
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)		261	233					577	490	637	1359	
v/s Ratio Prot								c0.21		c0.27	0.36	
v/s Ratio Perm		0.10	0.01						0.06			
v/c Ratio		0.70	0.08					0.70	0.19	0.75	0.49	
Uniform Delay, d1		26.0	23.6					19.6	16.3	18.0	3.6	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		7.9	0.2					3.8	0.2	5.0	0.3	
Delay (s)		33.8	23.8					23.4	16.5	23.0	3.9	
Level of Service		C	C					C	B	C	A	
Approach Delay (s)		29.6			0.0			20.4			11.9	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	63.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	19	2	291	58	6	203
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	20	2	306	61	6	214
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	563	337			367	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	563	337			367	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	100			99	
cM capacity (veh/h)	485	705			1191	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	22	367	220
Volume Left	20	0	6
Volume Right	2	61	0
cSH	500	1700	1191
Volume to Capacity	0.04	0.22	0.01
Queue Length 95th (ft)	3	0	0
Control Delay (s)	12.5	0.0	0.3
Lane LOS	B		A
Approach Delay (s)	12.5	0.0	0.3
Approach LOS	B		

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		28.8%	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)	38	5	213	49	4	260
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	40	5	224	52	4	274
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	532	250			276	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	532	250			276	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	99			100	
cM capacity (veh/h)	506	789			1287	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	45	276	278
Volume Left	40	0	4
Volume Right	5	52	0
cSH	528	1700	1287
Volume to Capacity	0.09	0.16	0.00
Queue Length 95th (ft)	7	0	0
Control Delay (s)	12.5	0.0	0.1
Lane LOS	B		A
Approach Delay (s)	12.5	0.0	0.1
Approach LOS	B		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	5	25	178	115	184	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	26	187	121	194	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				645		
pX, platoon unblocked						
vC, conflicting volume	711	215	236			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	711	215	236			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	97	86			
cM capacity (veh/h)	343	825	1331			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	32	308	236
Volume Left	5	187	0
Volume Right	26	0	42
cSH	669	1331	1700
Volume to Capacity	0.05	0.14	0.14
Queue Length 95th (ft)	4	12	0
Control Delay (s)	10.6	5.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.6	5.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	34	155	32	186	109	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	36	163	34	196	115	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				645		
pX, platoon unblocked						
vC, conflicting volume	382	118	122			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	382	118	122			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	83	98			
cM capacity (veh/h)	607	933	1465			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	199	229	122
Volume Left	36	34	0
Volume Right	163	0	7
cSH	851	1465	1700
Volume to Capacity	0.23	0.02	0.07
Queue Length 95th (ft)	23	2	0
Control Delay (s)	10.5	1.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.5	1.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
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)	0	0	0	18	0	2	0	62	58	7	206	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	19	0	2	0	65	61	7	217	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								825				
pX, platoon unblocked												
vC, conflicting volume	329	358	217	327	327	96	217			126		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	329	358	217	327	327	96	217			126		
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 %	100	100	100	97	100	100	100			99		
cM capacity (veh/h)	620	566	823	623	588	961	1353			1460		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	21	126	224
Volume Left	0	19	0	7
Volume Right	0	2	61	0
cSH	1700	646	1353	1460
Volume to Capacity	0.00	0.03	0.00	0.01
Queue Length 95th (ft)	0	3	0	0
Control Delay (s)	0.0	10.8	0.0	0.3
Lane LOS	A	B		A
Approach Delay (s)	0.0	10.8	0.0	0.3
Approach LOS	A	B		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
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)	0	0	0	38	0	6	0	171	49	4	78	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	40	0	6	0	180	52	4	82	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								825				
pX, platoon unblocked												
vC, conflicting volume	303	322	82	296	296	206	82			232		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	303	322	82	296	296	206	82			232		
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 %	100	100	100	94	100	99	100			100		
cM capacity (veh/h)	643	593	978	654	613	835	1515			1336		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	46	232	86
Volume Left	0	40	0	4
Volume Right	0	6	52	0
cSH	1700	674	1515	1336
Volume to Capacity	0.00	0.07	0.00	0.00
Queue Length 95th (ft)	0	6	0	0
Control Delay (s)	0.0	10.7	0.0	0.4
Lane LOS	A	B		A
Approach Delay (s)	0.0	10.7	0.0	0.4
Approach LOS	A	B		

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		