Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	530	10	128	386	94	7	11	290	35	10	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.94	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3539	1518	3273	3438	1485	1770	1863	1533	1770	1781	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3539	1518	3273	3438	1485	1770	1863	1533	1770	1781	
Peak-hour factor, PHF	0.86	0.86	0.86	0.84	0.84	0.84	0.79	0.79	0.79	0.71	0.71	0.71
Adj. Flow (vph)	41	616	12	152	460	112	9	14	367	49	14	4
RTOR Reduction (vph)	0	0	6	0	0	44	0	0	239	0	2	0
Lane Group Flow (vph)	41	616	6	152	460	68	9	14	128	49	16	0
Confl. Peds. (#/hr)			13			12			10			20
Confl. Bikes (#/hr)			3			2			1		1	
Heavy Vehicles (%)	5%	2%	2%	7%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	5.2	22.7	22.7	29.2	46.7	46.7	0.8	35.4	35.4	6.7	41.3	
Effective Green, g (s)	5.2	22.7	22.7	29.2	46.7	46.7	0.8	35.4	35.4	6.7	41.3	
Actuated g/C Ratio	0.05	0.21	0.21	0.27	0.42	0.42	0.01	0.32	0.32	0.06	0.38	
Clearance Time (s)	4.0	4.0	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	3.0	3.0	
Lane Grp Cap (vph)	81	730	313	869	1460	630	13	600	493	108	669	
v/s Ratio Prot	0.02	c0.17		0.05	c0.13		0.01	0.01		c0.03	0.01	
v/s Ratio Perm			0.00			0.05			c0.08			
v/c Ratio	0.51	0.84	0.02	0.17	0.32	0.11	0.69	0.02	0.26	0.45	0.02	
Uniform Delay, d1	51.1	41.9	34.8	31.1	21.0	19.1	54.5	25.5	27.6	49.9	21.6	
Progression Factor	1.00	1.00	1.00	0.90	0.83	1.08	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.9	8.8	0.0	0.1	0.6	0.3	96.3	0.1	1.3	3.0	0.1	
Delay (s)	56.0	50.8	34.8	28.1	18.0	21.0	150.8	25.6	28.9	52.9	21.7	
Level of Service	E	D	C	C	B	C	F	C	C	D	C	
Approach Delay (s)		50.8			20.6			31.6			44.5	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

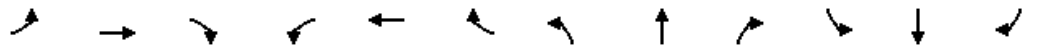
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	71	785	572	266	153	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1498	1770	1547
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1498	1770	1547
Peak-hour factor, PHF	0.93	0.93	0.88	0.88	0.86	0.86
Adj. Flow (vph)	76	844	650	302	178	42
RTOR Reduction (vph)	0	0	0	54	0	36
Lane Group Flow (vph)	76	844	650	248	178	6
Confl. Peds. (#/hr)				8		4
Confl. Bikes (#/hr)				13		2
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	8.8	85.6	72.8	72.8	16.4	16.4
Effective Green, g (s)	8.8	85.6	72.8	72.8	16.4	16.4
Actuated g/C Ratio	0.08	0.78	0.66	0.66	0.15	0.15
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)	142	2754	2342	991	264	231
v/s Ratio Prot	c0.04	c0.24	0.18		c0.10	
v/s Ratio Perm				0.17		0.00
v/c Ratio	0.54	0.31	0.28	0.25	0.67	0.03
Uniform Delay, d1	48.6	3.6	7.7	7.5	44.3	40.0
Progression Factor	1.03	0.31	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	0.3	0.3	0.6	6.6	0.0
Delay (s)	53.3	1.4	8.0	8.1	50.9	40.0
Level of Service	D	A	A	A	D	D
Approach Delay (s)		5.7	8.0		48.8	
Approach LOS		A	A		D	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.8%	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												
Volume (vph)	98	515	188	30	584	69	141	44	23	95	86	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1529	1770	3539	1485	1770	1863	1538	1719	1863	1435
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1529	1770	3539	1485	1770	1863	1538	1719	1863	1435
Peak-hour factor, PHF	0.82	0.82	0.82	0.80	0.80	0.80	0.67	0.67	0.67	0.80	0.80	0.80
Adj. Flow (vph)	120	628	229	38	730	86	210	66	34	119	108	188
RTOR Reduction (vph)	0	0	44	0	0	14	0	0	21	0	0	121
Lane Group Flow (vph)	120	628	185	38	730	72	210	66	13	119	108	67
Confl. Peds. (#/hr)			4			9			4			16
Confl. Bikes (#/hr)		1	5		1	2		2	12		11	44
Heavy Vehicles (%)	2%	2%	2%	2%	2%	4%	2%	2%	2%	5%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	8.7	30.5	30.5	3.1	24.9	24.9	15.5	19.1	19.1	8.8	12.4	12.4
Effective Green, g (s)	8.7	30.5	30.5	3.1	24.9	24.9	15.5	19.1	19.1	8.8	12.4	12.4
Actuated g/C Ratio	0.11	0.39	0.39	0.04	0.32	0.32	0.20	0.25	0.25	0.11	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	199	1393	602	71	1137	477	354	459	379	195	298	230
v/s Ratio Prot	c0.07	0.18		0.02	c0.21		c0.12	0.04		0.07	c0.06	
v/s Ratio Perm			0.12			0.05			0.01			0.05
v/c Ratio	0.60	0.45	0.31	0.54	0.64	0.15	0.59	0.14	0.03	0.61	0.36	0.29
Uniform Delay, d1	32.8	17.3	16.2	36.5	22.5	18.8	28.1	22.8	22.2	32.7	29.0	28.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.1	0.2	0.3	7.6	1.3	0.1	2.7	0.1	0.0	5.5	0.8	0.7
Delay (s)	37.8	17.6	16.5	44.0	23.7	18.9	30.8	23.0	22.2	38.3	29.8	29.4
Level of Service	D	B	B	D	C	B	C	C	C	D	C	C
Approach Delay (s)		19.8			24.2			28.2			32.0	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	77.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.1%	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												
Volume (vph)	26	456	138	144	449	30	165	118	40	46	135	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.93	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1687	3539	1518	1770	3539	1419	1703	1759	1466	1770	3343	1534
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1687	3539	1518	1770	3539	1419	1703	1759	1466	1770	3343	1534
Peak-hour factor, PHF	0.86	0.86	0.86	0.88	0.88	0.88	0.89	0.89	0.89	0.79	0.79	0.79
Adj. Flow (vph)	30	530	160	164	510	34	185	133	45	58	171	71
RTOR Reduction (vph)	0	0	36	0	0	20	0	0	31	0	0	54
Lane Group Flow (vph)	30	530	124	164	510	14	185	133	14	58	171	17
Confl. Peds. (#/hr)			3			4			4			13
Confl. Bikes (#/hr)		2	8		3	5		2	73		71	1
Heavy Vehicles (%)	7%	2%	4%	2%	2%	10%	6%	8%	2%	2%	8%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	1.9	20.0	20.0	12.3	30.4	30.4	13.4	20.9	20.9	4.5	12.0	12.0
Effective Green, g (s)	1.9	20.0	20.0	12.3	30.4	30.4	13.4	20.9	20.9	4.5	12.0	12.0
Actuated g/C Ratio	0.03	0.27	0.27	0.17	0.41	0.41	0.18	0.28	0.28	0.06	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	43	960	412	295	1460	585	310	499	416	108	544	250
v/s Ratio Prot	0.02	c0.15		c0.09	0.14		c0.11	c0.08		0.03	0.05	
v/s Ratio Perm			0.08			0.01			0.01			0.01
v/c Ratio	0.70	0.55	0.30	0.56	0.35	0.02	0.60	0.27	0.03	0.54	0.31	0.07
Uniform Delay, d1	35.6	23.0	21.3	28.2	14.9	12.8	27.7	20.5	19.1	33.6	27.2	26.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	39.3	0.7	0.4	2.3	0.1	0.0	3.1	0.3	0.0	5.1	0.3	0.1
Delay (s)	74.9	23.7	21.7	30.5	15.0	12.9	30.7	20.7	19.1	38.6	27.6	26.2
Level of Service	E	C	C	C	B	B	C	C	B	D	C	C
Approach Delay (s)		25.4			18.5			25.6			29.4	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	73.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	378	187	225	501	138	167
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.94	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	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)	3539	1488	1770	3539	1770	1563
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1488	1770	3539	1770	1563
Peak-hour factor, PHF	0.76	0.76	0.82	0.82	0.56	0.56
Adj. Flow (vph)	497	246	274	611	246	298
RTOR Reduction (vph)	0	65	0	0	0	233
Lane Group Flow (vph)	497	181	274	611	246	65
Confl. Peds. (#/hr)		8				
Confl. Bikes (#/hr)		14				1
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	15.7	15.7	16.0	35.7	15.5	15.5
Effective Green, g (s)	15.7	15.7	16.0	35.7	15.5	15.5
Actuated g/C Ratio	0.22	0.22	0.23	0.50	0.22	0.22
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)	784	330	399	1782	387	342
v/s Ratio Prot	c0.14		c0.15	0.17	c0.14	
v/s Ratio Perm		0.12				0.04
v/c Ratio	0.63	0.55	0.69	0.34	0.64	0.19
Uniform Delay, d1	25.0	24.5	25.2	10.6	25.1	22.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	1.9	4.9	0.1	3.4	0.3
Delay (s)	26.7	26.3	30.0	10.7	28.5	22.9
Level of Service	C	C	C	B	C	C
Approach Delay (s)	26.6			16.7	25.4	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	70.9	Sum of lost time (s)	23.7
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	40	501	645	94	147	81
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	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.96	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1463	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1463	1770	1583
Peak-hour factor, PHF	0.73	0.73	0.84	0.84	0.73	0.73
Adj. Flow (vph)	55	686	768	112	201	111
RTOR Reduction (vph)	0	0	0	12	0	84
Lane Group Flow (vph)	55	686	768	100	201	27
Confl. Peds. (#/hr)				11		
Confl. Bikes (#/hr)			15			
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	4.3	30.1	21.8	21.8	14.0	14.0
Effective Green, g (s)	4.3	30.1	21.8	21.8	14.0	14.0
Actuated g/C Ratio	0.07	0.52	0.38	0.38	0.24	0.24
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)	132	1843	1335	552	429	383
v/s Ratio Prot	0.03	c0.19	c0.22		c0.11	
v/s Ratio Perm				0.07		0.02
v/c Ratio	0.42	0.37	0.58	0.18	0.47	0.07
Uniform Delay, d1	25.6	8.2	14.3	12.0	18.7	16.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	0.1	0.6	0.2	0.8	0.1
Delay (s)	27.7	8.4	14.9	12.2	19.5	17.0
Level of Service	C	A	B	B	B	B
Approach Delay (s)		9.8	14.6		18.6	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	57.8	Sum of lost time (s)	17.7
Intersection Capacity Utilization	39.3%	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												
Volume (vph)	29	506	124	296	603	58	59	66	106	145	183	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1540	3400	3539	1525	1752	1863	1525	1770	1863	1446
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1540	3400	3539	1525	1752	1863	1525	1770	1863	1446
Peak-hour factor, PHF	0.75	0.75	0.75	0.77	0.77	0.77	0.78	0.78	0.78	0.83	0.83	0.83
Adj. Flow (vph)	39	675	165	384	783	75	76	85	136	175	220	95
RTOR Reduction (vph)	0	0	37	0	0	8	0	0	112	0	0	26
Lane Group Flow (vph)	39	675	128	384	783	67	76	85	24	175	220	69
Confl. Peds. (#/hr)			2			6			10			20
Confl. Bikes (#/hr)			2		3	2						9
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%	3%	2%	3%	2%	2%	6%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	3.2	25.4	25.4	15.2	37.4	37.4	7.3	11.9	11.9	14.0	18.6	18.6
Effective Green, g (s)	3.2	25.4	25.4	15.2	37.4	37.4	7.3	11.9	11.9	14.0	18.6	18.6
Actuated g/C Ratio	0.04	0.31	0.31	0.18	0.45	0.45	0.09	0.14	0.14	0.17	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	69	1090	474	626	1604	691	155	269	220	300	420	326
v/s Ratio Prot	0.02	c0.19		c0.11	0.22		0.04	0.05		c0.10	c0.12	
v/s Ratio Perm			0.08			0.04			0.02			0.05
v/c Ratio	0.57	0.62	0.27	0.61	0.49	0.10	0.49	0.32	0.11	0.58	0.52	0.21
Uniform Delay, d1	39.0	24.4	21.5	30.9	15.8	12.9	35.8	31.7	30.7	31.6	28.1	26.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.2	1.1	0.3	1.8	0.2	0.1	2.4	0.7	0.2	2.9	1.2	0.3
Delay (s)	49.2	25.5	21.9	32.7	16.1	13.0	38.3	32.3	30.9	34.4	29.2	26.3
Level of Service	D	C	C	C	B	B	D	C	C	C	C	C
Approach Delay (s)		25.8			21.0			33.2			30.5	
Approach LOS		C			C			C			C	

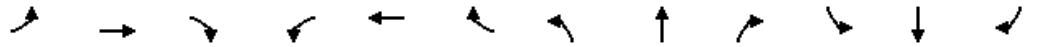
Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	82.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	673	77	54	890	0	69	0	53	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00			
Frpb, ped/bikes	1.00	1.00	0.91	1.00	1.00			1.00	0.99			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539	1403	1656	3539			1770	1563			
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539	1403	1656	3539			1770	1563			
Peak-hour factor, PHF	0.79	0.79	0.79	0.74	0.74	0.74	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	1	852	97	73	1203	0	86	0	66	0	0	0
RTOR Reduction (vph)	0	0	15	0	0	0	0	0	57	0	0	0
Lane Group Flow (vph)	1	852	82	73	1203	0	0	86	9	0	0	0
Confl. Peds. (#/hr)			47			1			1			
Confl. Bikes (#/hr)			5			1						3
Heavy Vehicles (%)	2%	2%	5%	9%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	0.5	23.4	23.4	3.4	26.3			6.1	6.1			
Effective Green, g (s)	0.5	23.4	23.4	3.4	26.3			6.1	6.1			
Actuated g/C Ratio	0.01	0.52	0.52	0.08	0.59			0.14	0.14			
Clearance Time (s)	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			
Lane Grp Cap (vph)	20	1844	731	125	2073			240	212			
v/s Ratio Prot	0.00	0.24		c0.04	c0.34			c0.05				
v/s Ratio Perm			0.06						0.01			
v/c Ratio	0.05	0.46	0.11	0.58	0.58			0.36	0.04			
Uniform Delay, d1	22.0	6.8	5.5	20.1	5.8			17.6	16.9			
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00			
Incremental Delay, d2	1.0	0.2	0.1	6.8	0.4			0.9	0.1			
Delay (s)	23.0	7.0	5.5	26.9	6.3			18.5	16.9			
Level of Service	C	A	A	C	A			B	B			
Approach Delay (s)		6.8			7.4			17.8			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.1%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	54	165	12	39	112	133	15	66	35	119	54	47
Peak Hour Factor	0.60	0.60	0.60	0.73	0.73	0.73	0.64	0.64	0.64	0.87	0.87	0.87
Hourly flow rate (vph)	90	275	20	53	153	182	23	103	55	137	62	54

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	90	295	53	336	127	55	199	54
Volume Left (vph)	90	0	53	0	23	0	137	0
Volume Right (vph)	0	20	0	182	0	55	0	54
Hadj (s)	0.53	-0.01	0.53	-0.33	0.18	-0.67	0.38	-0.67
Departure Headway (s)	7.0	6.5	7.0	6.2	7.3	6.4	7.3	6.3
Degree Utilization, x	0.18	0.53	0.10	0.57	0.26	0.10	0.40	0.09
Capacity (veh/h)	486	535	486	552	450	510	462	530
Control Delay (s)	10.3	15.3	9.6	16.0	11.6	8.9	14.0	8.7
Approach Delay (s)	14.2		15.1		10.8		12.9	
Approach LOS	B		C		B		B	

Intersection Summary				
Delay	13.7			
HCM Level of Service	B			
Intersection Capacity Utilization	44.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	145	134	95	296	174	52
Peak Hour Factor	0.72	0.72	0.79	0.79	0.57	0.57
Hourly flow rate (vph)	201	186	120	375	305	91

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total (vph)	201	186	120	375	396
Volume Left (vph)	0	0	120	0	305
Volume Right (vph)	0	186	0	0	91
Hadj (s)	0.03	-0.67	0.53	0.03	0.05
Departure Headway (s)	6.7	6.0	7.0	6.5	6.1
Degree Utilization, x	0.38	0.31	0.23	0.68	0.67
Capacity (veh/h)	508	567	493	531	564
Control Delay (s)	12.5	10.5	11.0	20.9	20.8
Approach Delay (s)	11.5		18.5		20.8
Approach LOS	B		C		C

Intersection Summary			
Delay	17.1		
HCM Level of Service	C		
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	125	102	110	108	257	358
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
Frpb, ped/bikes	1.00	0.94	1.00	1.00	1.00	0.93
Flpb, ped/bikes	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	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1486	1770	1792	1863	1472
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1486	1770	1792	1863	1472
Peak-hour factor, PHF	0.80	0.80	0.83	0.83	0.78	0.78
Adj. Flow (vph)	156	128	133	130	329	459
RTOR Reduction (vph)	0	101	0	0	0	289
Lane Group Flow (vph)	156	27	133	130	329	170
Confl. Peds. (#/hr)	66					15
Confl. Bikes (#/hr)		24		17	2	31
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	9.2	9.2	5.8	25.7	15.9	15.9
Effective Green, g (s)	9.2	9.2	5.8	25.7	15.9	15.9
Actuated g/C Ratio	0.21	0.21	0.14	0.60	0.37	0.37
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)	380	319	239	1074	690	546
v/s Ratio Prot	c0.09		c0.08	0.07	c0.18	
v/s Ratio Perm		0.02				0.12
v/c Ratio	0.41	0.09	0.56	0.12	0.48	0.31
Uniform Delay, d1	14.5	13.5	17.3	3.7	10.3	9.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.1	2.8	0.1	0.5	0.3
Delay (s)	15.2	13.6	20.1	3.8	10.8	9.9
Level of Service	B	B	C	A	B	A
Approach Delay (s)	14.5			12.0	10.3	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	42.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	22	25	68	10	22	96
Peak Hour Factor	0.65	0.65	0.89	0.89	0.74	0.74
Hourly flow rate (vph)	34	38	76	11	30	130

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	72	76	11	30	130
Volume Left (vph)	34	0	0	30	0
Volume Right (vph)	38	0	11	0	0
Hadj (s)	-0.19	0.03	-0.67	0.53	0.14
Departure Headway (s)	4.3	4.8	4.1	5.3	4.9
Degree Utilization, x	0.09	0.10	0.01	0.04	0.18
Capacity (veh/h)	797	724	843	662	720
Control Delay (s)	7.7	7.2	6.0	7.3	7.7
Approach Delay (s)	7.7	7.0		7.6	
Approach LOS	A	A		A	

Intersection Summary			
Delay	7.5		
HCM Level of Service	A		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	229	12	15	263	36	10	39	11	56	63	20
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
Frpb, ped/bikes		1.00	0.92		1.00	0.92		1.00	0.98		1.00	0.89
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.98	1.00
Satd. Flow (prot)		1852	1287		1857	1422		1713	1547		1800	1366
Flt Permitted		0.94	1.00		0.97	1.00		0.94	1.00		0.85	1.00
Satd. Flow (perm)		1756	1287		1809	1422		1629	1547		1562	1366
Peak-hour factor, PHF	0.69	0.69	0.69	0.73	0.73	0.73	0.71	0.71	0.71	0.63	0.63	0.63
Adj. Flow (vph)	35	332	17	21	360	49	14	55	15	89	100	32
RTOR Reduction (vph)	0	0	10	0	0	29	0	0	9	0	0	19
Lane Group Flow (vph)	0	367	7	0	381	20	0	69	6	0	189	13
Confl. Peds. (#/hr)	12		3	3		12	9		1	1		9
Confl. Bikes (#/hr)		1	56		4	45		2	2		1	88
Heavy Vehicles (%)	2%	2%	16%	2%	2%	5%	20%	7%	2%	2%	4%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Effective Green, g (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Actuated g/C Ratio		0.40	0.40		0.40	0.40		0.40	0.40		0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		702	515		724	569		652	619		625	546
v/s Ratio Prot												
v/s Ratio Perm		0.21	0.01		c0.21	0.01		0.04	0.00		c0.12	0.01
v/c Ratio		0.52	0.01		0.53	0.03		0.11	0.01		0.30	0.02
Uniform Delay, d1		9.1	7.2		9.1	7.3		7.5	7.2		8.2	7.3
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		2.8	0.0		2.7	0.1		0.3	0.0		1.2	0.1
Delay (s)		11.9	7.3		11.8	7.4		7.8	7.3		9.4	7.3
Level of Service		B	A		B	A		A	A		A	A
Approach Delay (s)		11.7			11.3			7.7			9.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.4%	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												
Volume (vph)	10	180	83	61	245	28	65	116	14	30	174	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95	1.00	0.99			1.00			1.00	0.94
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt		1.00	0.85	1.00	0.98			0.99			1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (prot)		1857	1504	1747	1810			1601			1847	1440
Flt Permitted		0.98	1.00	0.55	1.00			0.81			0.93	1.00
Satd. Flow (perm)		1820	1504	1012	1810			1321			1730	1440
Peak-hour factor, PHF	0.68	0.68	0.68	0.80	0.80	0.80	0.76	0.76	0.76	0.65	0.65	0.65
Adj. Flow (vph)	15	265	122	76	306	35	86	153	18	46	268	29
RTOR Reduction (vph)	0	0	71	0	8	0	0	5	0	0	0	15
Lane Group Flow (vph)	0	280	51	76	333	0	0	252	0	0	314	15
Confl. Peds. (#/hr)	6		2	2		6	10		9	9		10
Confl. Bikes (#/hr)		2	29		2	110		3	10		8	33
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%	2%	2%	14%	2%	2%	5%
Parking (#/hr)								1				
Turn Type	Perm		Perm	Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		21.0	21.0	21.0	21.0			21.0			21.0	21.0
Effective Green, g (s)		21.0	21.0	21.0	21.0			21.0			21.0	21.0
Actuated g/C Ratio		0.42	0.42	0.42	0.42			0.42			0.42	0.42
Clearance Time (s)		4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Grp Cap (vph)		764	632	425	760			555			727	605
v/s Ratio Prot					c0.18							
v/s Ratio Perm		0.15	0.03	0.08				c0.19			0.18	0.01
v/c Ratio		0.37	0.08	0.18	0.44			0.45			0.43	0.02
Uniform Delay, d1		9.9	8.7	9.1	10.3			10.4			10.3	8.5
Progression Factor		1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2		1.4	0.3	0.9	1.8			2.7			1.9	0.1
Delay (s)		11.3	9.0	10.0	12.1			13.1			12.1	8.6
Level of Service		B	A	B	B			B			B	A
Approach Delay (s)		10.6			11.8			13.1			11.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.7%	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												
Volume (vph)	10	230	22	37	340	83	15	91	12	78	237	44
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
Frpb, ped/bikes		0.99			0.97		1.00	1.00	0.95	1.00	1.00	0.91
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.99			0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1826			1731		1597	1776	1416	1770	1863	1439
Flt Permitted		0.98			0.95		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1784			1645		1597	1776	1416	1770	1863	1439
Peak-hour factor, PHF	0.68	0.68	0.68	0.76	0.76	0.76	0.84	0.84	0.84	0.78	0.78	0.78
Adj. Flow (vph)	15	338	32	49	447	109	18	108	14	100	304	56
RTOR Reduction (vph)	0	2	0	0	5	0	0	0	11	0	0	18
Lane Group Flow (vph)	0	383	0	0	600	0	18	108	3	100	304	38
Confl. Peds. (#/hr)	6		7	7		6			13			9
Confl. Bikes (#/hr)			37		14	237			2		2	39
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	13%	7%	8%	2%	2%	2%
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)		40.0			40.0		1.2	14.2	14.2	7.7	20.7	20.7
Effective Green, g (s)		40.0			40.0		1.2	14.2	14.2	7.7	20.7	20.7
Actuated g/C Ratio		0.54			0.54		0.02	0.19	0.19	0.10	0.28	0.28
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)		966			890		26	341	272	184	522	403
v/s Ratio Prot							0.01	0.06		c0.06	c0.16	
v/s Ratio Perm		0.21			c0.36				0.00			0.03
v/c Ratio		0.40			0.67		0.69	0.32	0.01	0.54	0.58	0.09
Uniform Delay, d1		9.9			12.2		36.2	25.7	24.2	31.4	22.9	19.7
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.3			2.0		57.6	0.5	0.0	3.3	1.7	0.1
Delay (s)		10.2			14.3		93.8	26.2	24.2	34.7	24.5	19.8
Level of Service		B			B		F	C	C	C	C	B
Approach Delay (s)		10.2			14.3			34.7			26.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	73.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	40	272	23	7	380	11	55	13	7	24	34	92
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.72	0.72	0.72	0.80	0.80	0.80
Hourly flow rate (vph)	48	324	27	9	463	13	76	18	10	30	42	115

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	48	351	485	94	10	73	115
Volume Left (vph)	48	0	9	76	0	30	0
Volume Right (vph)	0	27	13	0	10	0	115
Hadj (s)	0.53	-0.02	0.02	0.20	-0.36	0.27	-0.63
Departure Headway (s)	6.8	6.3	6.2	7.8	3.2	7.6	6.7
Degree Utilization, x	0.09	0.61	0.84	0.21	0.01	0.15	0.21
Capacity (veh/h)	502	549	564	416	1121	442	497
Control Delay (s)	9.3	17.4	33.2	12.8	6.2	10.8	10.3
Approach Delay (s)	16.4		33.2	12.2		10.5	
Approach LOS	C		D	B		B	

Intersection Summary				
Delay	22.0			
HCM Level of Service	C			
Intersection Capacity Utilization	43.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	214	31	28	452	38	14	58	12	30	158	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	0.98	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.98			0.99		1.00	0.97		1.00	0.95	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3284			3452		1664	1549		1763	1544	
Flt Permitted		1.00			1.00		0.31	1.00		0.70	1.00	
Satd. Flow (perm)		3284			3452		549	1549		1298	1544	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	21	274	40	36	579	49	18	74	15	38	203	88
RTOR Reduction (vph)	0	14	0	0	8	0	0	9	0	0	20	0
Lane Group Flow (vph)	0	321	0	0	656	0	18	80	0	38	271	0
Confl. Peds. (#/hr)	3		9	9		3	19		3	3		19
Confl. Bikes (#/hr)		1	1			8			2		1	24
Heavy Vehicles (%)	18%	7%	2%	2%	3%	2%	7%	5%	8%	2%	2%	2%
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		21.0			26.0		16.0	16.0		16.0	16.0	
Effective Green, g (s)		21.0			26.0		16.0	16.0		16.0	16.0	
Actuated g/C Ratio		0.28			0.35		0.21	0.21		0.21	0.21	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		920			1197		117	330		277	329	
v/s Ratio Prot		c0.10			c0.19			0.05			c0.18	
v/s Ratio Perm							0.03			0.03		
v/c Ratio		0.35			0.55		0.15	0.24		0.14	0.82	
Uniform Delay, d1		21.5			19.8		24.0	24.5		23.9	28.1	
Progression Factor		1.00			0.29		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0			1.5		2.8	1.7		1.0	20.2	
Delay (s)		22.6			7.3		26.8	26.2		24.9	48.4	
Level of Service		C			A		C	C		C	D	
Approach Delay (s)		22.6			7.3			26.3			45.7	
Approach LOS		C			A			C			D	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.2%	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												
Volume (vph)	11	226	19	32	494	22	15	27	31	23	27	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.97	1.00	
Frt		0.99			0.99		1.00	0.92		1.00	0.96	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3338			3492		1589	1420		1689	1386	
Flt Permitted		1.00			1.00		0.72	1.00		0.72	1.00	
Satd. Flow (perm)		3338			3492		1205	1420		1271	1386	
Peak-hour factor, PHF	0.78	0.78	0.78	0.79	0.79	0.79	0.91	0.91	0.91	0.64	0.64	0.64
Adj. Flow (vph)	14	290	24	41	625	28	16	30	34	36	42	14
RTOR Reduction (vph)	0	8	0	0	4	0	0	27	0	0	11	0
Lane Group Flow (vph)	0	320	0	0	690	0	16	37	0	36	45	0
Confl. Peds. (#/hr)	4		7	7		4	4		21	21		4
Confl. Bikes (#/hr)			2		2	9			2		2	10
Heavy Vehicles (%)	18%	6%	5%	2%	2%	9%	13%	7%	6%	4%	14%	22%
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		21.0			26.0		16.0	16.0		16.0	16.0	
Effective Green, g (s)		21.0			26.0		16.0	16.0		16.0	16.0	
Actuated g/C Ratio		0.28			0.35		0.21	0.21		0.21	0.21	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		935			1211		257	303		271	296	
v/s Ratio Prot		c0.10			c0.20			0.03			c0.03	
v/s Ratio Perm							0.01			0.03		
v/c Ratio		0.34			0.57		0.06	0.12		0.13	0.15	
Uniform Delay, d1		21.5			19.9		23.5	23.8		23.9	24.0	
Progression Factor		0.30			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0			1.9		0.5	0.8		1.0	1.1	
Delay (s)		7.5			21.9		24.0	24.7		24.9	25.1	
Level of Service		A			C		C	C		C	C	
Approach Delay (s)		7.5			21.9			24.5			25.0	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	615	109	60	905	34	47
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.76	0.76	0.75	0.75
Hourly flow rate (vph)	759	135	79	1191	45	63
Pedestrians					78	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					6	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	932			1318		
pX, platoon unblocked					0.96	
vC, conflicting volume			837		1591	458
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			837		1533	458
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			89		46	88
cM capacity (veh/h)			741		84	514

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	380	380	135	79	595	595	45	63
Volume Left	0	0	0	79	0	0	45	0
Volume Right	0	0	135	0	0	0	0	63
cSH	1700	1700	1700	741	1700	1700	84	514
Volume to Capacity	0.22	0.22	0.08	0.11	0.35	0.35	0.54	0.12
Queue Length 95th (ft)	0	0	0	9	0	0	59	10
Control Delay (s)	0.0	0.0	0.0	10.4	0.0	0.0	90.3	13.0
Lane LOS				B			F	B
Approach Delay (s)	0.0			0.6			45.4	
Approach LOS							E	

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	631	31	57	917	57	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.76	0.76	0.79	0.79
Hourly flow rate (vph)	760	37	75	1207	72	4
Pedestrians	73			73	73	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	6			6	6	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				724		
pX, platoon unblocked					0.87	
vC, conflicting volume			871		1678	545
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			871		1483	545
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		9	99
cM capacity (veh/h)			723		79	426

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	507	291	75	603	603	76
Volume Left	0	0	75	0	0	72
Volume Right	0	37	0	0	0	4
cSH	1700	1700	723	1700	1700	82
Volume to Capacity	0.30	0.17	0.10	0.35	0.35	0.92
Queue Length 95th (ft)	0	0	9	0	0	124
Control Delay (s)	0.0	0.0	10.6	0.0	0.0	167.0
Lane LOS			B			F
Approach Delay (s)	0.0		0.6			167.0
Approach LOS						F

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	365	123	70	501	90	154	125	42	129	259	296
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.73	1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1139	1736	3539	1541	1752	1712	1497	1752	1827	1549
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1139	1736	3539	1541	1752	1712	1497	1752	1827	1549
Peak-hour factor, PHF	0.80	0.80	0.80	0.82	0.82	0.82	0.76	0.76	0.76	0.80	0.80	0.80
Adj. Flow (vph)	218	456	154	85	611	110	203	164	55	161	324	370
RTOR Reduction (vph)	0	0	109	0	0	52	0	0	34	0	0	268
Lane Group Flow (vph)	218	456	45	85	611	58	203	164	21	161	324	102
Confl. Peds. (#/hr)			116			1			38			1
Confl. Bikes (#/hr)			2			3						9
Heavy Vehicles (%)	2%	2%	4%	4%	2%	2%	3%	11%	2%	3%	4%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	10.6	20.1	20.1	6.6	16.1	16.1	9.8	14.4	14.4	11.8	16.4	16.4
Effective Green, g (s)	10.6	20.1	20.1	6.6	16.1	16.1	9.8	14.4	14.4	11.8	16.4	16.4
Actuated g/C Ratio	0.15	0.29	0.29	0.10	0.23	0.23	0.14	0.21	0.21	0.17	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	272	1032	332	166	827	360	249	358	313	300	435	369
v/s Ratio Prot	c0.12	c0.13		0.05	c0.17		c0.12	0.10		0.09	c0.18	
v/s Ratio Perm			0.04			0.04			0.01			0.07
v/c Ratio	0.80	0.44	0.14	0.51	0.74	0.16	0.82	0.46	0.07	0.54	0.74	0.28
Uniform Delay, d1	28.1	19.8	18.0	29.6	24.5	21.0	28.7	23.8	21.9	26.1	24.3	21.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.5	0.3	0.2	2.7	3.5	0.2	18.2	0.9	0.1	1.8	6.8	0.4
Delay (s)	43.6	20.1	18.2	32.3	27.9	21.2	46.9	24.8	22.0	27.9	31.1	21.8
Level of Service	D	C	B	C	C	C	D	C	C	C	C	C
Approach Delay (s)		26.0			27.5			35.0			26.5	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	68.9	Sum of lost time (s)	16.0
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						
Volume (vph)	491	45	53	591	70	49
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.93	1.00	1.00	1.00	0.98
Flpb, ped/bikes	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)	3505	1479	1770	3539	1770	1558
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1479	1770	3539	1770	1558
Peak-hour factor, PHF	0.75	0.75	0.77	0.77	0.47	0.47
Adj. Flow (vph)	655	60	69	768	149	104
RTOR Reduction (vph)	0	28	0	0	0	75
Lane Group Flow (vph)	655	32	69	768	149	29
Confl. Peds. (#/hr)		19				
Confl. Bikes (#/hr)		4				3
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	25.6	25.6	6.8	36.4	12.0	12.0
Effective Green, g (s)	25.6	25.6	6.8	36.4	12.0	12.0
Actuated g/C Ratio	0.35	0.35	0.09	0.50	0.17	0.17
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)	1241	524	166	1782	294	259
v/s Ratio Prot	c0.19		0.04	c0.22	c0.08	
v/s Ratio Perm		0.02				0.02
v/c Ratio	0.53	0.06	0.42	0.43	0.51	0.11
Uniform Delay, d1	18.5	15.4	30.9	11.4	27.5	25.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	1.7	0.2	1.4	0.2
Delay (s)	19.0	15.5	32.6	11.6	28.8	25.8
Level of Service	B	B	C	B	C	C
Approach Delay (s)	18.7			13.3	27.6	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	72.3	Sum of lost time (s)	27.9
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	54	538	464	62	138	131
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	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.97	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1719	3539	3505	1523	1770	1543
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1719	3539	3505	1523	1770	1543
Peak-hour factor, PHF	0.86	0.86	0.75	0.75	0.75	0.75
Adj. Flow (vph)	63	626	619	83	184	175
RTOR Reduction (vph)	0	0	0	25	0	87
Lane Group Flow (vph)	63	626	619	58	184	88
Confl. Peds. (#/hr)				4		13
Confl. Bikes (#/hr)				2		1
Heavy Vehicles (%)	5%	2%	3%	3%	2%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	4.5	26.0	17.5	17.5	12.7	12.7
Effective Green, g (s)	4.5	26.0	17.5	17.5	12.7	12.7
Actuated g/C Ratio	0.09	0.50	0.33	0.33	0.24	0.24
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)	148	1756	1171	509	429	374
v/s Ratio Prot	0.04	c0.18	c0.18		c0.10	
v/s Ratio Perm				0.04		0.06
v/c Ratio	0.43	0.36	0.53	0.11	0.43	0.23
Uniform Delay, d1	22.7	8.1	14.1	12.1	16.8	15.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.1	0.4	0.1	0.7	0.3
Delay (s)	24.7	8.2	14.5	12.2	17.5	16.3
Level of Service	C	A	B	B	B	B
Approach Delay (s)		9.7	14.3		16.9	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	52.4	Sum of lost time (s)	17.7
Intersection Capacity Utilization	35.9%	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												
Volume (veh/h)	1	632	32	20	497	0	29	0	46	0	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.76	0.76	0.76	0.75	0.75	0.75	0.25	0.25	0.25
Hourly flow rate (vph)	1	672	34	26	654	0	39	0	61	0	0	8
Pedestrians								12				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								1				
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (ft)		903										
pX, platoon unblocked				0.99			0.99	0.99	0.99	0.99	0.99	
vC, conflicting volume	654			718			1091	1410	365	1106	1427	327
vC1, stage 1 conf vol							703	703		707	707	
vC2, stage 2 conf vol							388	707		400	721	
vCu, unblocked vol	654			689			1066	1389	331	1081	1407	327
tC, single (s)	4.1			4.3			7.5	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			89	100	90	100	100	99
cM capacity (veh/h)	929			831			352	324	644	329	312	669

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	1	448	258	353	327	100	8
Volume Left	1	0	0	26	0	39	0
Volume Right	0	0	34	0	0	61	8
cSH	929	1700	1700	831	1700	488	669
Volume to Capacity	0.00	0.26	0.15	0.03	0.19	0.21	0.01
Queue Length 95th (ft)	0	0	0	2	0	19	1
Control Delay (s)	8.9	0.0	0.0	1.0	0.0	14.3	10.4
Lane LOS	A			A		B	B
Approach Delay (s)	0.0			0.5		14.3	10.4
Approach LOS						B	B

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	46.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	562	108	4	358	156	25
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	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)	3539	1536	1444	1845	1770	1563
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1536	1444	1845	1770	1563
Peak-hour factor, PHF	0.88	0.88	0.77	0.77	0.68	0.68
Adj. Flow (vph)	639	123	5	465	229	37
RTOR Reduction (vph)	0	39	0	0	0	9
Lane Group Flow (vph)	639	84	5	465	229	28
Confl. Peds. (#/hr)		7				1
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	2%	2%	25%	3%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	19.5	19.5	0.6	24.1	10.6	10.6
Effective Green, g (s)	19.5	19.5	0.6	24.1	10.6	10.6
Actuated g/C Ratio	0.46	0.46	0.01	0.56	0.25	0.25
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)	1616	701	20	1041	439	388
v/s Ratio Prot	0.18		0.00	c0.25	c0.13	
v/s Ratio Perm		0.05				0.02
v/c Ratio	0.40	0.12	0.25	0.45	0.52	0.07
Uniform Delay, d1	7.7	6.7	20.8	5.4	13.9	12.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	6.5	0.3	1.1	0.1
Delay (s)	7.9	6.7	27.3	5.7	15.0	12.4
Level of Service	A	A	C	A	B	B
Approach Delay (s)	7.7			6.0	14.6	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	42.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	546	39	37	348	18	1
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	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)	3539	1550	1770	1827	1719	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1550	1770	1827	1719	1583
Peak-hour factor, PHF	0.92	0.92	0.76	0.76	0.68	0.68
Adj. Flow (vph)	593	42	49	458	26	1
RTOR Reduction (vph)	0	17	0	0	0	1
Lane Group Flow (vph)	593	25	49	458	26	0
Confl. Bikes (#/hr)		2				
Heavy Vehicles (%)	2%	2%	2%	4%	5%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	24.1	24.1	2.5	30.6	1.1	1.1
Effective Green, g (s)	24.1	24.1	2.5	30.6	1.1	1.1
Actuated g/C Ratio	0.61	0.61	0.06	0.77	0.03	0.03
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)	2148	941	111	1408	48	44
v/s Ratio Prot	0.17		0.03	c0.25	c0.02	
v/s Ratio Perm		0.02				0.00
v/c Ratio	0.28	0.03	0.44	0.33	0.54	0.00
Uniform Delay, d1	3.7	3.1	17.9	1.4	19.1	18.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	2.8	0.1	11.9	0.0
Delay (s)	3.8	3.1	20.7	1.5	31.0	18.8
Level of Service	A	A	C	A	C	B
Approach Delay (s)	3.7			3.4	30.5	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	4.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	39.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	344	113	411	698	20
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	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	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	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1703	1845	3539	1487
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1703	1845	3539	1487
Peak-hour factor, PHF	0.93	0.93	0.65	0.65	0.76	0.76
Adj. Flow (vph)	22	370	174	632	918	26
RTOR Reduction (vph)	0	315	0	0	0	15
Lane Group Flow (vph)	22	56	174	632	918	11
Confl. Peds. (#/hr)						8
Confl. Bikes (#/hr)					5	
Heavy Vehicles (%)	2%	2%	6%	3%	2%	5%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	8.1	8.1	11.7	37.9	22.2	22.2
Effective Green, g (s)	8.1	8.1	11.7	37.9	22.2	22.2
Actuated g/C Ratio	0.15	0.15	0.22	0.70	0.41	0.41
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	237	369	1295	1455	611
v/s Ratio Prot	0.01		0.10	c0.34	c0.26	
v/s Ratio Perm		c0.04				0.01
v/c Ratio	0.08	0.23	0.47	0.49	0.63	0.02
Uniform Delay, d1	19.8	20.2	18.5	3.7	12.6	9.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.5	1.0	0.3	0.9	0.0
Delay (s)	19.9	20.7	19.4	3.9	13.5	9.4
Level of Service	B	C	B	A	B	A
Approach Delay (s)	20.7			7.3	13.4	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.3%	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												
Volume (vph)	20	21	248	11	18	17	471	492	15	48	987	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1667	1511	1530	1656		1752	3446		1770	3539	1467
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1667	1511	1530	1656		1752	3446		1770	3539	1467
Peak-hour factor, PHF	0.84	0.84	0.84	0.82	0.82	0.82	0.85	0.85	0.85	0.86	0.86	0.86
Adj. Flow (vph)	24	25	295	13	22	21	554	579	18	56	1148	31
RTOR Reduction (vph)	0	0	261	0	19	0	0	2	0	0	0	20
Lane Group Flow (vph)	24	25	34	13	24	0	554	595	0	56	1148	11
Confl. Peds. (#/hr)						1						
Confl. Bikes (#/hr)			3		7	6						8
Heavy Vehicles (%)	2%	14%	5%	18%	5%	5%	3%	4%	13%	2%	2%	7%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	1.4	9.6	9.6	0.7	8.9		26.2	52.2		4.0	30.0	30.0
Effective Green, g (s)	1.4	9.6	9.6	0.7	8.9		26.2	52.2		4.0	30.0	30.0
Actuated g/C Ratio	0.02	0.12	0.12	0.01	0.11		0.32	0.63		0.05	0.36	0.36
Clearance Time (s)	4.0	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	3.0
Lane Grp Cap (vph)	30	194	176	13	179		556	2180		86	1287	533
v/s Ratio Prot	c0.01	0.01		0.01	0.01		c0.32	0.17		0.03	c0.32	
v/s Ratio Perm			c0.02									0.01
v/c Ratio	0.80	0.13	0.20	1.00	0.14		1.00	0.27		0.65	0.89	0.02
Uniform Delay, d1	40.4	32.7	33.0	40.9	33.3		28.1	6.7		38.6	24.7	16.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	84.3	0.3	0.5	249.6	0.3		37.0	0.1		16.3	8.2	0.0
Delay (s)	124.7	33.0	33.5	290.5	33.7		65.1	6.8		54.8	32.9	16.9
Level of Service	F	C	C	F	C		E	A		D	C	B
Approach Delay (s)		39.8			93.3			34.9			33.5	
Approach LOS		D			F			C			C	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	82.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	394	149	100	17	48	291	10	516	72	162	254	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3438	1488	1770	1863	1556	1770	3471	1559	1736	3438	1533
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3438	1488	1770	1863	1556	1770	3471	1559	1736	3438	1533
Peak-hour factor, PHF	0.95	0.95	0.95	0.81	0.81	0.81	0.80	0.80	0.80	0.82	0.82	0.82
Adj. Flow (vph)	415	157	105	21	59	359	12	645	90	198	310	338
RTOR Reduction (vph)	0	0	75	0	0	220	0	0	23	0	0	211
Lane Group Flow (vph)	415	157	30	21	59	139	12	645	68	198	310	127
Confl. Peds. (#/hr)			2						1			
Confl. Bikes (#/hr)					1	3			2		2	1
Heavy Vehicles (%)	2%	5%	7%	2%	2%	2%	2%	4%	2%	4%	5%	4%
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	22.9	22.9	22.9	10.3	10.3	10.3	0.8	20.0	20.0	10.8	30.0	30.0
Effective Green, g (s)	22.9	22.9	22.9	10.3	10.3	10.3	0.8	20.0	20.0	10.8	30.0	30.0
Actuated g/C Ratio	0.29	0.29	0.29	0.13	0.13	0.13	0.01	0.25	0.25	0.14	0.38	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	507	984	426	228	240	200	18	868	390	234	1289	575
v/s Ratio Prot	c0.23	0.05		0.01	0.03		0.01	c0.19		c0.11	0.09	
v/s Ratio Perm			0.02			c0.09			0.04			0.08
v/c Ratio	0.82	0.16	0.07	0.09	0.25	0.69	0.67	0.74	0.17	0.85	0.24	0.22
Uniform Delay, d1	26.6	21.4	20.8	30.7	31.4	33.3	39.5	27.6	23.5	33.8	17.2	17.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.7	0.3	0.3	0.2	0.5	9.9	66.1	3.5	0.2	23.5	0.1	0.2
Delay (s)	40.3	21.7	21.1	30.9	31.9	43.3	105.6	31.1	23.7	57.3	17.3	17.2
Level of Service	D	C	C	C	C	D	F	C	C	E	B	B
Approach Delay (s)		33.0			41.1			31.4			26.6	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	31.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	77	9	278	31	6	542
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	84	10	302	34	7	589
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	904	302			336	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	904	302			336	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	73	99			99	
cM capacity (veh/h)	306	737			1223	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	93	302	34	7	589
Volume Left	84	0	0	7	0
Volume Right	10	0	34	0	0
cSH	341	1700	1700	1223	1700
Volume to Capacity	0.27	0.18	0.02	0.01	0.35
Queue Length 95th (ft)	27	0	0	0	0
Control Delay (s)	20.0	0.0	0.0	8.0	0.0
Lane LOS	C			A	
Approach Delay (s)	20.0	0.0		0.1	
Approach LOS	C				

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	85	16	293	96	20	599
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	92	17	318	104	22	651
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type			None			None
Median storage veh)						
Upstream signal (ft)			623			
pX, platoon unblocked						
vC, conflicting volume	1013	318			423	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1013	318			423	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	64	98			98	
cM capacity (veh/h)	260	722			1136	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	110	318	104	22	651
Volume Left	92	0	0	22	0
Volume Right	17	0	104	0	0
cSH	309	1700	1700	1136	1700
Volume to Capacity	0.36	0.19	0.06	0.02	0.38
Queue Length 95th (ft)	39	0	0	1	0
Control Delay (s)	23.8	0.0	0.0	8.2	0.0
Lane LOS	C			A	
Approach Delay (s)	23.8	0.0		0.3	
Approach LOS	C				

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	42.9%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	169	45	247	70	24	376
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.78	0.78	0.79	0.79	0.78	0.78
Hourly flow rate (vph)	217	58	313	89	31	482
Pedestrians	12					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)		4				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	868	325			413	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	868	325			413	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	30	92			97	
cM capacity (veh/h)	311	709			1124	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	274	313	89	31	482
Volume Left	217	0	0	31	0
Volume Right	58	0	89	0	0
cSH	394	1700	1700	1124	1700
Volume to Capacity	0.70	0.18	0.05	0.03	0.28
Queue Length 95th (ft)	128	0	0	2	0
Control Delay (s)	33.4	0.0	0.0	8.3	0.0
Lane LOS	D			A	
Approach Delay (s)	33.4	0.0		0.5	
Approach LOS	D				

Intersection Summary				
Average Delay	7.9			
Intersection Capacity Utilization	35.8%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	61	51	306	394	49
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.72	0.72	0.68	0.68
Hourly flow rate (vph)	19	77	71	425	579	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (ft)					656	
pX, platoon unblocked	0.85	0.85	0.85			
vC, conflicting volume	1182	615	651			
vC1, stage 1 conf vol	615					
vC2, stage 2 conf vol	567					
vCu, unblocked vol	1126	459	501			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	85	92			
cM capacity (veh/h)	404	508	899			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	96	71	425	651
Volume Left	19	71	0	0
Volume Right	77	0	0	72
cSH	483	899	1700	1700
Volume to Capacity	0.20	0.08	0.25	0.38
Queue Length 95th (ft)	18	6	0	0
Control Delay (s)	14.3	9.3	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	14.3	1.3		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	128	105	253	24	70	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.89	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1409	1815		1719	1845
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1409	1815		1719	1845
Peak-hour factor, PHF	0.70	0.70	0.81	0.81	0.88	0.88
Adj. Flow (vph)	183	150	312	30	80	428
RTOR Reduction (vph)	0	123	4	0	0	0
Lane Group Flow (vph)	183	27	338	0	80	428
Confl. Peds. (#/hr)				2		
Confl. Bikes (#/hr)		43		18		8
Heavy Vehicles (%)	2%	2%	3%	4%	5%	3%
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	8.4	8.4	17.2		4.0	25.2
Effective Green, g (s)	8.4	8.4	17.2		4.0	25.2
Actuated g/C Ratio	0.18	0.18	0.36		0.08	0.53
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	314	250	659		145	981
v/s Ratio Prot	c0.10		c0.19		0.05	c0.23
v/s Ratio Perm		0.02				
v/c Ratio	0.58	0.11	0.51		0.55	0.44
Uniform Delay, d1	17.9	16.4	11.8		20.8	6.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.7	0.2	0.7		4.5	0.3
Delay (s)	20.6	16.5	12.5		25.3	7.1
Level of Service	C	B	B		C	A
Approach Delay (s)	18.8		12.5			10.0
Approach LOS	B		B			A

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	17.8
Intersection Capacity Utilization	35.8%	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												
Volume (vph)	49	44	110	42	104	22	103	205	23	9	393	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	0.95		1.00	0.91	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00	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	0.85	1.00	1.00	0.85
Flt Protected		0.97	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1759	1503		1833	1417	1770	1863	1444	1770	1863	1491
Flt Permitted		0.75	1.00		0.87	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1361	1503		1622	1417	1770	1863	1444	1770	1863	1491
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.82	0.82	0.82	0.93	0.93	0.93
Adj. Flow (vph)	53	48	120	48	118	25	126	250	28	10	423	113
RTOR Reduction (vph)	0	0	97	0	0	20	0	0	14	0	0	72
Lane Group Flow (vph)	0	101	23	0	166	5	126	250	14	10	423	41
Confl. Peds. (#/hr)	2		5	5		2			5			9
Confl. Bikes (#/hr)			13			34		3	11		11	18
Heavy Vehicles (%)	8%	2%	2%	2%	2%	4%	2%	2%	8%	2%	2%	3%
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)		7.7	7.7		7.7	7.7	5.8	19.5	19.5	0.6	14.3	14.3
Effective Green, g (s)		7.7	7.7		7.7	7.7	5.8	19.5	19.5	0.6	14.3	14.3
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.15	0.49	0.49	0.02	0.36	0.36
Clearance Time (s)		4.0	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	3.0
Lane Grp Cap (vph)		263	291		314	274	258	913	707	27	669	536
v/s Ratio Prot							c0.07	0.13		0.01	c0.23	
v/s Ratio Perm		0.07	0.02		c0.10	0.00			0.01			0.03
v/c Ratio		0.38	0.08		0.53	0.02	0.49	0.27	0.02	0.37	0.63	0.08
Uniform Delay, d1		14.0	13.1		14.4	13.0	15.6	6.0	5.2	19.4	10.6	8.4
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.9	0.1		1.6	0.0	1.5	0.2	0.0	8.4	2.0	0.1
Delay (s)		14.9	13.3		16.0	13.0	17.1	6.1	5.2	27.8	12.5	8.5
Level of Service		B	B		B	B	B	A	A	C	B	A
Approach Delay (s)		14.0			15.6			9.5			12.0	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	39.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.9%	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												
Volume (vph)	40	124	103	96	225	60	217	235	117	131	321	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.88	1.00	1.00	0.94	1.00	1.00	0.97	1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1687	3505	1338	1719	3471	1476	1770	1863	1528	1770	1863	1460
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1687	3505	1338	1719	3471	1476	1770	1863	1528	1770	1863	1460
Peak-hour factor, PHF	0.82	0.82	0.82	0.86	0.86	0.86	0.80	0.80	0.80	0.89	0.89	0.89
Adj. Flow (vph)	49	151	126	112	262	70	271	294	146	147	361	138
RTOR Reduction (vph)	0	0	106	0	0	31	0	0	34	0	0	25
Lane Group Flow (vph)	49	151	20	112	262	39	271	294	112	147	361	113
Confl. Peds. (#/hr)			41			11			16			21
Confl. Bikes (#/hr)			3		1	8			1		1	25
Heavy Vehicles (%)	7%	3%	6%	5%	4%	3%	2%	2%	2%	2%	2%	4%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	3.5	12.1	12.1	8.2	16.8	16.8	17.9	27.6	27.6	12.2	21.9	21.9
Effective Green, g (s)	3.5	12.1	12.1	8.2	16.8	16.8	17.9	27.6	27.6	12.2	21.9	21.9
Actuated g/C Ratio	0.05	0.16	0.16	0.11	0.22	0.22	0.24	0.36	0.36	0.16	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	78	557	213	185	766	326	416	676	554	284	536	420
v/s Ratio Prot	0.03	0.04		c0.07	c0.08		c0.15	0.16		0.08	c0.19	
v/s Ratio Perm			0.01			0.03			0.07			0.08
v/c Ratio	0.63	0.27	0.09	0.61	0.34	0.12	0.65	0.43	0.20	0.52	0.67	0.27
Uniform Delay, d1	35.7	28.1	27.3	32.4	25.0	23.7	26.3	18.3	16.7	29.3	23.9	20.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.8	0.3	0.2	5.5	0.3	0.2	3.6	0.5	0.2	1.6	3.3	0.3
Delay (s)	50.4	28.4	27.5	37.9	25.3	23.9	29.9	18.8	16.9	30.8	27.3	21.3
Level of Service	D	C	C	D	C	C	C	B	B	C	C	C
Approach Delay (s)		31.4			28.2			22.6			26.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	76.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.4%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	3	14	22	19	6	17	52	7	9	110	29
Peak Hour Factor	0.75	0.75	0.75	0.69	0.69	0.69	0.83	0.83	0.83	0.65	0.65	0.65
Hourly flow rate (vph)	21	4	19	32	28	9	20	63	8	14	169	45

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	44	68	92	228
Volume Left (vph)	21	32	20	14
Volume Right (vph)	19	9	8	45
Hadj (s)	-0.12	0.05	0.02	-0.07
Departure Headway (s)	4.6	4.7	4.4	4.2
Degree Utilization, x	0.06	0.09	0.11	0.27
Capacity (veh/h)	721	704	775	823
Control Delay (s)	7.9	8.2	8.0	8.7
Approach Delay (s)	7.9	8.2	8.0	8.7
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.4		
HCM Level of Service	A		
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	212	82	37	286	12	61	56	40	34	105	42
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	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	0.95	1.00	0.98	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1745	1740		1762	1843		1759	1863	1511	1752	1754	
Flt Permitted	0.42	1.00		0.47	1.00		0.62	1.00	1.00	0.72	1.00	
Satd. Flow (perm)	775	1740		868	1843		1148	1863	1511	1321	1754	
Peak-hour factor, PHF	0.83	0.83	0.83	0.75	0.75	0.75	0.91	0.91	0.91	0.67	0.67	0.67
Adj. Flow (vph)	6	255	99	49	381	16	67	62	44	51	157	63
RTOR Reduction (vph)	0	28	0	0	3	0	0	0	26	0	29	0
Lane Group Flow (vph)	6	326	0	49	394	0	67	62	18	51	191	0
Confl. Peds. (#/hr)	18		5	5		18	5		7	7		5
Confl. Bikes (#/hr)		7	70		2	82		12	17		10	33
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	21.0	21.0		21.0	21.0		21.0	21.0	21.0	21.0	21.0	
Effective Green, g (s)	21.0	21.0		21.0	21.0		21.0	21.0	21.0	21.0	21.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.42	0.42	0.42	0.42	0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	326	731		365	774		482	782	635	555	737	
v/s Ratio Prot		0.19			c0.21			0.03			c0.11	
v/s Ratio Perm	0.01			0.06			0.06		0.01	0.04		
v/c Ratio	0.02	0.45		0.13	0.51		0.14	0.08	0.03	0.09	0.26	
Uniform Delay, d1	8.5	10.3		8.9	10.7		8.9	8.7	8.5	8.7	9.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	2.0		0.8	2.4		0.6	0.2	0.1	0.3	0.9	
Delay (s)	8.6	12.3		9.7	13.1		9.5	8.9	8.6	9.1	10.3	
Level of Service	A	B		A	B		A	A	A	A	B	
Approach Delay (s)		12.3			12.7			9.1			10.1	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.7%	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												
Volume (vph)	40	174	54	49	465	41	54	67	35	52	138	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1700		1641	3539	1506	1770	1863	1370	1770	1863	1444
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1700		1641	3539	1506	1770	1863	1370	1770	1863	1444
Peak-hour factor, PHF	0.78	0.78	0.78	0.75	0.75	0.75	0.65	0.65	0.65	0.78	0.78	0.78
Adj. Flow (vph)	51	223	69	65	620	55	83	103	54	67	177	119
RTOR Reduction (vph)	0	13	0	0	0	35	0	0	42	0	0	98
Lane Group Flow (vph)	51	279	0	65	620	20	83	103	12	67	177	21
Confl. Peds. (#/hr)			16			9			3			13
Confl. Bikes (#/hr)					3	13			17		17	50
Heavy Vehicles (%)	2%	8%	2%	10%	2%	2%	2%	2%	14%	2%	2%	2%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	3.9	20.2		3.9	20.2	20.2	6.2	12.0	12.0	3.9	9.7	9.7
Effective Green, g (s)	3.9	20.2		3.9	20.2	20.2	6.2	12.0	12.0	3.9	9.7	9.7
Actuated g/C Ratio	0.07	0.36		0.07	0.36	0.36	0.11	0.21	0.21	0.07	0.17	0.17
Clearance Time (s)	4.0	4.0		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	3.0	3.0
Lane Grp Cap (vph)	123	613		114	1277	543	196	399	294	123	323	250
v/s Ratio Prot	0.03	0.16		c0.04	c0.18		c0.05	0.06		0.04	c0.10	
v/s Ratio Perm						0.01			0.01			0.01
v/c Ratio	0.41	0.45		0.57	0.49	0.04	0.42	0.26	0.04	0.54	0.55	0.08
Uniform Delay, d1	25.0	13.7		25.2	13.9	11.6	23.2	18.3	17.4	25.2	21.1	19.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	0.5		6.7	0.3	0.0	1.5	0.3	0.1	4.9	1.9	0.1
Delay (s)	27.2	14.2		32.0	14.2	11.6	24.7	18.6	17.5	30.0	23.0	19.6
Level of Service	C	B		C	B	B	C	B	B	C	C	B
Approach Delay (s)		16.2			15.5			20.5			23.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	42.4%	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												
Volume (vph)	7	526	8	209	599	23	12	4	223	65	4	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.87	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3505	1530	3433	3539	1526	1671	1863	1538	1770	1534	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3505	1530	3433	3539	1526	1671	1863	1538	1770	1534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.84	0.84	0.84	0.89	0.89	0.89	0.81	0.81	0.81
Adj. Flow (vph)	8	584	9	249	713	27	13	4	251	80	5	31
RTOR Reduction (vph)	0	0	5	0	0	6	0	0	186	0	21	0
Lane Group Flow (vph)	8	584	4	249	713	21	13	4	65	80	15	0
Confl. Peds. (#/hr)			8			4			8			17
Confl. Bikes (#/hr)		2	5			4		2	2			
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%	8%	2%	2%	2%	2%	4%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	0.8	22.2	22.2	34.2	55.6	55.6	2.4	28.6	28.6	9.0	35.2	
Effective Green, g (s)	0.8	22.2	22.2	34.2	55.6	55.6	2.4	28.6	28.6	9.0	35.2	
Actuated g/C Ratio	0.01	0.20	0.20	0.31	0.51	0.51	0.02	0.26	0.26	0.08	0.32	
Clearance Time (s)	4.0	4.0	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	3.0	3.0	
Lane Grp Cap (vph)	13	707	309	1067	1789	771	36	484	400	145	491	
v/s Ratio Prot	0.00	c0.17		0.07	c0.20		0.01	0.00		c0.05	0.01	
v/s Ratio Perm			0.00			0.01			c0.04			
v/c Ratio	0.62	0.83	0.01	0.23	0.40	0.03	0.36	0.01	0.16	0.55	0.03	
Uniform Delay, d1	54.4	42.1	35.1	28.2	16.8	13.6	53.0	30.2	31.5	48.6	25.7	
Progression Factor	1.00	1.00	1.00	0.88	0.69	0.25	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	64.0	7.8	0.0	0.1	0.6	0.1	6.1	0.0	0.9	4.5	0.1	
Delay (s)	118.5	49.9	35.2	24.8	12.3	3.4	59.1	30.2	32.3	53.0	25.8	
Level of Service	F	D	D	C	B	A	E	C	C	D	C	
Approach Delay (s)		50.6			15.2			33.6			44.6	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	35	770	769	183	242	59
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	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.95	0.95	0.75	0.75
Adj. Flow (vph)	39	856	809	193	323	79
RTOR Reduction (vph)	0	0	0	33	0	61
Lane Group Flow (vph)	39	856	809	160	323	18
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	3.6	76.5	68.9	68.9	25.5	25.5
Effective Green, g (s)	3.6	76.5	68.9	68.9	25.5	25.5
Actuated g/C Ratio	0.03	0.70	0.63	0.63	0.23	0.23
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)	58	2461	2217	992	410	367
v/s Ratio Prot	c0.02	0.24	c0.23		c0.18	
v/s Ratio Perm				0.10		0.01
v/c Ratio	0.67	0.35	0.36	0.16	0.79	0.05
Uniform Delay, d1	52.6	6.7	10.0	8.5	39.7	32.8
Progression Factor	1.10	0.25	1.00	1.00	1.00	1.00
Incremental Delay, d2	24.3	0.4	0.5	0.3	9.7	0.1
Delay (s)	82.2	2.1	10.4	8.9	49.4	32.9
Level of Service	F	A	B	A	D	C
Approach Delay (s)		5.5	10.1		46.1	
Approach LOS		A	B		D	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	690	118	29	639	93	108	93	43	143	86	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.92	1.00	1.00	0.90	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1515	1770	3539	1454	1770	1863	1426	1770	1863	1422
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1515	1770	3539	1454	1770	1863	1426	1770	1863	1422
Peak-hour factor, PHF	0.91	0.91	0.91	0.77	0.77	0.77	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	162	758	130	38	830	121	124	107	49	161	97	129
RTOR Reduction (vph)	0	0	21	0	0	18	0	0	19	0	0	88
Lane Group Flow (vph)	162	758	109	38	830	103	124	107	30	161	97	41
Confl. Peds. (#/hr)			8			21			12			39
Confl. Bikes (#/hr)		1	3			7		2	49		48	16
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.3	39.5	39.5	3.1	29.3	29.3	13.1	13.1	13.1	13.5	13.5	13.5
Effective Green, g (s)	13.3	39.5	39.5	3.1	29.3	29.3	13.1	13.1	13.1	13.5	13.5	13.5
Actuated g/C Ratio	0.16	0.46	0.46	0.04	0.34	0.34	0.15	0.15	0.15	0.16	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	276	1641	702	64	1217	500	272	286	219	280	295	225
v/s Ratio Prot	c0.09	0.21		0.02	c0.23		c0.07	0.06		c0.09	0.05	
v/s Ratio Perm			0.07			0.07			0.02			0.03
v/c Ratio	0.59	0.46	0.16	0.59	0.68	0.21	0.46	0.37	0.14	0.57	0.33	0.18
Uniform Delay, d1	33.4	15.6	13.2	40.4	24.0	19.7	32.8	32.4	31.2	33.2	31.8	31.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2	0.1	13.9	1.6	0.2	1.2	0.8	0.3	2.8	0.7	0.4
Delay (s)	36.6	15.8	13.3	54.3	25.6	19.9	34.0	33.2	31.5	36.0	32.5	31.4
Level of Service	D	B	B	D	C	B	C	C	C	D	C	C
Approach Delay (s)		18.7			26.0			33.3			33.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	85.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.4%	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												
Volume (vph)	71	644	127	108	450	87	216	203	133	92	153	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.91	1.00	1.00	0.89	1.00	1.00	0.92
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1736	3539	1519	1770	3539	1435	1752	1827	1413	1770	3406	1455
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1736	3539	1519	1770	3539	1435	1752	1827	1413	1770	3406	1455
Peak-hour factor, PHF	0.93	0.93	0.93	0.86	0.86	0.86	0.91	0.91	0.91	0.74	0.74	0.74
Adj. Flow (vph)	76	692	137	126	523	101	237	223	146	124	207	70
RTOR Reduction (vph)	0	0	24	0	0	69	0	0	58	0	0	42
Lane Group Flow (vph)	76	692	113	126	523	32	237	223	88	124	207	28
Confl. Peds. (#/hr)			18			24			29			26
Confl. Bikes (#/hr)		1	5		1	16		1	73		71	27
Heavy Vehicles (%)	4%	2%	2%	2%	2%	2%	3%	4%	2%	2%	6%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	6.6	22.2	22.2	8.6	24.2	24.2	16.2	20.9	20.9	8.3	13.0	13.0
Effective Green, g (s)	6.6	22.2	22.2	8.6	24.2	24.2	16.2	20.9	20.9	8.3	13.0	13.0
Actuated g/C Ratio	0.09	0.29	0.29	0.11	0.32	0.32	0.21	0.27	0.27	0.11	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	151	1034	444	200	1127	457	373	502	389	193	583	249
v/s Ratio Prot	0.04	c0.20		c0.07	0.15		c0.14	c0.12		0.07	0.06	
v/s Ratio Perm			0.07			0.02			0.06			0.02
v/c Ratio	0.50	0.67	0.25	0.63	0.46	0.07	0.64	0.44	0.23	0.64	0.36	0.11
Uniform Delay, d1	33.1	23.7	20.6	32.2	20.7	18.1	27.2	22.8	21.3	32.4	27.8	26.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	1.7	0.3	6.3	0.3	0.1	3.5	0.6	0.3	7.1	0.4	0.2
Delay (s)	35.8	25.3	20.9	38.5	21.0	18.1	30.7	23.4	21.6	39.6	28.2	26.8
Level of Service	D	C	C	D	C	B	C	C	C	D	C	C
Approach Delay (s)		25.5			23.6			25.8			31.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	76.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

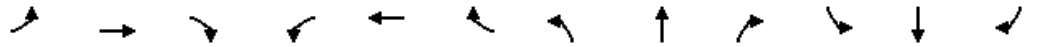
c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	746	129	116	525	124	129
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98
Flpb, ped/bikes	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)	3539	1508	1770	3539	1770	1551
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1508	1770	3539	1770	1551
Peak-hour factor, PHF	0.82	0.82	0.91	0.91	0.90	0.90
Adj. Flow (vph)	910	157	127	577	138	143
RTOR Reduction (vph)	0	22	0	0	0	118
Lane Group Flow (vph)	910	135	127	577	138	25
Confl. Peds. (#/hr)		8			14	5
Confl. Bikes (#/hr)	1	14				
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	23.7	23.7	7.7	35.4	10.7	10.7
Effective Green, g (s)	23.7	23.7	7.7	35.4	10.7	10.7
Actuated g/C Ratio	0.39	0.39	0.13	0.59	0.18	0.18
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)	1396	595	227	2085	315	276
v/s Ratio Prot	c0.26		c0.07	0.16	c0.08	
v/s Ratio Perm		0.09				0.02
v/c Ratio	0.65	0.23	0.56	0.28	0.44	0.09
Uniform Delay, d1	14.8	12.1	24.6	6.1	22.0	20.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.2	3.0	0.1	1.0	0.1
Delay (s)	15.9	12.3	27.6	6.1	23.0	20.8
Level of Service	B	B	C	A	C	C
Approach Delay (s)	15.4			10.0	21.9	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	75	802	592	168	132	51
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	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1512	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1512	1770	1583
Peak-hour factor, PHF	0.82	0.82	0.94	0.94	0.85	0.85
Adj. Flow (vph)	91	978	630	179	155	60
RTOR Reduction (vph)	0	0	0	22	0	51
Lane Group Flow (vph)	91	978	630	157	155	9
Confl. Peds. (#/hr)				15		
Confl. Bikes (#/hr)			11			
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	6.9	32.3	21.4	21.4	8.6	8.6
Effective Green, g (s)	6.9	32.3	21.4	21.4	8.6	8.6
Actuated g/C Ratio	0.13	0.59	0.39	0.39	0.16	0.16
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)	224	2094	1387	593	279	249
v/s Ratio Prot	0.05	c0.28	0.18		c0.09	
v/s Ratio Perm				0.10		0.01
v/c Ratio	0.41	0.47	0.45	0.26	0.56	0.04
Uniform Delay, d1	22.0	6.3	12.3	11.3	21.2	19.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.2	0.2	0.2	2.4	0.1
Delay (s)	23.2	6.5	12.5	11.5	23.6	19.6
Level of Service	C	A	B	B	C	B
Approach Delay (s)		7.9	12.3		22.5	
Approach LOS		A	B		C	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	54.6	Sum of lost time (s)	13.7
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

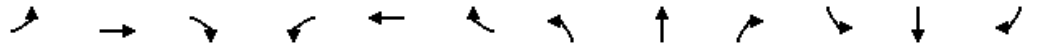


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	674	176	210	548	146	180	162	192	95	107	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1503	3433	3539	1501	1770	1863	1526	1770	1863	1524
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1503	3433	3539	1501	1770	1863	1526	1770	1863	1524
Peak-hour factor, PHF	0.84	0.84	0.84	0.92	0.92	0.92	0.79	0.79	0.79	0.85	0.85	0.85
Adj. Flow (vph)	80	802	210	228	596	159	228	205	243	112	126	58
RTOR Reduction (vph)	0	0	43	0	0	22	0	0	89	0	0	28
Lane Group Flow (vph)	80	802	167	228	596	137	228	205	154	112	126	30
Confl. Peds. (#/hr)			10			9			14			10
Confl. Bikes (#/hr)		1	5		1	9		1	3		2	7
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.0	28.3	28.3	10.6	31.9	31.9	16.5	20.3	20.3	8.7	12.5	12.5
Effective Green, g (s)	7.0	28.3	28.3	10.6	31.9	31.9	16.5	20.3	20.3	8.7	12.5	12.5
Actuated g/C Ratio	0.08	0.34	0.34	0.13	0.38	0.38	0.20	0.24	0.24	0.10	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	148	1194	507	434	1346	571	348	451	369	184	278	227
v/s Ratio Prot	0.05	c0.23		c0.07	c0.17		c0.13	c0.11		0.06	0.07	
v/s Ratio Perm			0.11			0.09			0.10			0.02
v/c Ratio	0.54	0.67	0.33	0.53	0.44	0.24	0.66	0.45	0.42	0.61	0.45	0.13
Uniform Delay, d1	36.9	23.8	20.7	34.3	19.4	17.7	31.1	27.1	26.8	36.0	32.6	31.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	1.5	0.4	1.2	0.2	0.2	4.4	0.7	0.8	5.6	1.2	0.3
Delay (s)	40.9	25.3	21.1	35.4	19.6	17.9	35.5	27.8	27.6	41.6	33.8	31.3
Level of Service	D	C	C	D	B	B	D	C	C	D	C	C
Approach Delay (s)		25.7			23.0			30.3			36.2	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	83.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.7%	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												
Volume (vph)	0	886	83	50	816	0	96	0	94	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0	4.0			
Lane Util. Factor		0.95	1.00	1.00	0.95			1.00	1.00			
Frpb, ped/bikes		1.00	0.94	1.00	1.00			1.00	1.00			
Flpb, ped/bikes		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)		3539	1491	1770	3539			1770	1583			
Flt Permitted		1.00	1.00	0.95	1.00			0.95	1.00			
Satd. Flow (perm)		3539	1491	1770	3539			1770	1583			
Peak-hour factor, PHF	0.85	0.85	0.85	0.89	0.89	0.89	0.86	0.86	0.86	0.25	0.25	0.25
Adj. Flow (vph)	0	1042	98	56	917	0	112	0	109	0	0	0
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	73	0	0	0
Lane Group Flow (vph)	0	1042	86	56	917	0	0	112	36	0	0	0
Confl. Peds. (#/hr)			26									
Confl. Bikes (#/hr)								1			1	
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)		25.6	25.6	3.3	32.9			7.0	7.0			
Effective Green, g (s)		25.6	25.6	3.3	32.9			7.0	7.0			
Actuated g/C Ratio		0.53	0.53	0.07	0.69			0.15	0.15			
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)		1891	797	122	2431			259	231			
v/s Ratio Prot		c0.29		0.03	c0.26			c0.06				
v/s Ratio Perm			0.06						0.02			
v/c Ratio		0.55	0.11	0.46	0.38			0.43	0.16			
Uniform Delay, d1		7.4	5.5	21.4	3.2			18.6	17.9			
Progression Factor		1.00	1.00	1.00	1.00			1.00	1.00			
Incremental Delay, d2		0.3	0.1	2.7	0.1			1.2	0.3			
Delay (s)		7.7	5.6	24.2	3.3			19.8	18.2			
Level of Service		A	A	C	A			B	B			
Approach Delay (s)		7.5			4.5			19.0			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	47.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.1%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	17	81	11	6	112	107	17	54	13	120	63	39
Peak Hour Factor	0.76	0.76	0.76	0.88	0.88	0.88	0.72	0.72	0.72	0.83	0.83	0.83
Hourly flow rate (vph)	22	107	14	7	127	122	24	75	18	145	76	47

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	22	121	7	249	99	18	220	47
Volume Left (vph)	22	0	7	0	24	0	145	0
Volume Right (vph)	0	14	0	122	0	18	0	47
Hadj (s)	0.59	-0.05	0.53	-0.31	0.19	-0.67	0.37	-0.67
Departure Headway (s)	6.5	5.9	6.3	5.5	6.1	5.3	6.1	5.1
Degree Utilization, x	0.04	0.20	0.01	0.38	0.17	0.03	0.37	0.07
Capacity (veh/h)	518	577	539	629	549	628	561	667
Control Delay (s)	8.6	9.1	8.2	10.5	9.2	7.2	11.5	7.2
Approach Delay (s)	9.0		10.5		8.9		10.8	
Approach LOS	A		B		A		B	

Intersection Summary				
Delay	10.1			
HCM Level of Service	B			
Intersection Capacity Utilization	37.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	163	94	39	150	96	72
Peak Hour Factor	0.92	0.92	0.86	0.86	0.82	0.82
Hourly flow rate (vph)	177	102	45	174	117	88

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total (vph)	177	102	45	174	205
Volume Left (vph)	0	0	45	0	117
Volume Right (vph)	0	102	0	0	88
Hadj (s)	0.03	-0.67	0.53	0.03	-0.11
Departure Headway (s)	5.3	4.6	5.9	5.4	4.9
Degree Utilization, x	0.26	0.13	0.07	0.26	0.28
Capacity (veh/h)	642	740	582	640	681
Control Delay (s)	9.0	7.1	8.2	9.1	9.9
Approach Delay (s)	8.3		8.9		9.9
Approach LOS	A		A		A

Intersection Summary			
Delay	8.9		
HCM Level of Service	A		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	184	96	87	368	321	164
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
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.96
Flpb, ped/bikes	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	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1545	1770	1863	1863	1523
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1545	1770	1863	1863	1523
Peak-hour factor, PHF	0.90	0.90	0.80	0.80	0.90	0.90
Adj. Flow (vph)	204	107	109	460	357	182
RTOR Reduction (vph)	0	82	0	0	0	128
Lane Group Flow (vph)	204	25	109	460	357	54
Confl. Peds. (#/hr)	25	4				18
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	7.7	7.7	3.4	17.1	9.7	9.7
Effective Green, g (s)	7.7	7.7	3.4	17.1	9.7	9.7
Actuated g/C Ratio	0.23	0.23	0.10	0.52	0.30	0.30
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)	416	363	183	971	551	450
v/s Ratio Prot	c0.12		0.06	c0.25	c0.19	
v/s Ratio Perm		0.02				0.04
v/c Ratio	0.49	0.07	0.60	0.47	0.65	0.12
Uniform Delay, d1	10.9	9.8	14.0	5.0	10.1	8.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	5.1	0.4	2.6	0.1
Delay (s)	11.8	9.8	19.2	5.4	12.7	8.6
Level of Service	B	A	B	A	B	A
Approach Delay (s)	11.1			8.0	11.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	32.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	15	22	132	18	10	103
Peak Hour Factor	0.77	0.77	0.71	0.71	0.81	0.81
Hourly flow rate (vph)	19	29	186	25	12	127

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	48	211	12	127
Volume Left (vph)	19	0	12	0
Volume Right (vph)	29	25	0	0
Hadj (s)	-0.24	-0.04	0.53	0.03
Departure Headway (s)	4.4	4.2	5.3	4.8
Degree Utilization, x	0.06	0.25	0.02	0.17
Capacity (veh/h)	743	832	660	733
Control Delay (s)	7.7	8.6	7.2	7.6
Approach Delay (s)	7.7	8.6	7.5	
Approach LOS	A	A	A	

Intersection Summary			
Delay	8.1		
HCM Level of Service	A		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	256	7	10	248	33	9	41	20	26	43	20
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
Frpb, ped/bikes		1.00	0.93		1.00	0.93		1.00	0.90		1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.98	1.00
Satd. Flow (prot)		1858	1479		1859	1462		1746	1431		1804	1508
Flt Permitted		0.98	1.00		0.99	1.00		0.96	1.00		0.91	1.00
Satd. Flow (perm)		1826	1479		1835	1462		1693	1431		1666	1508
Peak-hour factor, PHF	0.88	0.88	0.88	0.80	0.80	0.80	0.76	0.76	0.76	0.82	0.82	0.82
Adj. Flow (vph)	14	291	8	12	310	41	12	54	26	32	52	24
RTOR Reduction (vph)	0	0	5	0	0	25	0	0	16	0	0	14
Lane Group Flow (vph)	0	305	3	0	322	16	0	66	10	0	84	10
Confl. Peds. (#/hr)	2		2	2		2	5		2	2		5
Confl. Bikes (#/hr)		33	47		3	49		1	80		47	23
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	11%	7%	2%	2%	4%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Effective Green, g (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Actuated g/C Ratio		0.40	0.40		0.40	0.40		0.40	0.40		0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		730	592		734	585		677	572		666	603
v/s Ratio Prot												
v/s Ratio Perm		0.17	0.00		c0.18	0.01		0.04	0.01		c0.05	0.01
v/c Ratio		0.42	0.01		0.44	0.03		0.10	0.02		0.13	0.02
Uniform Delay, d1		8.6	7.2		8.7	7.3		7.5	7.3		7.6	7.2
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.8	0.0		1.9	0.1		0.3	0.1		0.4	0.0
Delay (s)		10.4	7.2		10.6	7.4		7.8	7.3		8.0	7.3
Level of Service		B	A		B	A		A	A		A	A
Approach Delay (s)		10.3			10.3			7.6			7.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	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												
Volume (vph)	11	269	60	47	211	13	65	120	48	10	89	13
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	
Frpb, ped/bikes		1.00	0.84	1.00	1.00			0.99			1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	
Frt		1.00	0.85	1.00	0.99			0.97			0.98	
Flt Protected		1.00	1.00	0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1859	1328	1728	1838			1570			1818	
Flt Permitted		0.99	1.00	0.51	1.00			0.88			0.97	
Satd. Flow (perm)		1837	1328	923	1838			1403			1767	
Peak-hour factor, PHF	0.88	0.88	0.88	0.81	0.81	0.81	0.86	0.86	0.86	0.67	0.67	0.67
Adj. Flow (vph)	12	306	68	58	260	16	76	140	56	15	133	19
RTOR Reduction (vph)	0	0	39	0	5	0	0	19	0	0	9	0
Lane Group Flow (vph)	0	318	29	58	271	0	0	253	0	0	158	0
Confl. Peds. (#/hr)	5		3	3		5	3		7	7		3
Confl. Bikes (#/hr)		17	153		2	54		4	37		20	11
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	4%	2%	2%	2%
Parking (#/hr)								1				
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		21.0	21.0	21.0	21.0			21.0			21.0	
Effective Green, g (s)		21.0	21.0	21.0	21.0			21.0			21.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.42			0.42			0.42	
Clearance Time (s)		4.0	4.0	4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)		772	558	388	772			589			742	
v/s Ratio Prot					0.15							
v/s Ratio Perm		c0.17	0.02	0.06				c0.18			0.09	
v/c Ratio		0.41	0.05	0.15	0.35			0.43			0.21	
Uniform Delay, d1		10.2	8.6	9.0	9.9			10.3			9.2	
Progression Factor		1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2		1.6	0.2	0.8	1.3			2.3			0.7	
Delay (s)		11.8	8.8	9.8	11.1			12.6			9.9	
Level of Service		B	A	A	B			B			A	
Approach Delay (s)		11.3			10.9			12.6			9.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	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												
Volume (vph)	24	249	32	41	202	70	38	360	54	85	287	22
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
Frpb, ped/bikes		0.98			0.98		1.00	1.00	0.90	1.00	1.00	0.92
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.99			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1791			1748		1770	1863	1432	1770	1863	1463
Flt Permitted		0.96			0.91		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1727			1609		1770	1863	1432	1770	1863	1463
Peak-hour factor, PHF	0.81	0.81	0.81	0.89	0.89	0.89	0.78	0.78	0.78	0.97	0.97	0.97
Adj. Flow (vph)	30	307	40	46	227	79	49	462	69	88	296	23
RTOR Reduction (vph)	0	4	0	0	10	0	0	0	11	0	0	6
Lane Group Flow (vph)	0	373	0	0	342	0	49	462	58	88	296	17
Confl. Peds. (#/hr)	13		10	10		13			19			19
Confl. Bikes (#/hr)		7	133		5	49		3	40		33	22
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)		21.5			21.5		3.5	25.3	25.3	7.0	28.8	28.8
Effective Green, g (s)		21.5			21.5		3.5	25.3	25.3	7.0	28.8	28.8
Actuated g/C Ratio		0.33			0.33		0.05	0.38	0.38	0.11	0.44	0.44
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)		564			526		94	716	551	188	815	640
v/s Ratio Prot							0.03	c0.25		c0.05	c0.16	
v/s Ratio Perm		c0.22			0.21				0.04			0.01
v/c Ratio		0.66			0.65		0.52	0.65	0.11	0.47	0.36	0.03
Uniform Delay, d1		19.0			18.9		30.3	16.6	13.0	27.6	12.4	10.5
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.9			2.9		5.1	2.0	0.1	1.8	0.3	0.0
Delay (s)		21.9			21.8		35.5	18.6	13.1	29.5	12.6	10.5
Level of Service		C			C		D	B	B	C	B	B
Approach Delay (s)		21.9			21.8			19.4			16.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.4%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	106	341	18	6	283	25	28	46	4	31	34	67
Peak Hour Factor	0.87	0.87	0.87	0.79	0.79	0.79	0.51	0.51	0.51	0.87	0.87	0.87
Hourly flow rate (vph)	122	392	21	8	358	32	55	90	8	36	39	77

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	122	413	397	145	8	75	77
Volume Left (vph)	122	0	8	55	0	36	0
Volume Right (vph)	0	21	32	0	8	0	77
Hadj (s)	0.53	0.00	-0.01	0.11	-0.57	0.27	-0.63
Departure Headway (s)	6.8	6.3	6.5	7.7	3.2	7.9	6.9
Degree Utilization, x	0.23	0.72	0.71	0.31	0.01	0.16	0.15
Capacity (veh/h)	507	555	537	419	1121	403	446
Control Delay (s)	10.7	22.6	23.8	14.0	6.2	11.2	9.9
Approach Delay (s)	19.9		23.8	13.6		10.5	
Approach LOS	C		C	B		B	

Intersection Summary				
Delay	19.2			
HCM Level of Service	C			
Intersection Capacity Utilization	57.3%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	471	53	50	370	65	37	208	49	38	225	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.98	1.00	
Frt		0.99			0.98		1.00	0.97		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3444			3435		1788	1575		1738	1562	
Flt Permitted		0.99			0.99		0.26	1.00		0.27	1.00	
Satd. Flow (perm)		3444			3435		494	1575		494	1562	
Peak-hour factor, PHF	0.75	0.75	0.75	0.86	0.86	0.86	0.83	0.83	0.83	0.93	0.93	0.93
Adj. Flow (vph)	105	628	71	58	430	76	45	251	59	41	242	72
RTOR Reduction (vph)	0	8	0	0	14	0	0	9	0	0	12	0
Lane Group Flow (vph)	0	796	0	0	550	0	45	301	0	41	302	0
Confl. Peds. (#/hr)	3		19	19		3	13		24	24		13
Confl. Bikes (#/hr)			13		3	2			38		38	19
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	2%	2%	2%	2%	5%
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		41.0			17.0		20.0	20.0		20.0	20.0	
Effective Green, g (s)		41.0			17.0		20.0	20.0		20.0	20.0	
Actuated g/C Ratio		0.46			0.19		0.22	0.22		0.22	0.22	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1569			649		110	350		110	347	
v/s Ratio Prot		c0.23			c0.16			0.19			c0.19	
v/s Ratio Perm							0.09			0.08		
v/c Ratio		0.51			0.85		0.41	0.86		0.37	0.87	
Uniform Delay, d1		17.3			35.3		29.9	33.6		29.7	33.8	
Progression Factor		1.00			0.91		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.2			9.4		10.9	23.0		9.4	24.6	
Delay (s)		18.5			41.6		40.8	56.6		39.1	58.4	
Level of Service		B			D		D	E		D	E	
Approach Delay (s)		18.5			41.6			54.6			56.2	
Approach LOS		B			D			D			E	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	471	56	75	409	60	58	103	53	28	59	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			0.99		1.00	0.97		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.96	1.00	
Frt		0.98			0.98		1.00	0.95		1.00	0.95	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3451			3438		1762	1516		1702	1558	
Flt Permitted		1.00			0.99		0.64	1.00		0.48	1.00	
Satd. Flow (perm)		3451			3438		1183	1516		864	1558	
Peak-hour factor, PHF	0.84	0.84	0.84	0.96	0.96	0.96	0.78	0.78	0.78	0.69	0.69	0.69
Adj. Flow (vph)	36	561	67	78	426	62	74	132	68	41	86	38
RTOR Reduction (vph)	0	9	0	0	11	0	0	20	0	0	18	0
Lane Group Flow (vph)	0	655	0	0	555	0	74	180	0	41	106	0
Confl. Peds. (#/hr)	5		16	16		5	3		35	35		3
Confl. Bikes (#/hr)		3	9		3	9		1	24		21	14
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		41.0			17.0		20.0	20.0		20.0	20.0	
Effective Green, g (s)		41.0			17.0		20.0	20.0		20.0	20.0	
Actuated g/C Ratio		0.46			0.19		0.22	0.22		0.22	0.22	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1572			649		263	337		192	346	
v/s Ratio Prot		c0.19			c0.16			c0.12			0.07	
v/s Ratio Perm							0.06			0.05		
v/c Ratio		0.42			0.86		0.28	0.53		0.21	0.31	
Uniform Delay, d1		16.5			35.3		29.0	30.9		28.6	29.2	
Progression Factor		0.29			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			13.6		2.7	5.9		2.5	2.3	
Delay (s)		5.5			48.9		31.7	36.8		31.1	31.5	
Level of Service		A			D		C	D		C	C	
Approach Delay (s)		5.5			48.9			35.4			31.4	
Approach LOS		A			D			D			C	

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	899	90	55	814	60	114
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1033	103	60	895	66	125
Pedestrians	32			32	32	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	3			3	3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	932			1318		
pX, platoon unblocked			0.90		0.91	0.90
vC, conflicting volume			1065		1665	581
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			844		1428	304
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		33	79
cM capacity (veh/h)			688		99	589

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	517	517	103	60	447	447	66	125
Volume Left	0	0	0	60	0	0	66	0
Volume Right	0	0	103	0	0	0	0	125
cSH	1700	1700	1700	688	1700	1700	99	589
Volume to Capacity	0.30	0.30	0.06	0.09	0.26	0.26	0.67	0.21
Queue Length 95th (ft)	0	0	0	7	0	0	83	20
Control Delay (s)	0.0	0.0	0.0	10.7	0.0	0.0	95.3	12.8
Lane LOS				B			F	B
Approach Delay (s)	0.0			0.7			41.2	
Approach LOS							E	

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	945	77	62	753	119	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.94	0.94	0.84	0.84
Hourly flow rate (vph)	1062	87	66	801	142	24
Pedestrians	7			7	7	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				724		
pX, platoon unblocked					0.91	
vC, conflicting volume			1155		1652	588
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1155		1517	588
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		0	95
cM capacity (veh/h)			597		88	447

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	708	440	66	401	401	165
Volume Left	0	0	66	0	0	142
Volume Right	0	87	0	0	0	24
cSH	1700	1700	597	1700	1700	99
Volume to Capacity	0.42	0.26	0.11	0.24	0.24	1.67
Queue Length 95th (ft)	0	0	9	0	0	326
Control Delay (s)	0.0	0.0	11.8	0.0	0.0	414.0
Lane LOS			B			F
Approach Delay (s)	0.0		0.9			414.0
Approach LOS						F

Intersection Summary			
Average Delay	31.8		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	331	482	152	104	433	121	148	250	52	166	236	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.81	1.00	1.00	0.96	1.00	1.00	0.93	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1275	1770	3539	1516	1770	1863	1465	1770	1863	1559
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1275	1770	3539	1516	1770	1863	1465	1770	1863	1559
Peak-hour factor, PHF	0.84	0.84	0.84	0.91	0.91	0.91	0.86	0.86	0.86	0.87	0.87	0.87
Adj. Flow (vph)	394	574	181	114	476	133	172	291	60	191	271	261
RTOR Reduction (vph)	0	0	95	0	0	51	0	0	12	0	0	205
Lane Group Flow (vph)	394	574	86	114	476	82	172	291	48	191	271	56
Confl. Peds. (#/hr)			59						35			
Confl. Bikes (#/hr)			6			12			9		9	3
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	25.8	35.2	35.2	9.3	18.7	18.7	13.5	19.1	19.1	14.5	20.1	20.1
Effective Green, g (s)	25.8	35.2	35.2	9.3	18.7	18.7	13.5	19.1	19.1	14.5	20.1	20.1
Actuated g/C Ratio	0.27	0.37	0.37	0.10	0.20	0.20	0.14	0.20	0.20	0.15	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	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	3.0	3.0	3.0
Lane Grp Cap (vph)	485	1324	477	175	703	301	254	378	297	273	398	333
v/s Ratio Prot	c0.22	0.16		0.06	c0.13		0.10	c0.16		c0.11	0.15	
v/s Ratio Perm			0.07			0.05			0.03			0.04
v/c Ratio	0.81	0.43	0.18	0.65	0.68	0.27	0.68	0.77	0.16	0.70	0.68	0.17
Uniform Delay, d1	31.9	22.0	19.8	40.8	34.9	31.9	38.2	35.4	30.9	37.7	34.0	30.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.0	0.2	0.2	8.4	2.6	0.5	7.0	9.1	0.3	7.6	4.7	0.2
Delay (s)	41.9	22.2	19.9	49.2	37.5	32.4	45.2	44.6	31.2	45.4	38.8	30.4
Level of Service	D	C	B	D	D	C	D	D	C	D	D	C
Approach Delay (s)		28.6			38.4			43.2			37.5	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	94.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	660	35	26	628	34	9
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	1.00
Flpb, ped/bikes	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)	3539	1461	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1461	1770	3539	1770	1583
Peak-hour factor, PHF	0.85	0.85	0.92	0.92	0.67	0.67
Adj. Flow (vph)	776	41	28	683	51	13
RTOR Reduction (vph)	0	0	0	0	0	12
Lane Group Flow (vph)	776	41	28	683	51	1
Confl. Peds. (#/hr)		16	16			
Confl. Bikes (#/hr)		4				
Heavy Vehicles (%)	2%	5%	2%	2%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	31.2	31.2	2.3	37.5	4.2	4.2
Effective Green, g (s)	31.2	31.2	2.3	37.5	4.2	4.2
Actuated g/C Ratio	0.56	0.56	0.04	0.67	0.08	0.08
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)	1986	820	73	2387	134	120
v/s Ratio Prot	c0.22		0.02	c0.19	c0.03	
v/s Ratio Perm		0.03				0.00
v/c Ratio	0.39	0.05	0.38	0.29	0.38	0.01
Uniform Delay, d1	6.9	5.5	26.0	3.7	24.5	23.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	3.3	0.1	1.8	0.0
Delay (s)	7.0	5.5	29.3	3.7	26.3	23.8
Level of Service	A	A	C	A	C	C
Approach Delay (s)	6.9			4.7	25.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	55.6	Sum of lost time (s)	17.9
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	101	483	594	131	63	68
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	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1511	1736	1545
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1511	1736	1545
Peak-hour factor, PHF	0.86	0.86	0.96	0.96	0.73	0.73
Adj. Flow (vph)	117	562	619	136	86	93
RTOR Reduction (vph)	0	0	0	38	0	81
Lane Group Flow (vph)	117	562	619	98	86	12
Confl. Peds. (#/hr)				15	2	13
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.4	31.0	19.6	19.6	6.9	6.9
Effective Green, g (s)	7.4	31.0	19.6	19.6	6.9	6.9
Actuated g/C Ratio	0.14	0.60	0.38	0.38	0.13	0.13
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)	254	2126	1344	574	232	207
v/s Ratio Prot	c0.07	0.16	c0.17		c0.05	
v/s Ratio Perm				0.06		0.01
v/c Ratio	0.46	0.26	0.46	0.17	0.37	0.06
Uniform Delay, d1	20.3	4.9	12.0	10.6	20.4	19.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	0.1	0.3	0.1	1.0	0.1
Delay (s)	21.6	5.0	12.3	10.7	21.4	19.6
Level of Service	C	A	B	B	C	B
Approach Delay (s)		7.8	12.0		20.5	
Approach LOS		A	B		C	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	17.7
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	517	29	50	699	0	33	0	25	3	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.94	0.94	0.94	0.52	0.52	0.52	0.38	0.38	0.38
Hourly flow rate (vph)	1	646	36	53	744	0	63	0	48	8	0	0
Pedestrians		5			50			5				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			4			0				
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (ft)		903										
pX, platoon unblocked												
vC, conflicting volume	744			688			1155	1522	396	1274	1540	377
vC1, stage 1 conf vol							672	672		850	850	
vC2, stage 2 conf vol							483	850		424	690	
vCu, unblocked vol	744			688			1155	1522	396	1274	1540	377
tC, single (s)	4.1			4.3			7.6	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)							6.6	5.5		6.5	5.5	
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			81	100	92	97	100	100
cM capacity (veh/h)	860			860			334	289	570	262	274	618

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	324	359	53	496	248	112	8
Volume Left	1	0	53	0	0	63	8
Volume Right	0	36	0	0	0	48	0
cSH	860	1700	860	1700	1700	407	262
Volume to Capacity	0.00	0.21	0.06	0.29	0.15	0.27	0.03
Queue Length 95th (ft)	0	0	5	0	0	28	2
Control Delay (s)	0.1	0.0	9.5	0.0	0.0	17.2	19.2
Lane LOS	A		A			C	C
Approach Delay (s)	0.0		0.6			17.2	19.2
Approach LOS						C	C

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	56.3%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	410	128	19	658	94	6
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	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)	3539	1521	1770	1863	1736	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1521	1770	1863	1736	1583
Peak-hour factor, PHF	0.90	0.90	0.94	0.94	0.78	0.78
Adj. Flow (vph)	456	142	20	700	121	8
RTOR Reduction (vph)	0	45	0	0	0	4
Lane Group Flow (vph)	456	97	20	700	121	4
Confl. Peds. (#/hr)		11				
Confl. Bikes (#/hr)		4				
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	29.3	29.3	1.2	34.5	7.2	7.2
Effective Green, g (s)	29.3	29.3	1.2	34.5	7.2	7.2
Actuated g/C Ratio	0.59	0.59	0.02	0.69	0.14	0.14
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)	2086	897	43	1293	251	229
v/s Ratio Prot	0.13		0.01	c0.38	c0.07	
v/s Ratio Perm		0.06				0.00
v/c Ratio	0.22	0.11	0.47	0.54	0.48	0.02
Uniform Delay, d1	4.8	4.5	23.9	3.7	19.5	18.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	7.8	0.5	1.5	0.0
Delay (s)	4.9	4.5	31.7	4.2	21.0	18.2
Level of Service	A	A	C	A	C	B
Approach Delay (s)	4.8			5.0	20.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	6.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	49.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	406	15	22	662	15	4
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	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)	3539	1548	1770	1863	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1548	1770	1863	1770	1583
Peak-hour factor, PHF	0.81	0.81	0.94	0.94	0.59	0.59
Adj. Flow (vph)	501	19	23	704	25	7
RTOR Reduction (vph)	0	7	0	0	0	7
Lane Group Flow (vph)	501	12	23	704	25	0
Confl. Bikes (#/hr)		4				
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	27.9	27.9	1.3	33.2	2.3	2.3
Effective Green, g (s)	27.9	27.9	1.3	33.2	2.3	2.3
Actuated g/C Ratio	0.64	0.64	0.03	0.76	0.05	0.05
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)	2270	993	53	1422	94	84
v/s Ratio Prot	0.14		0.01	c0.38	c0.01	
v/s Ratio Perm		0.01				0.00
v/c Ratio	0.22	0.01	0.43	0.50	0.27	0.00
Uniform Delay, d1	3.3	2.8	20.7	2.0	19.8	19.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.0	5.6	0.3	1.5	0.0
Delay (s)	3.3	2.8	26.3	2.2	21.3	19.5
Level of Service	A	A	C	A	C	B
Approach Delay (s)	3.3			3.0	20.9	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	3.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	43.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	16	186	332	634	463	18
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	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.98
Flpb, ped/bikes	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	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1559	1770	1863	3539	1546
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1559	1770	1863	3539	1546
Peak-hour factor, PHF	0.80	0.80	0.89	0.89	0.85	0.85
Adj. Flow (vph)	20	232	373	712	545	21
RTOR Reduction (vph)	0	198	0	0	0	15
Lane Group Flow (vph)	20	34	373	712	545	6
Confl. Bikes (#/hr)		2		5	1	3
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	7.4	7.4	16.9	35.7	14.8	14.8
Effective Green, g (s)	7.4	7.4	16.9	35.7	14.8	14.8
Actuated g/C Ratio	0.14	0.14	0.33	0.70	0.29	0.29
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)	256	226	585	1302	1025	448
v/s Ratio Prot	0.01		c0.21	c0.38	0.15	
v/s Ratio Perm		c0.02				0.00
v/c Ratio	0.08	0.15	0.64	0.55	0.53	0.01
Uniform Delay, d1	18.9	19.1	14.5	3.8	15.2	12.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3	2.3	0.5	0.5	0.0
Delay (s)	19.0	19.4	16.8	4.2	15.8	13.0
Level of Service	B	B	B	A	B	B
Approach Delay (s)	19.4			8.5	15.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	51.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.5%	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												
Volume (vph)	110	126	517	18	19	35	459	825	54	78	544	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.98		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1570	1719	1657		1770	3501		1752	3539	1536
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1570	1719	1657		1770	3501		1752	3539	1536
Peak-hour factor, PHF	0.82	0.82	0.82	0.69	0.69	0.69	0.86	0.86	0.86	0.94	0.94	0.94
Adj. Flow (vph)	134	154	630	26	28	51	534	959	63	83	579	48
RTOR Reduction (vph)	0	0	61	0	46	0	0	5	0	0	0	37
Lane Group Flow (vph)	134	154	569	26	33	0	534	1017	0	83	579	11
Confl. Peds. (#/hr)			6			5			2			2
Confl. Bikes (#/hr)			6		2	2			2		3	3
Heavy Vehicles (%)	2%	2%	2%	5%	2%	2%	2%	2%	2%	3%	2%	2%
Turn Type	Prot		pm+ov	Prot			Prot			Prot		Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	9.0	15.6	43.4	1.7	8.3		27.8	39.2		6.4	17.8	17.8
Effective Green, g (s)	9.0	15.6	43.4	1.7	8.3		27.8	39.2		6.4	17.8	17.8
Actuated g/C Ratio	0.11	0.20	0.55	0.02	0.11		0.35	0.50		0.08	0.23	0.23
Clearance Time (s)	4.0	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	3.0
Lane Grp Cap (vph)	202	368	943	37	174		624	1739		142	798	347
v/s Ratio Prot	c0.08	0.08	c0.21	0.02	0.02		c0.30	0.29		0.05	c0.16	
v/s Ratio Perm			0.15									0.01
v/c Ratio	0.66	0.42	0.60	0.70	0.19		0.86	0.58		0.58	0.73	0.03
Uniform Delay, d1	33.5	27.7	12.0	38.3	32.2		23.7	14.1		35.0	28.3	23.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.9	0.8	1.1	46.2	0.5		11.1	0.5		6.0	3.3	0.0
Delay (s)	41.4	28.5	13.1	84.5	32.8		34.8	14.6		41.0	31.6	23.9
Level of Service	D	C	B	F	C		C	B		D	C	C
Approach Delay (s)		19.8			45.6			21.5			32.2	
Approach LOS		B			D			C			C	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	78.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.0%	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												
Volume (vph)	380	330	170	30	40	190	26	466	109	244	419	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1562	1770	1863	1560	1752	3505	1557	1770	3539	1562
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1562	1770	1863	1560	1752	3505	1557	1770	3539	1562
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	392	340	175	32	43	204	27	480	112	271	466	304
RTOR Reduction (vph)	0	0	111	0	0	186	0	0	33	0	0	195
Lane Group Flow (vph)	392	340	64	32	43	18	27	480	79	271	466	109
Confl. Bikes (#/hr)		1	2			1			4		3	2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	2%	2%	2%	2%
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	34.5	34.5	34.5	8.3	8.3	8.3	2.0	18.6	18.6	17.6	34.2	34.2
Effective Green, g (s)	34.5	34.5	34.5	8.3	8.3	8.3	2.0	18.6	18.6	17.6	34.2	34.2
Actuated g/C Ratio	0.36	0.36	0.36	0.09	0.09	0.09	0.02	0.20	0.20	0.19	0.36	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	643	1285	567	155	163	136	37	686	305	328	1274	562
v/s Ratio Prot	c0.22	0.10		0.02	c0.02		0.02	c0.14		c0.15	0.13	
v/s Ratio Perm			0.04			0.01			0.05			0.07
v/c Ratio	0.61	0.26	0.11	0.21	0.26	0.13	0.73	0.70	0.26	0.83	0.37	0.19
Uniform Delay, d1	24.7	21.3	20.1	40.3	40.5	40.0	46.2	35.6	32.4	37.2	22.4	20.9
Progression Factor	0.82	0.81	1.25	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	0.5	0.4	0.7	0.9	0.4	52.2	3.1	0.5	15.5	0.2	0.2
Delay (s)	24.3	17.7	25.5	41.0	41.4	40.5	98.4	38.7	32.8	52.7	22.6	21.1
Level of Service	C	B	C	D	D	D	F	D	C	D	C	C
Approach Delay (s)		22.1			40.7			40.3			30.0	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	51	12	551	61	9	475
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	55	13	599	66	10	516
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1135	599			665	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1135	599			665	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	75	97			99	
cM capacity (veh/h)	221	502			924	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	68	599	66	10	516
Volume Left	55	0	0	10	0
Volume Right	13	0	66	0	0
cSH	274	1700	1700	924	1700
Volume to Capacity	0.25	0.35	0.04	0.01	0.30
Queue Length 95th (ft)	24	0	0	1	0
Control Delay (s)	23.9	0.0	0.0	8.9	0.0
Lane LOS	C			A	
Approach Delay (s)	23.9	0.0		0.2	
Approach LOS	C				

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	123	24	588	114	20	506
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	134	26	639	124	22	550
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type			None			None
Median storage veh)						
Upstream signal (ft)			633			
pX, platoon unblocked	0.89	0.89			0.89	
vC, conflicting volume	1233	639			763	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1198	529			669	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	24	95			97	
cM capacity (veh/h)	177	487			817	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	160	639	124	22	550
Volume Left	134	0	0	22	0
Volume Right	26	0	124	0	0
cSH	211	1700	1700	817	1700
Volume to Capacity	0.76	0.38	0.07	0.03	0.32
Queue Length 95th (ft)	129	0	0	2	0
Control Delay (s)	60.8	0.0	0.0	9.5	0.0
Lane LOS	F			A	
Approach Delay (s)	60.8	0.0		0.4	
Approach LOS	F				

Intersection Summary				
Average Delay	6.6			
Intersection Capacity Utilization	44.4%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	119	25	445	180	44	321
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.86	0.86	0.89	0.89
Hourly flow rate (vph)	149	31	517	209	49	361
Pedestrians	6					1
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)		4				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	983	524			733	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	983	524			733	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	43	94			94	
cM capacity (veh/h)	259	550			868	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	180	517	209	49	361
Volume Left	149	0	0	49	0
Volume Right	31	0	209	0	0
cSH	313	1700	1700	868	1700
Volume to Capacity	0.57	0.30	0.12	0.06	0.21
Queue Length 95th (ft)	84	0	0	5	0
Control Delay (s)	31.9	0.0	0.0	9.4	0.0
Lane LOS	D			A	
Approach Delay (s)	31.9	0.0		1.1	
Approach LOS	D				

Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	43.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	53	101	72	401	407	92
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.77	0.77	0.80	0.80	0.82	0.82
Hourly flow rate (vph)	69	131	90	501	496	112
Pedestrians	9			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (ft)					656	
pX, platoon unblocked	0.87	0.87	0.87			
vC, conflicting volume	1243	564	618			
vC1, stage 1 conf vol	561					
vC2, stage 2 conf vol	681					
vCu, unblocked vol	1205	429	489			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	82	76	90			
cM capacity (veh/h)	377	541	931			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	200	90	501	609
Volume Left	69	90	0	0
Volume Right	131	0	0	112
cSH	471	931	1700	1700
Volume to Capacity	0.42	0.10	0.29	0.36
Queue Length 95th (ft)	52	8	0	0
Control Delay (s)	18.2	9.3	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	18.2	1.4		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	79	68	443	110	88	371
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.81	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1225	1800		1770	1863
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1225	1800		1770	1863
Peak-hour factor, PHF	0.85	0.85	0.86	0.86	0.85	0.85
Adj. Flow (vph)	93	80	515	128	104	436
RTOR Reduction (vph)	0	73	10	0	0	0
Lane Group Flow (vph)	93	7	633	0	104	436
Confl. Bikes (#/hr)		42		18		14
Heavy Vehicles (%)	2%	7%	2%	2%	2%	2%
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	4.9	4.9	25.2		4.9	34.1
Effective Green, g (s)	4.9	4.9	25.2		4.9	34.1
Actuated g/C Ratio	0.09	0.09	0.47		0.09	0.64
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	163	113	854		163	1196
v/s Ratio Prot	c0.05		c0.35		c0.06	0.23
v/s Ratio Perm		0.01				
v/c Ratio	0.57	0.07	0.74		0.64	0.36
Uniform Delay, d1	23.1	22.0	11.3		23.2	4.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.8	0.2	3.5		7.9	0.2
Delay (s)	27.8	22.3	14.8		31.2	4.6
Level of Service	C	C	B		C	A
Approach Delay (s)	25.3		14.8			9.7
Approach LOS	C		B			A

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	18.1
Intersection Capacity Utilization	49.3%	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												
Volume (vph)	116	114	167	40	65	21	138	430	61	22	347	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	0.92		1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00	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	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00		0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1811	1459		1821	1517	1770	1863	1515	1770	1863	1506
Flt Permitted		0.78	1.00		0.82	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1448	1459		1527	1517	1770	1863	1515	1770	1863	1506
Peak-hour factor, PHF	0.89	0.89	0.89	0.88	0.88	0.88	0.88	0.88	0.88	0.91	0.91	0.91
Adj. Flow (vph)	130	128	188	45	74	24	157	489	69	24	381	121
RTOR Reduction (vph)	0	0	135	0	0	17	0	0	38	0	0	79
Lane Group Flow (vph)	0	258	53	0	119	7	157	489	31	24	381	42
Confl. Peds. (#/hr)	5		10	10		5			6			9
Confl. Bikes (#/hr)		2	33		3	11		2	17		15	14
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)		13.9	13.9		13.9	13.9	6.8	22.8	22.8	1.3	17.3	17.3
Effective Green, g (s)		13.9	13.9		13.9	13.9	6.8	22.8	22.8	1.3	17.3	17.3
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.14	0.46	0.46	0.03	0.35	0.35
Clearance Time (s)		4.0	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	3.0
Lane Grp Cap (vph)		403	406		425	422	241	850	691	46	645	521
v/s Ratio Prot							c0.09	c0.26		0.01	0.20	
v/s Ratio Perm		c0.18	0.04		0.08	0.00			0.02			0.03
v/c Ratio		0.64	0.13		0.28	0.02	0.65	0.58	0.05	0.52	0.59	0.08
Uniform Delay, d1		15.9	13.5		14.1	13.1	20.5	10.0	7.6	24.0	13.4	11.0
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		3.5	0.1		0.4	0.0	6.2	0.9	0.0	10.3	1.5	0.1
Delay (s)		19.3	13.7		14.5	13.1	26.7	11.0	7.6	34.3	14.9	11.1
Level of Service		B	B		B	B	C	B	A	C	B	B
Approach Delay (s)		16.9			14.3			14.1			14.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	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												
Volume (vph)	121	201	210	133	171	182	181	381	179	155	349	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.85	1.00	1.00	0.96	1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1454	1770	3505	1347	1770	1863	1526	1770	1863	1483
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1454	1770	3505	1347	1770	1863	1526	1770	1863	1483
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	126	209	219	158	204	217	199	419	197	168	379	121
RTOR Reduction (vph)	0	0	151	0	0	123	0	0	30	0	0	21
Lane Group Flow (vph)	126	209	68	158	204	94	199	419	167	168	379	100
Confl. Peds. (#/hr)			7			49			14			28
Confl. Bikes (#/hr)		1	12		2	7		2	6		5	15
Heavy Vehicles (%)	2%	2%	4%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	9.1	12.9	12.9	12.6	16.4	16.4	14.4	24.2	24.2	13.1	22.9	22.9
Effective Green, g (s)	9.1	12.9	12.9	12.6	16.4	16.4	14.4	24.2	24.2	13.1	22.9	22.9
Actuated g/C Ratio	0.12	0.16	0.16	0.16	0.21	0.21	0.18	0.31	0.31	0.17	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	204	579	238	283	729	280	323	572	469	294	541	431
v/s Ratio Prot	0.07	0.06		c0.09	0.06		c0.11	c0.22		0.09	0.20	
v/s Ratio Perm			0.05			c0.07			0.11			0.07
v/c Ratio	0.62	0.36	0.28	0.56	0.28	0.34	0.62	0.73	0.36	0.57	0.70	0.23
Uniform Delay, d1	33.2	29.3	28.9	30.5	26.2	26.6	29.7	24.4	21.2	30.3	24.9	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	0.4	0.7	2.4	0.2	0.7	3.5	4.8	0.5	2.7	4.1	0.3
Delay (s)	38.7	29.7	29.6	32.9	26.4	27.3	33.1	29.2	21.7	32.9	29.0	21.5
Level of Service	D	C	C	C	C	C	C	C	C	C	C	C
Approach Delay (s)		31.7			28.5			28.4			28.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	78.8	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	8	10	8	18	25	7	13	136	14	9	86	15
Peak Hour Factor	0.65	0.65	0.65	0.78	0.78	0.78	0.83	0.83	0.83	0.76	0.76	0.76
Hourly flow rate (vph)	12	15	12	23	32	9	16	164	17	12	113	20

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	40	64	196	145
Volume Left (vph)	12	23	16	12
Volume Right (vph)	12	9	17	20
Hadj (s)	-0.09	0.02	0.00	-0.03
Departure Headway (s)	4.7	4.7	4.3	4.3
Degree Utilization, x	0.05	0.08	0.24	0.17
Capacity (veh/h)	705	699	806	793
Control Delay (s)	7.9	8.2	8.6	8.3
Approach Delay (s)	7.9	8.2	8.6	8.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay		8.4		
HCM Level of Service		A		
Intersection Capacity Utilization		23.4%	ICU Level of Service	A
Analysis Period (min)		15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	264	74	24	219	19	66	145	79	15	78	23
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	
Frpb, ped/bikes	1.00	0.97		1.00	0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1747	1754		1761	1830		1763	1863	1515	1763	1787	
Flt Permitted	0.54	1.00		0.45	1.00		0.66	1.00	1.00	0.65	1.00	
Satd. Flow (perm)	991	1754		842	1830		1232	1863	1515	1211	1787	
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.88	0.88	0.88	0.69	0.69	0.69
Adj. Flow (vph)	35	287	80	29	267	23	75	165	90	22	113	33
RTOR Reduction (vph)	0	20	0	0	6	0	0	0	52	0	19	0
Lane Group Flow (vph)	35	347	0	29	284	0	75	165	38	22	127	0
Confl. Peds. (#/hr)	13		6	6		13	3		3	3		3
Confl. Bikes (#/hr)		4	106		4	34		10	21		17	7
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	21.0	21.0		21.0	21.0		21.0	21.0	21.0	21.0	21.0	
Effective Green, g (s)	21.0	21.0		21.0	21.0		21.0	21.0	21.0	21.0	21.0	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.42	0.42	0.42	0.42	0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	416	737		354	769		517	782	636	509	751	
v/s Ratio Prot		c0.20			0.15			c0.09			0.07	
v/s Ratio Perm	0.04			0.03			0.06		0.02	0.02		
v/c Ratio	0.08	0.47		0.08	0.37		0.15	0.21	0.06	0.04	0.17	
Uniform Delay, d1	8.7	10.5		8.7	10.0		9.0	9.2	8.6	8.6	9.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	2.2		0.5	1.4		0.6	0.6	0.2	0.2	0.5	
Delay (s)	9.1	12.6		9.2	11.3		9.5	9.8	8.8	8.7	9.5	
Level of Service	A	B		A	B		A	A	A	A	A	
Approach Delay (s)		12.3			11.1			9.5			9.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	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												
Volume (vph)	84	328	99	61	372	64	87	164	122	47	95	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1777		1703	3539	1505	1770	1863	1497	1770	1863	1489
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1777		1703	3539	1505	1770	1863	1497	1770	1863	1489
Peak-hour factor, PHF	0.83	0.83	0.83	0.89	0.89	0.89	0.87	0.87	0.87	0.70	0.70	0.70
Adj. Flow (vph)	101	395	119	69	418	72	100	189	140	67	136	80
RTOR Reduction (vph)	0	12	0	0	0	47	0	0	106	0	0	64
Lane Group Flow (vph)	101	502	0	69	418	25	100	189	34	67	136	16
Confl. Peds. (#/hr)			14			11			3			18
Confl. Bikes (#/hr)			3			7			43		43	24
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	6.9	25.4		4.2	22.7	22.7	6.9	16.0	16.0	4.1	13.2	13.2
Effective Green, g (s)	6.9	25.4		4.2	22.7	22.7	6.9	16.0	16.0	4.1	13.2	13.2
Actuated g/C Ratio	0.11	0.39		0.06	0.35	0.35	0.11	0.24	0.24	0.06	0.20	0.20
Clearance Time (s)	4.0	4.0		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	3.0	3.0
Lane Grp Cap (vph)	186	687		109	1223	520	186	454	365	110	374	299
v/s Ratio Prot	c0.06	c0.28		0.04	0.12		c0.06	c0.10		0.04	0.07	
v/s Ratio Perm						0.02			0.02			0.01
v/c Ratio	0.54	0.73		0.63	0.34	0.05	0.54	0.42	0.09	0.61	0.36	0.05
Uniform Delay, d1	27.9	17.2		30.0	16.0	14.3	27.9	20.9	19.2	30.0	22.6	21.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	4.0		11.4	0.2	0.0	3.0	0.6	0.1	9.2	0.6	0.1
Delay (s)	31.1	21.2		41.4	16.1	14.3	30.9	21.5	19.3	39.2	23.2	21.3
Level of Service	C	C		D	B	B	C	C	B	D	C	C
Approach Delay (s)		22.8			19.0			23.0			26.5	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: Oak Ave

Scenario: Existing
Peak Hour: AM

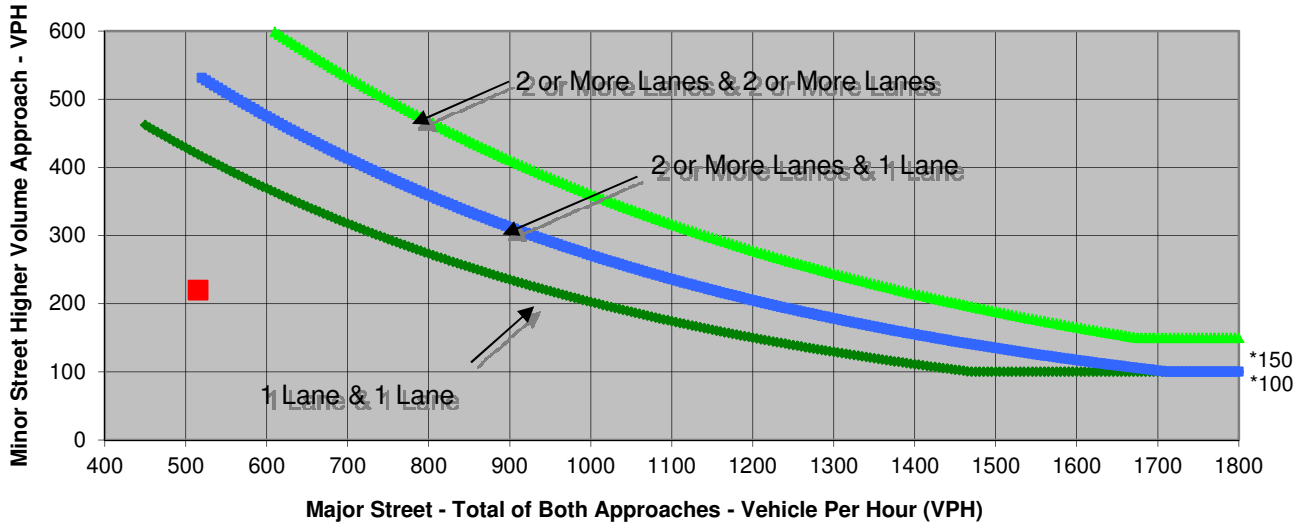
Turn Movement Volumes

	NB	SB	EB	WB
Left	15	119	54	39
Through	66	54	165	112
Right	35	47	12	133
Total	116	220	231	284

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	Oak Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	515	220	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: Oak Ave

Scenario: Existing
Peak Hour: PM

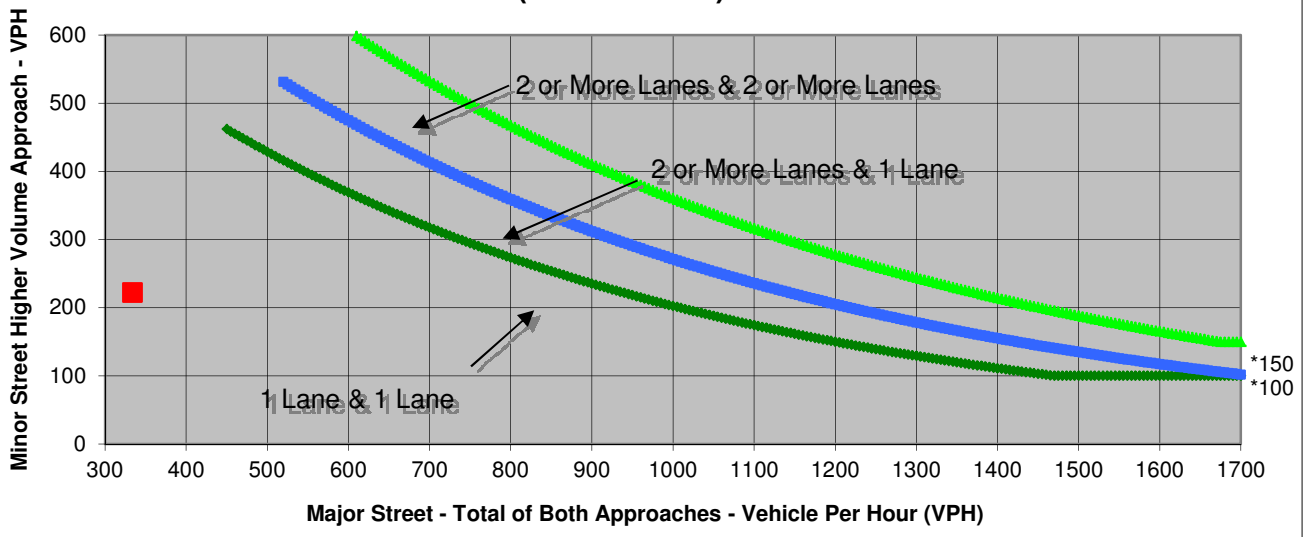
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	120	17	6
Through	54	63	81	112
Right	13	39	11	107
Total	84	222	109	225

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	Oak Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	334	222	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: B St

Scenario: Existing
Peak Hour: AM

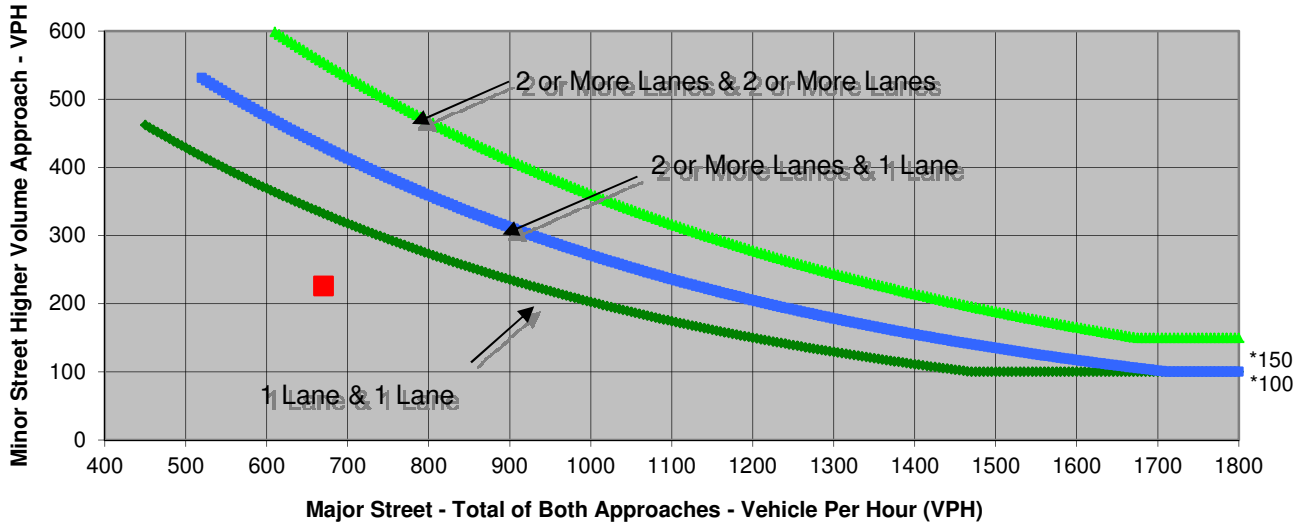
Turn Movement Volumes

	NB	SB	EB	WB
Left	174	0	0	95
Through	0	0	145	296
Right	52	0	134	0
Total	226	0	279	391

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	B St	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	670	226	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: B St

Scenario: Existing
Peak Hour: PM

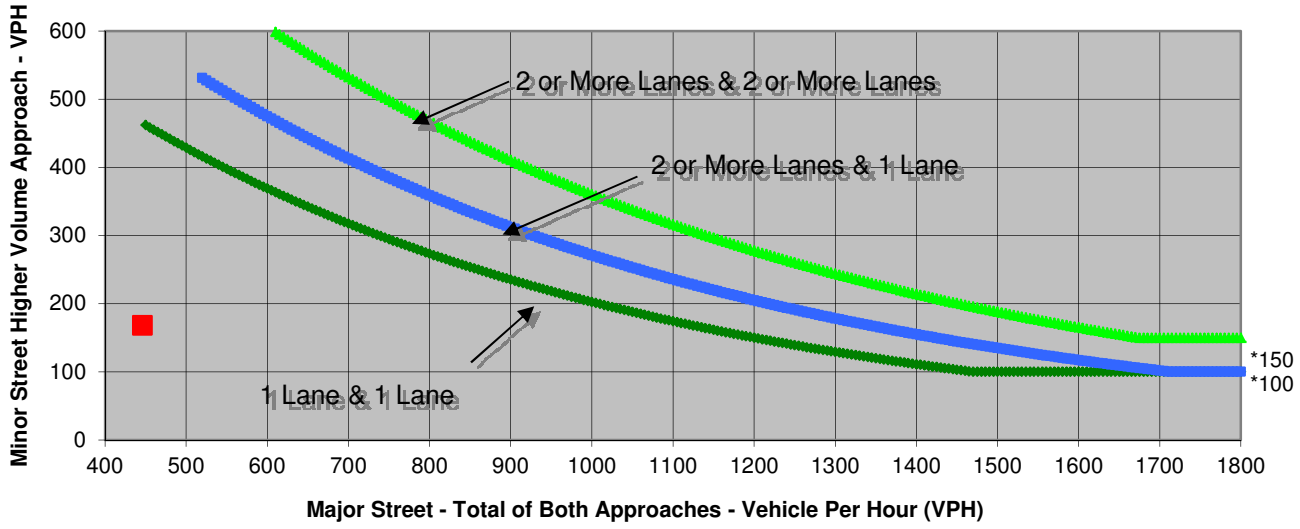
Turn Movement Volumes

	NB	SB	EB	WB
Left	96	0	0	39
Through	0	0	163	150
Right	72	0	94	0
Total	168	0	257	189

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	B St	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	446	168	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: J St
Minor Street: Drexel Dr

Scenario: Existing
Peak Hour: AM

Turn Movement Volumes

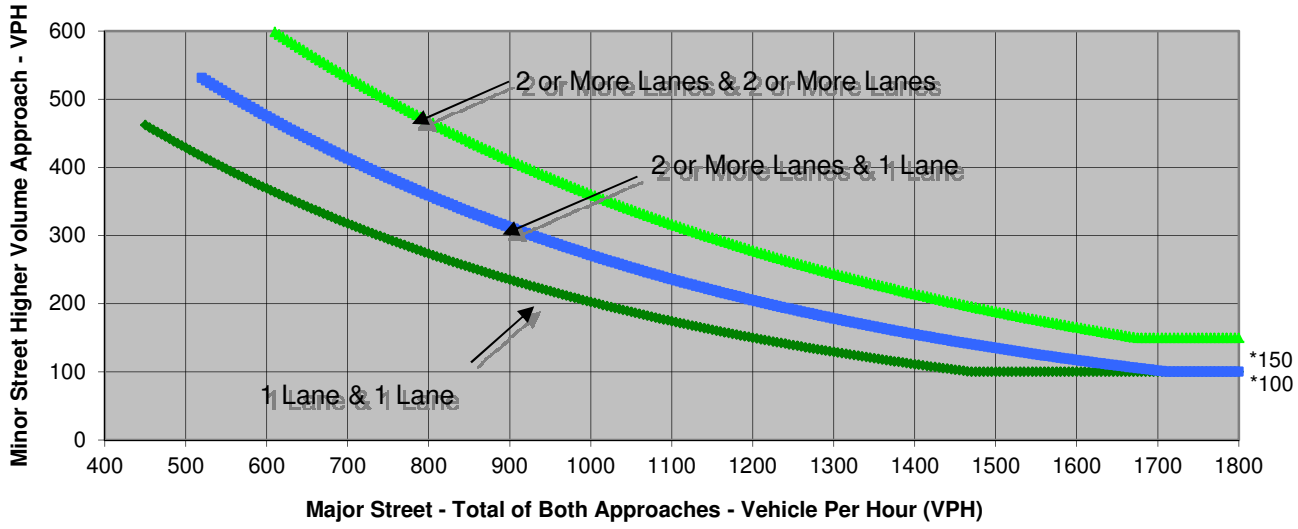
	NB	SB	EB	WB
Left	0	22	0	22
Through	68	96	0	0
Right	10	0	0	25
Total	78	118	0	47

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	J St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	196	47	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: J St
Minor Street: Drexel Dr

Scenario: Existing
Peak Hour: PM

Turn Movement Volumes

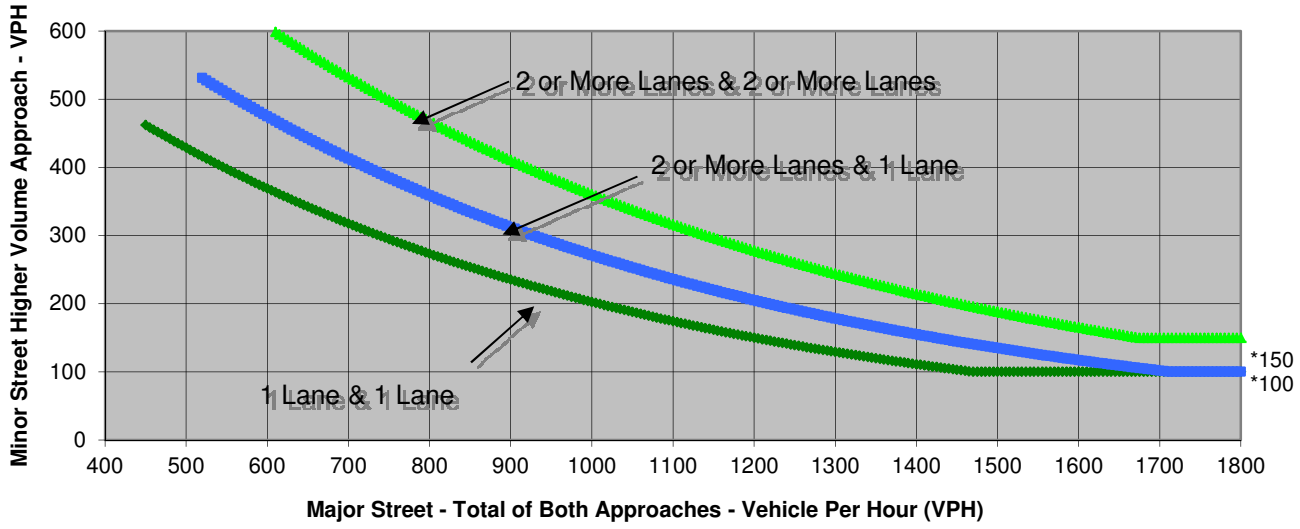
	NB	SB	EB	WB
Left	0	10	0	15
Through	132	103	0	0
Right	18	0	0	22
Total	150	113	0	37

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	J St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	263	37	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: E 8th St
Minor Street: J St

Scenario: Existing
Peak Hour: AM

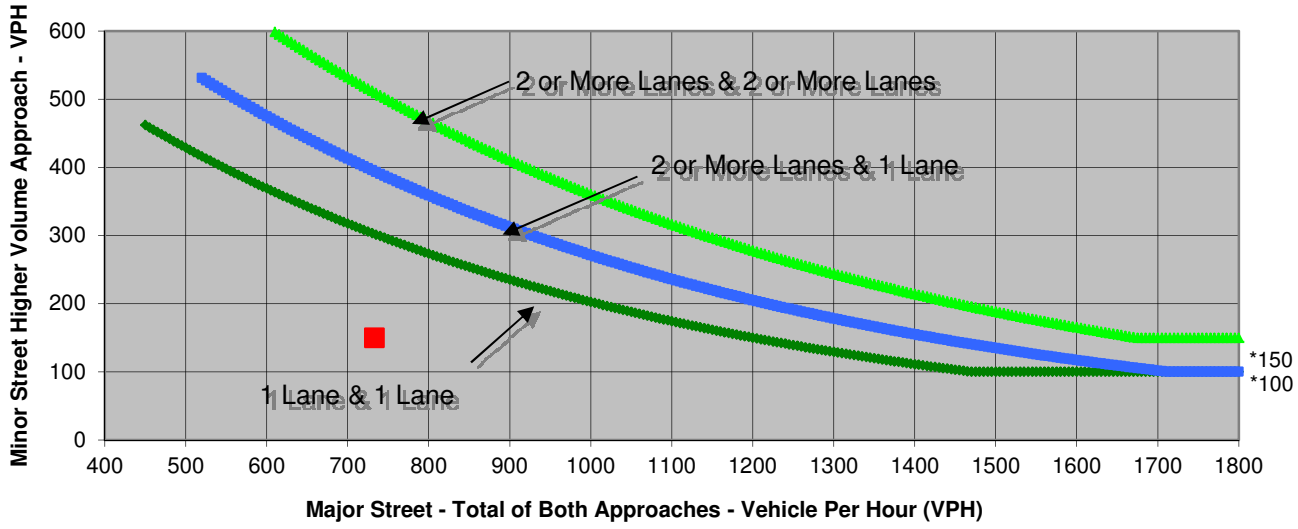
Turn Movement Volumes

	NB	SB	EB	WB
Left	55	24	40	7
Through	13	34	272	380
Right	7	92	23	11
Total	75	150	335	398

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	E 8th St	J St	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	733	150	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: E 8th St
Minor Street: J St

Scenario: Existing
Peak Hour: PM

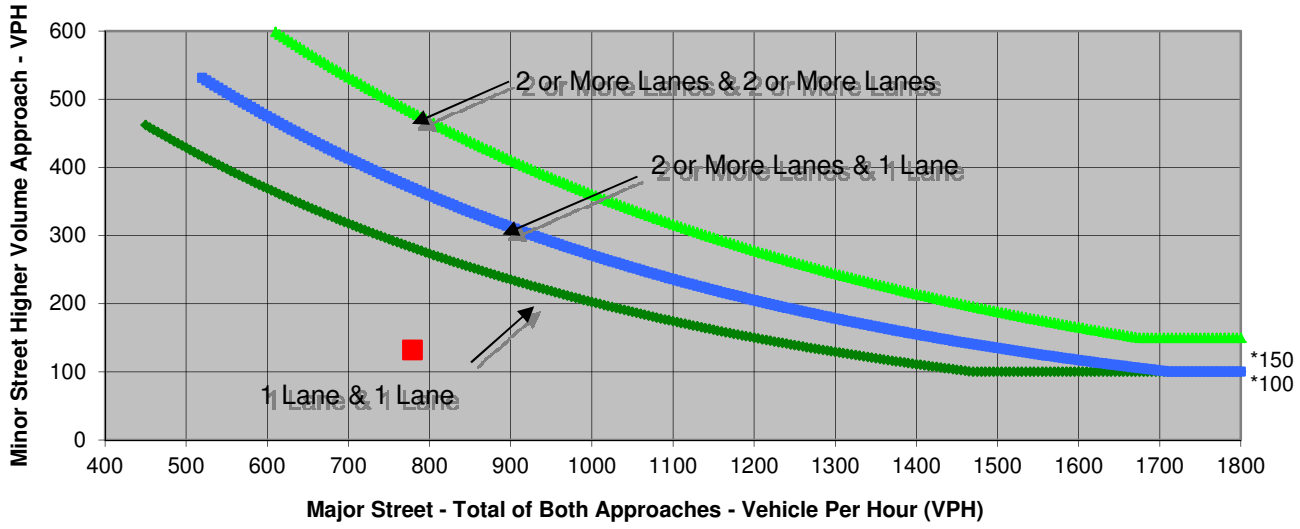
Turn Movement Volumes

	NB	SB	EB	WB
Left	28	31	106	6
Through	46	34	341	283
Right	4	67	18	25
Total	78	132	465	314

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	E 8th St	J St	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	779	132	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: L St

Scenario: Existing
Peak Hour: AM

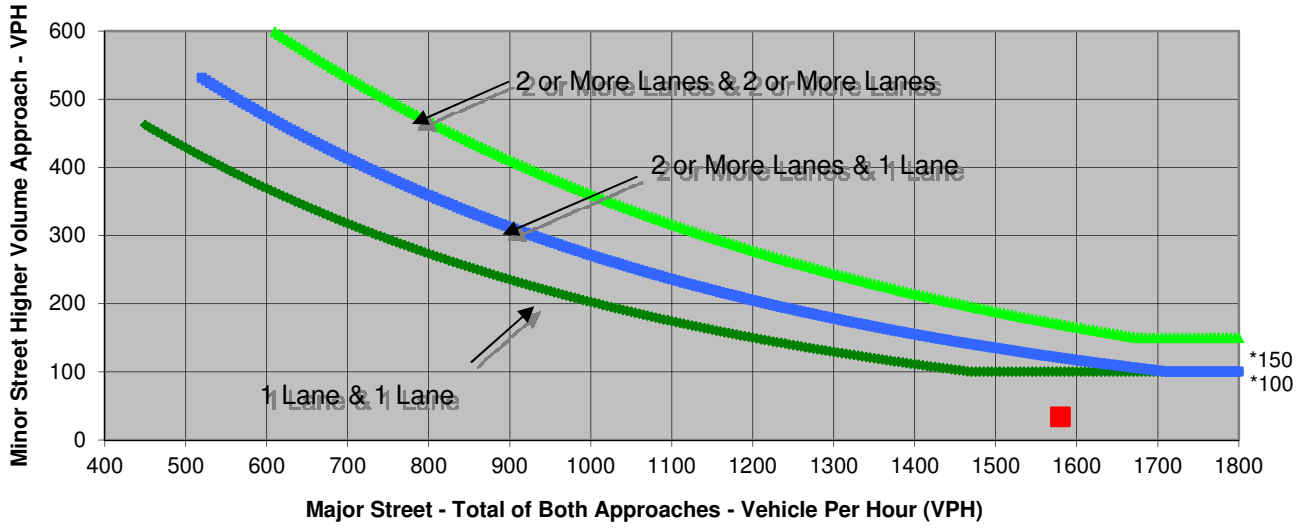
Turn Movement Volumes

	NB	SB	EB	WB
Left	34	0	0	60
Through	0	0	615	905
Right	0	0	0	0
Total	34	0	615	965

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	L St	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,580	34	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: L St

Scenario: Existing
Peak Hour: PM

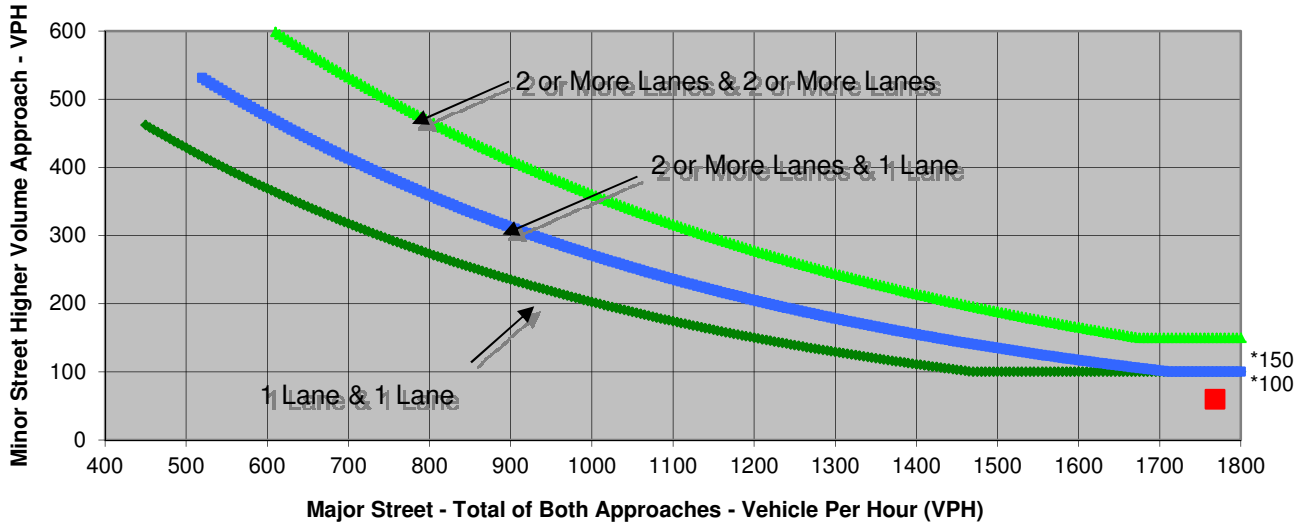
Turn Movement Volumes

	NB	SB	EB	WB
Left	60	0	0	55
Through	0	0	899	814
Right	0	0	0	0
Total	60	0	899	869

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	L St	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,768	60	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Existing
Peak Hour: AM

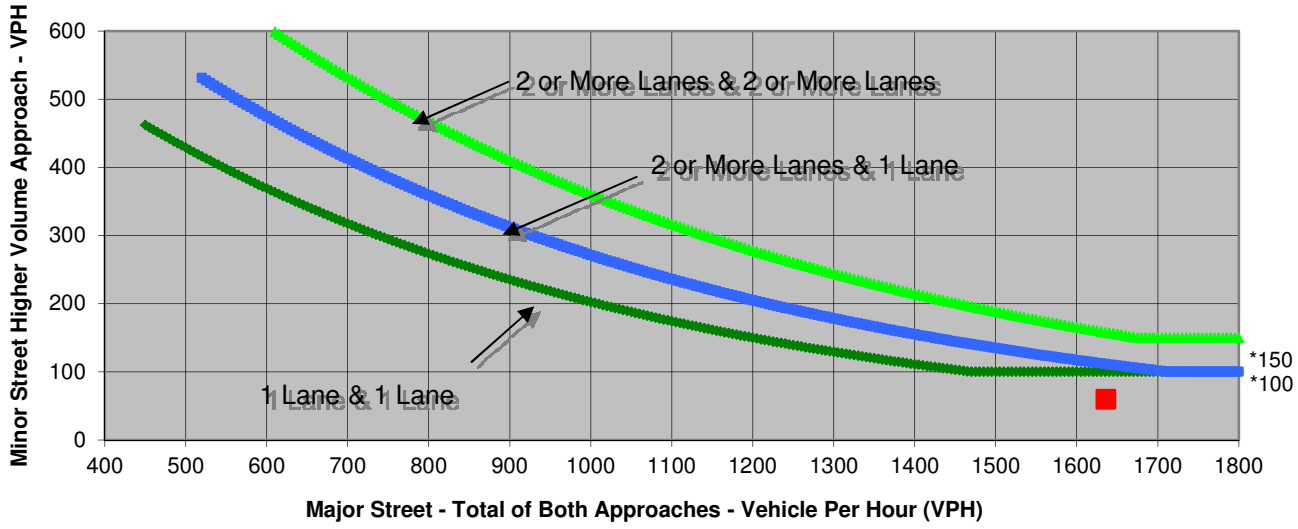
Turn Movement Volumes

	NB	SB	EB	WB
Left	57	0	0	57
Through	0	0	631	917
Right	3	0	31	0
Total	60	0	662	974

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street Covell Blvd	Minor Street Oak Tree Plaza Dvwy	Warrant Met
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,636	60	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Existing
Peak Hour: PM

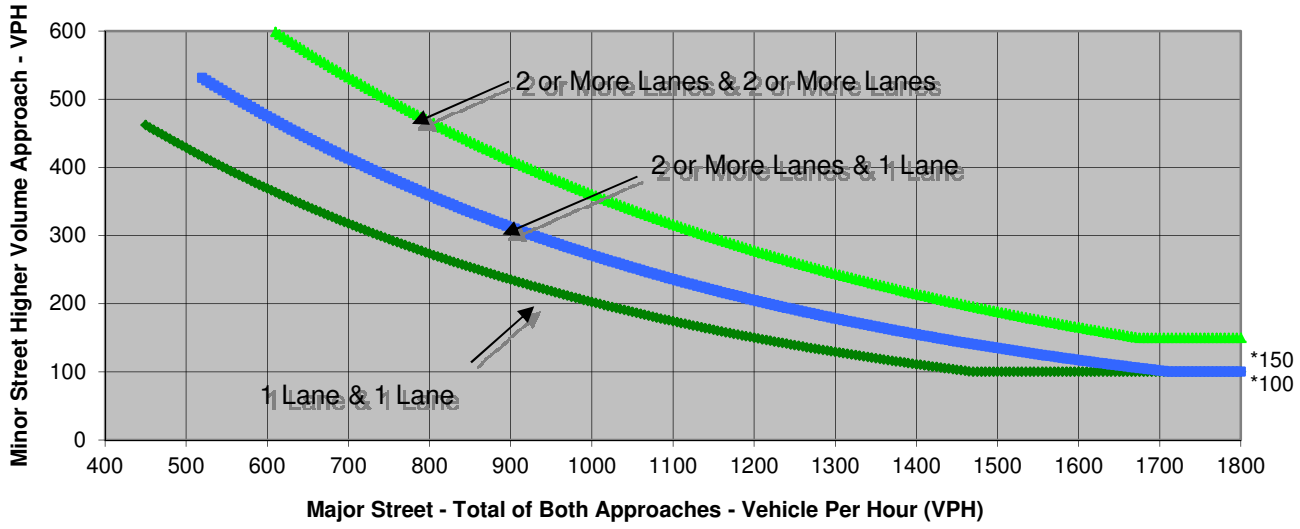
Turn Movement Volumes

	NB	SB	EB	WB
Left	119	0	0	62
Through	0	0	945	753
Right	20	0	77	0
Total	139	0	1,022	815

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,837	139	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Monarch Ln

Scenario: Existing
Peak Hour: AM

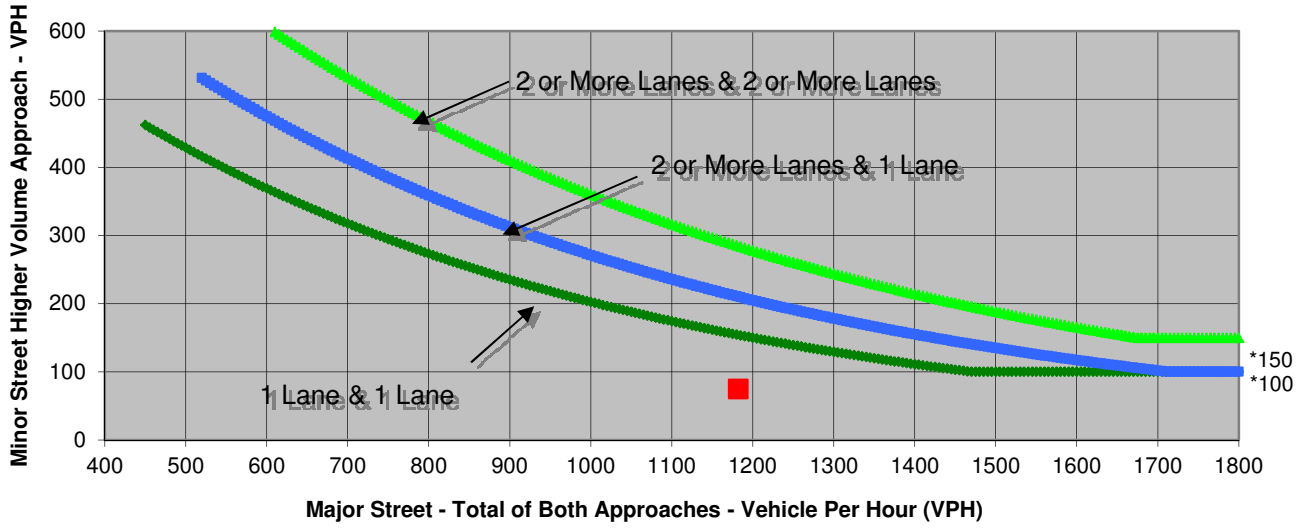
Turn Movement Volumes

	NB	SB	EB	WB
Left	29	0	1	20
Through	0	0	632	497
Right	46	2	32	0
Total	75	2	665	517

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	Monarch Ln	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,182	75	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Monarch Ln

Scenario: Existing
Peak Hour: PM

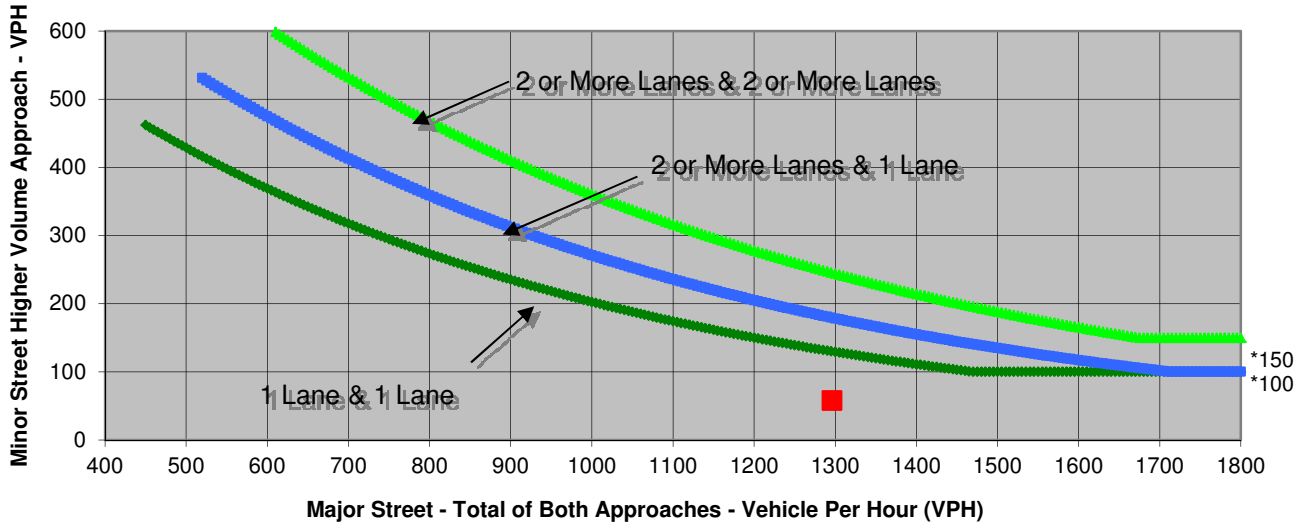
Turn Movement Volumes

	NB	SB	EB	WB
Left	33	3	1	50
Through	0	0	517	699
Right	25	0	29	0
Total	58	3	547	749

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	Monarch Ln	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,296	58	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Donner Ave

Scenario: Existing
Peak Hour: AM

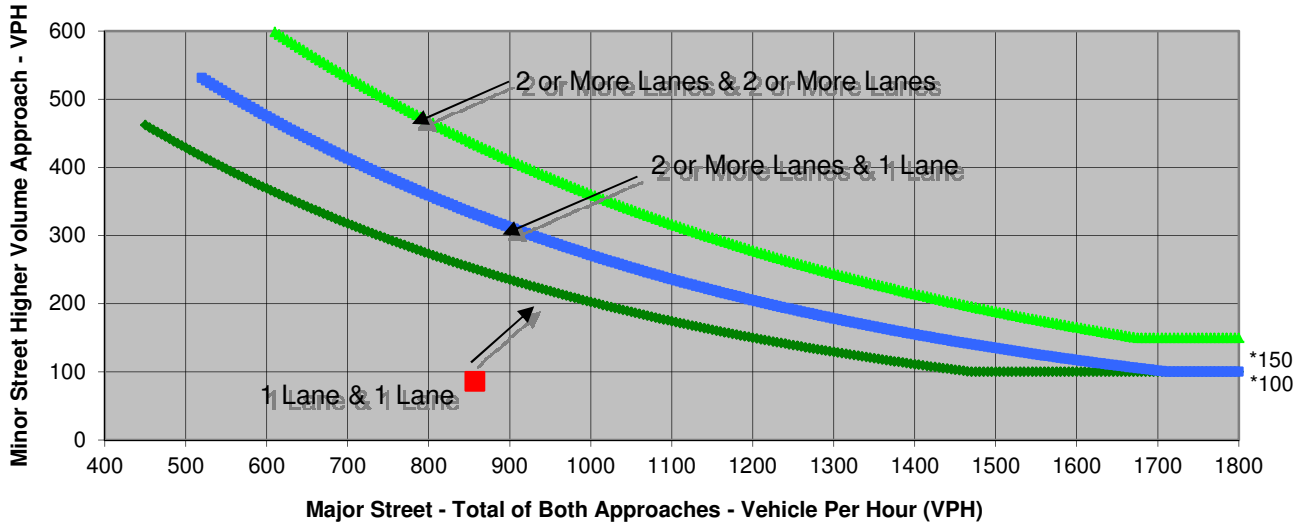
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	6	0	77
Through	278	542	0	0
Right	31	0	0	9
Total	309	548	0	86

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Donner Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	857	86	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Donner Ave

Scenario: Existing
Peak Hour: PM

Turn Movement Volumes

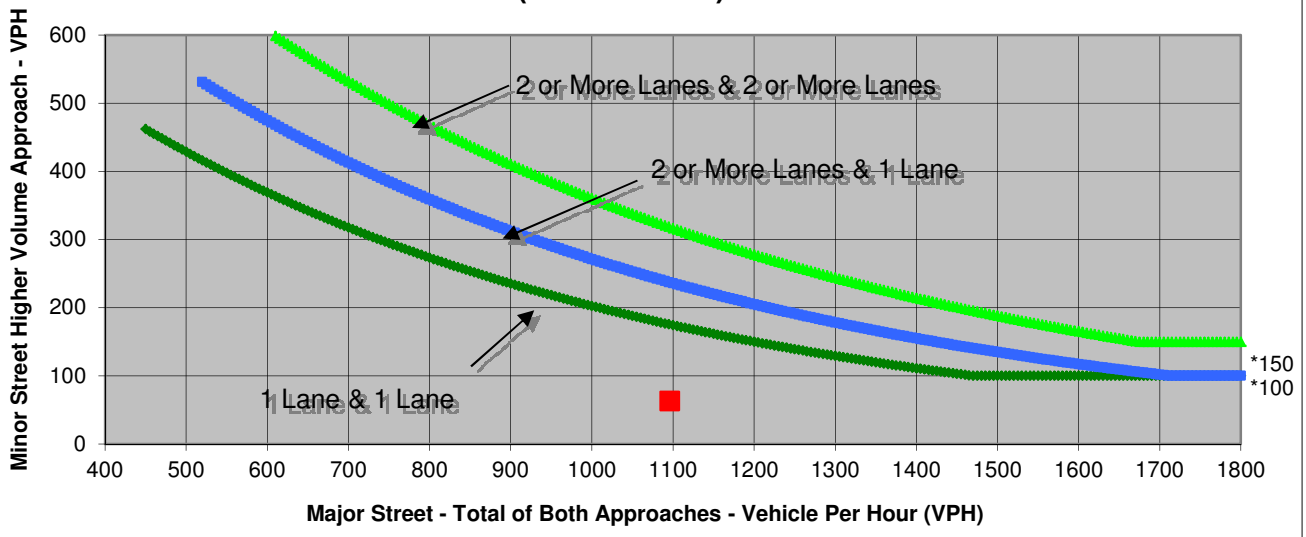
	NB	SB	EB	WB
Left	0	9	0	51
Through	551	475	0	0
Right	61	0	0	12
Total	612	484	0	63

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Donner Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	1,096	63	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Picasso Ave

Scenario: Existing
Peak Hour: AM

Turn Movement Volumes

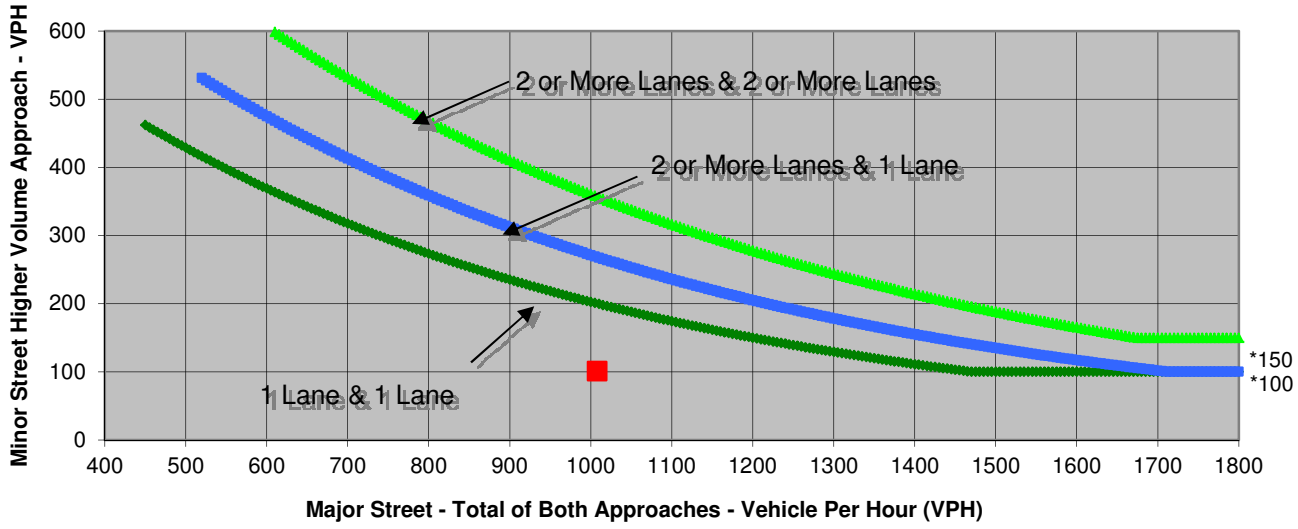
	NB	SB	EB	WB
Left	0	20	0	85
Through	293	599	0	0
Right	96	0	0	16
Total	389	619	0	101

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Picasso Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	1,008	101	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Picasso Ave

Scenario: Existing
Peak Hour: PM

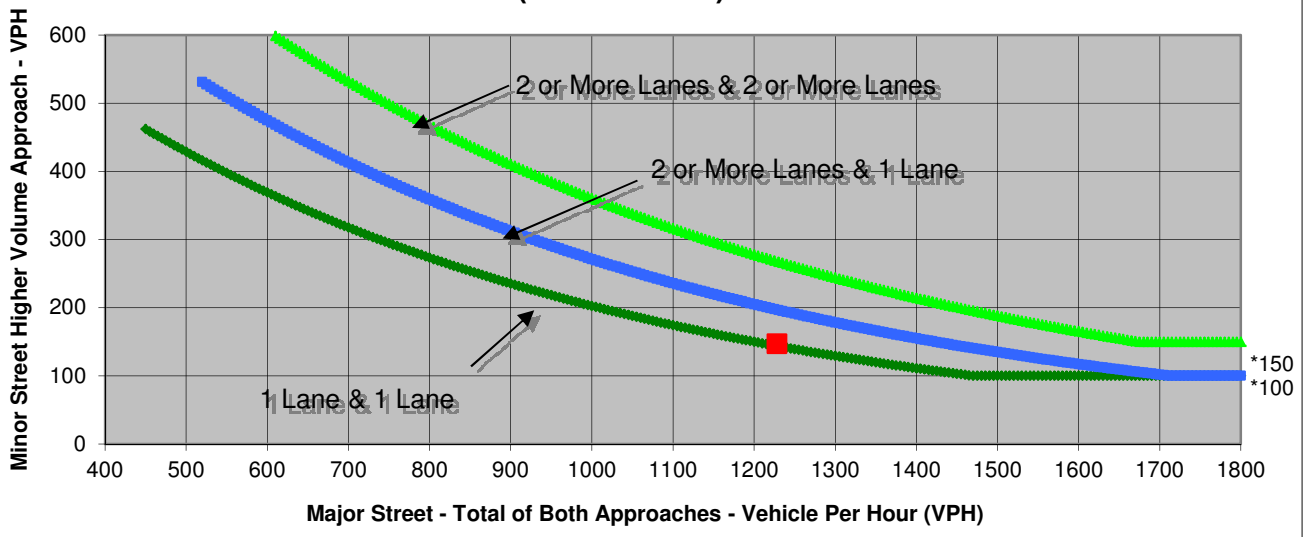
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	123
Through	588	506	0	0
Right	114	0	0	24
Total	702	526	0	147

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Picasso Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	1,228	147	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Moore Ave

Scenario: Existing
Peak Hour: AM

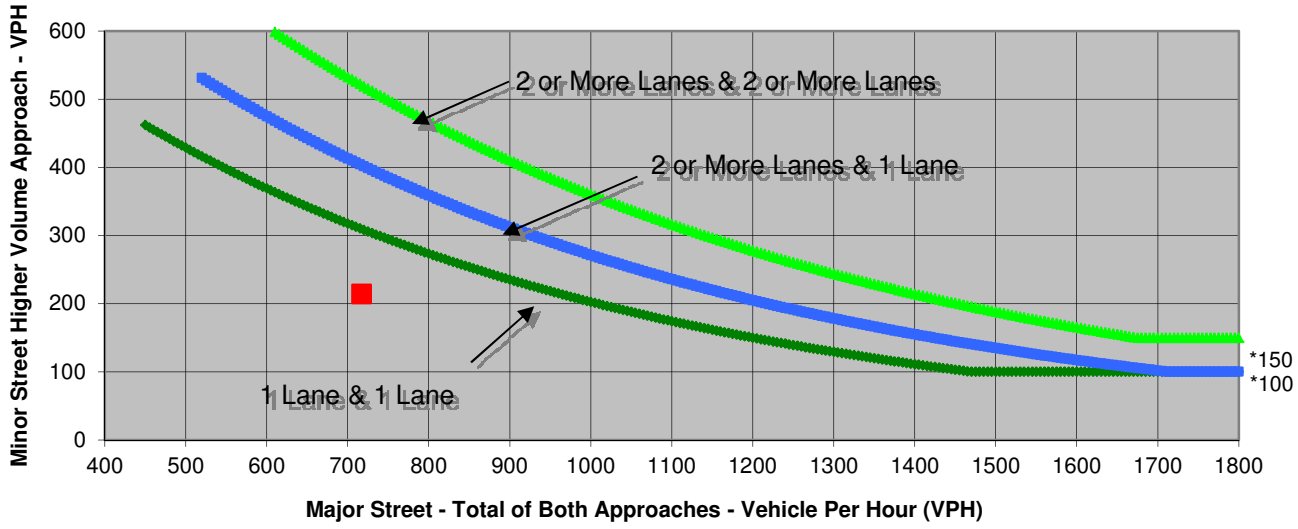
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	24	0	169
Through	247	376	0	0
Right	70	0	0	45
Total	317	400	0	214

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Moore Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	717	214	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Moore Ave

Scenario: Existing
Peak Hour: PM

Turn Movement Volumes

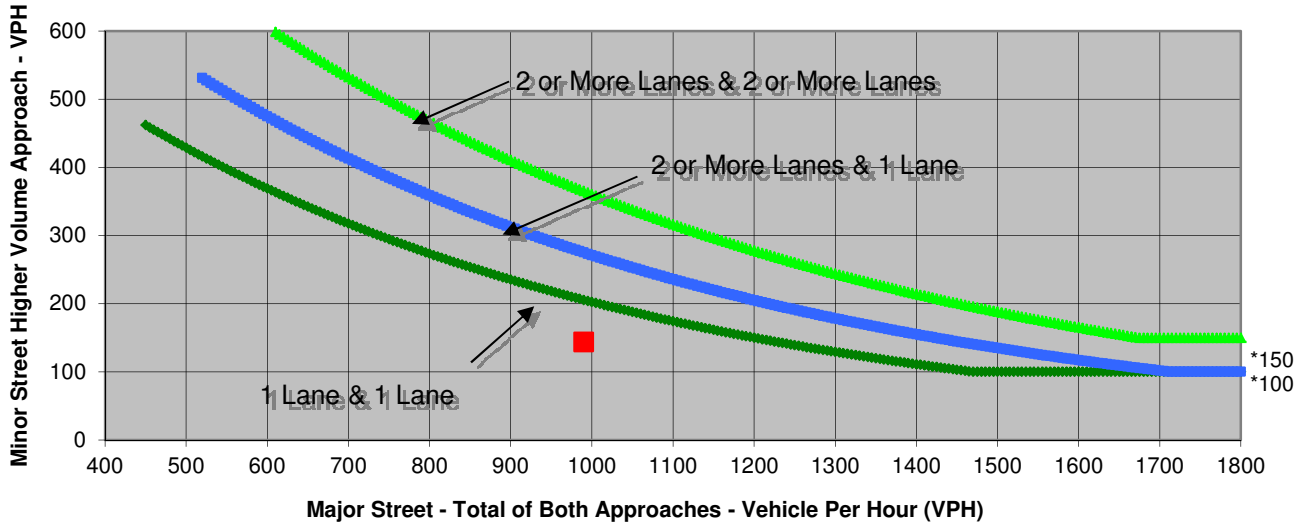
	NB	SB	EB	WB
Left	0	44	0	119
Through	445	321	0	0
Right	180	0	0	25
Total	625	365	0	144

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Moore Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	990	144	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Existing
Peak Hour: AM

Turn Movement Volumes

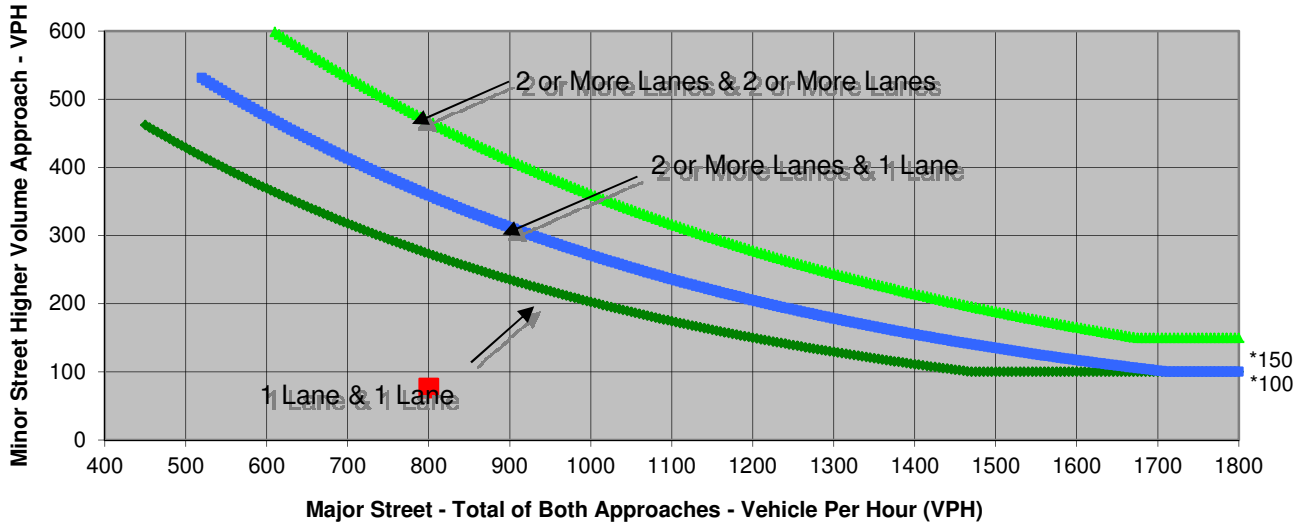
	NB	SB	EB	WB
Left	51	0	15	0
Through	306	394	0	0
Right	0	49	61	0
Total	357	443	76	0

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	800	76	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Existing
Peak Hour: PM

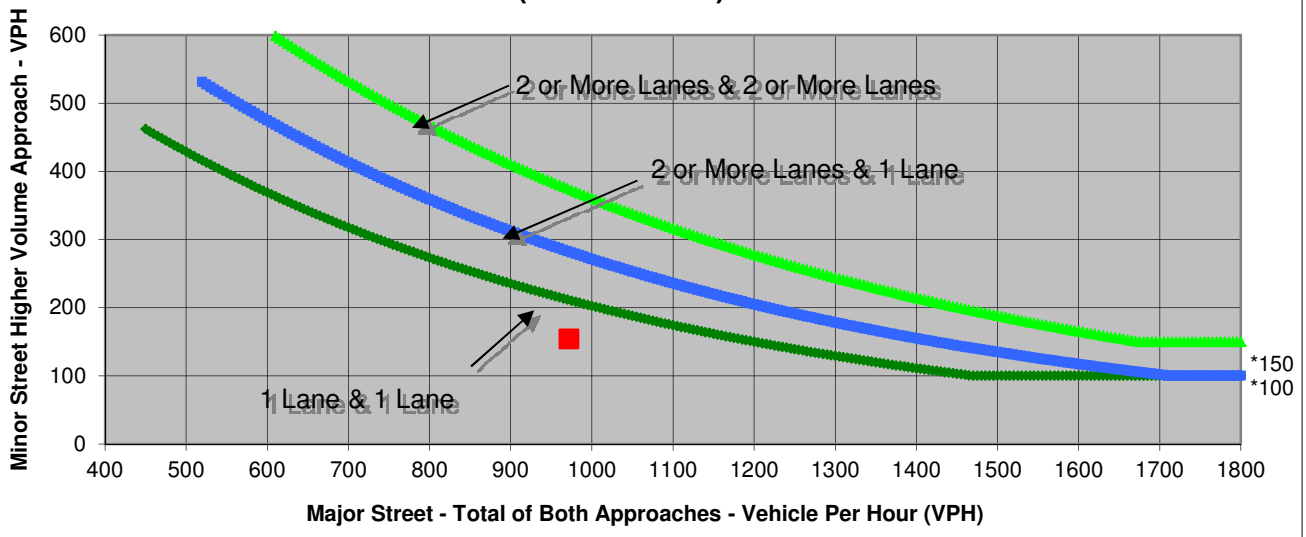
Turn Movement Volumes

	NB	SB	EB	WB
Left	72	0	53	0
Through	401	407	0	0
Right	0	92	101	0
Total	473	499	154	0

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	972	154	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: L St
Minor Street: Drexel Dr

Scenario: Existing
Peak Hour: AM

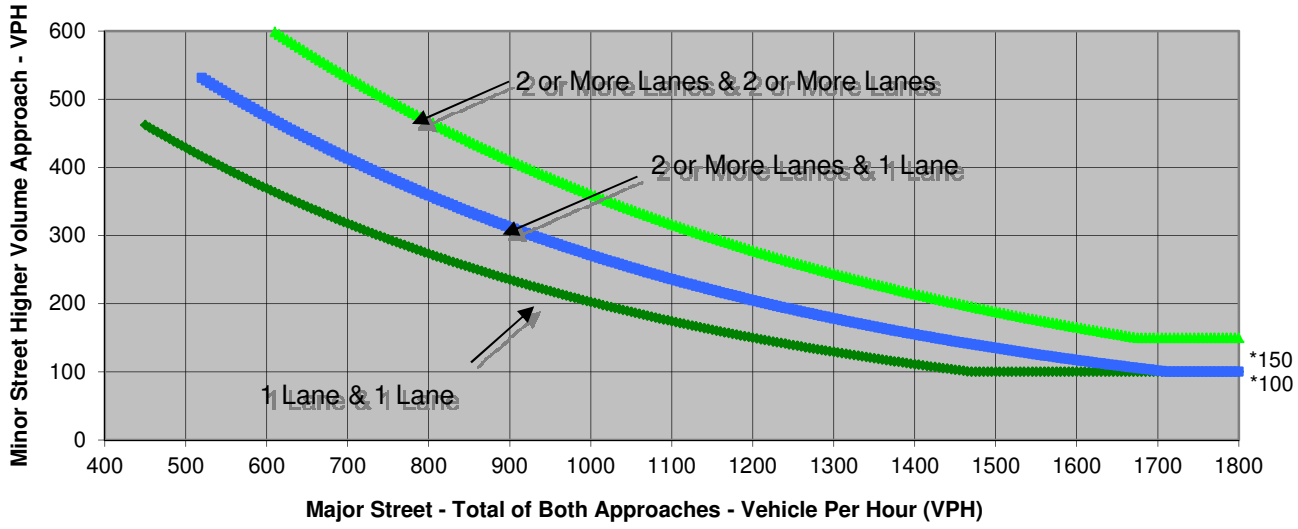
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	9	16	22
Through	52	110	3	19
Right	7	29	14	6
Total	76	148	33	47

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	L St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	224	47	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: L St
Minor Street: Drexel Dr

Scenario: Existing
Peak Hour: PM

Turn Movement Volumes

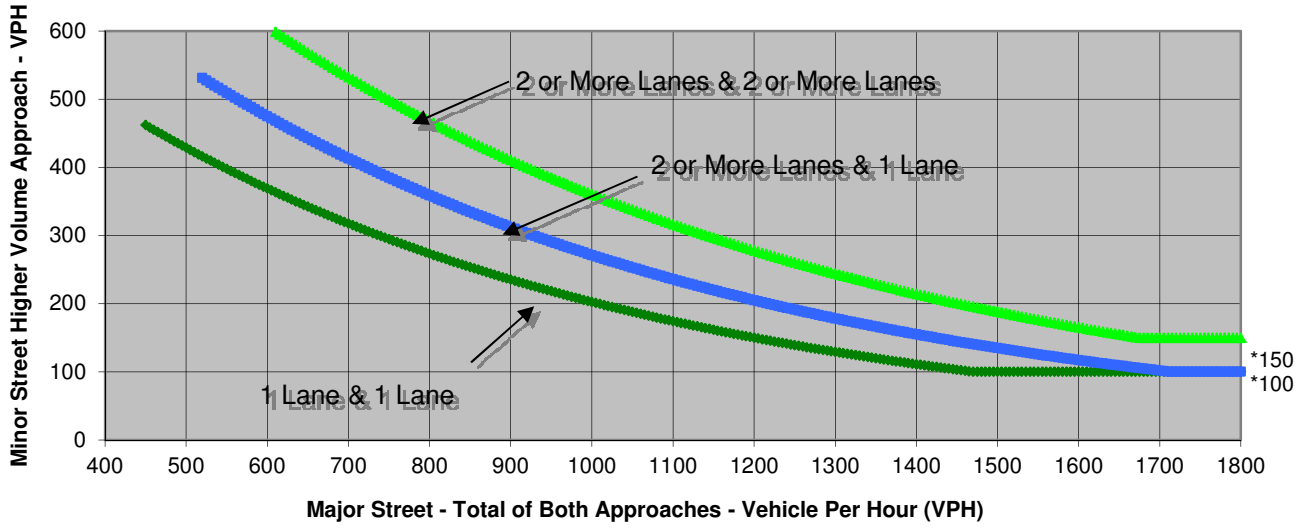
	NB	SB	EB	WB
Left	16	9	8	18
Through	136	86	10	25
Right	14	15	8	7
Total	166	110	26	50

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	L St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	276	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.