Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	549	10	141	408	94	7	11	301	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	638	12	168	486	112	9	14	381	49	14	4
RTOR Reduction (vph)	0	0	6	0	0	41	0	0	235	0	2	0
Lane Group Flow (vph)	41	638	6	168	486	71	9	14	146	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	23.5	23.5	28.4	46.7	46.7	0.8	35.4	35.4	6.7	41.3	
Effective Green, g (s)	5.2	23.5	23.5	28.4	46.7	46.7	0.8	35.4	35.4	6.7	41.3	
Actuated g/C Ratio	0.05	0.21	0.21	0.26	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	756	324	845	1460	630	13	600	493	108	669	
v/s Ratio Prot	0.02	c0.18		0.05	c0.14		0.01	0.01		c0.03	0.01	
v/s Ratio Perm			0.00			0.05			c0.10			
v/c Ratio	0.51	0.84	0.02	0.20	0.33	0.11	0.69	0.02	0.30	0.45	0.02	
Uniform Delay, d1	51.1	41.5	34.2	31.9	21.2	19.1	54.5	25.5	28.0	49.9	21.6	
Progression Factor	1.00	1.00	1.00	0.88	0.78	0.90	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.9	8.5	0.0	0.1	0.6	0.4	96.3	0.1	1.5	3.0	0.1	
Delay (s)	56.0	50.0	34.2	28.1	17.2	17.5	150.8	25.6	29.5	52.9	21.7	
Level of Service	E	D	C	C	B	B	F	C	C	D	C	
Approach Delay (s)		50.1			19.6			32.0			44.5	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	71	815	607	275	161	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	1548
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1498	1770	1548
Peak-hour factor, PHF	0.93	0.93	0.88	0.88	0.86	0.86
Adj. Flow (vph)	76	876	690	312	187	42
RTOR Reduction (vph)	0	0	0	53	0	36
Lane Group Flow (vph)	76	876	690	259	187	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	85.0	72.2	72.2	17.0	17.0
Effective Green, g (s)	8.8	85.0	72.2	72.2	17.0	17.0
Actuated g/C Ratio	0.08	0.77	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	2735	2323	983	274	239
v/s Ratio Prot	c0.04	c0.25	0.19		c0.11	
v/s Ratio Perm				0.17		0.00
v/c Ratio	0.54	0.32	0.30	0.26	0.68	0.03
Uniform Delay, d1	48.6	3.8	8.1	7.9	43.9	39.5
Progression Factor	1.05	0.29	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	0.3	0.3	0.7	6.8	0.0
Delay (s)	54.4	1.4	8.4	8.5	50.8	39.5
Level of Service	D	A	A	A	D	D
Approach Delay (s)		5.6	8.4		48.7	
Approach LOS		A	A		D	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.2%	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)	98	590	188	34	671	78	141	44	27	103	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	0.90
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	1484	1770	1863	1537	1719	1863	1431
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	1484	1770	1863	1537	1719	1863	1431
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.67	0.67	0.67	0.80	0.80	0.80
Adj. Flow (vph)	120	720	229	41	818	95	210	66	40	129	108	188
RTOR Reduction (vph)	0	0	38	0	0	14	0	0	25	0	0	122
Lane Group Flow (vph)	120	720	191	41	818	81	210	66	15	129	108	66
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)	8.8	32.7	32.7	3.1	27.0	27.0	15.7	19.0	19.0	9.1	12.4	12.4
Effective Green, g (s)	8.8	32.7	32.7	3.1	27.0	27.0	15.7	19.0	19.0	9.1	12.4	12.4
Actuated g/C Ratio	0.11	0.41	0.41	0.04	0.34	0.34	0.20	0.24	0.24	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)	195	1448	626	69	1196	501	348	443	365	196	289	222
v/s Ratio Prot	c0.07	0.20		0.02	c0.23		c0.12	0.04		0.08	c0.06	
v/s Ratio Perm			0.13			0.05			0.01			0.05
v/c Ratio	0.62	0.50	0.31	0.59	0.68	0.16	0.60	0.15	0.04	0.66	0.37	0.30
Uniform Delay, d1	33.9	17.5	15.9	37.8	22.8	18.5	29.3	24.1	23.4	33.9	30.3	29.9
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	5.7	0.3	0.3	13.0	1.6	0.2	2.9	0.2	0.0	7.7	0.8	0.8
Delay (s)	39.6	17.8	16.2	50.8	24.4	18.7	32.2	24.2	23.5	41.7	31.1	30.7
Level of Service	D	B	B	D	C	B	C	C	C	D	C	C
Approach Delay (s)		19.9			25.0			29.4			34.1	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	79.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.5%	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)	26	542	138	166	549	39	165	118	59	54	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	0.92	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	1452	1770	3343	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)	1687	3539	1518	1770	3539	1419	1703	1759	1452	1770	3343	1533
Peak-hour factor, PHF	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89	0.89	0.79	0.79	0.79
Adj. Flow (vph)	30	616	157	182	603	43	185	133	66	68	171	71
RTOR Reduction (vph)	0	0	29	0	0	24	0	0	48	0	0	55
Lane Group Flow (vph)	30	616	128	182	603	19	185	133	18	68	171	16
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)	2.0	21.8	21.8	13.1	32.9	32.9	13.7	18.6	18.6	6.3	11.2	11.2
Effective Green, g (s)	2.0	21.8	21.8	13.1	32.9	32.9	13.7	18.6	18.6	6.3	11.2	11.2
Actuated g/C Ratio	0.03	0.29	0.29	0.17	0.43	0.43	0.18	0.25	0.25	0.08	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)	45	1018	437	306	1536	616	308	432	356	147	494	227
v/s Ratio Prot	0.02	c0.17		c0.10	0.17		c0.11	c0.08		0.04	0.05	
v/s Ratio Perm			0.08			0.01			0.01			0.01
v/c Ratio	0.67	0.61	0.29	0.59	0.39	0.03	0.60	0.31	0.05	0.46	0.35	0.07
Uniform Delay, d1	36.6	23.3	21.0	28.9	14.6	12.3	28.5	23.3	21.9	33.1	29.0	27.8
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	31.5	1.0	0.4	3.1	0.2	0.0	3.3	0.4	0.1	2.3	0.4	0.1
Delay (s)	68.0	24.3	21.4	32.0	14.8	12.3	31.8	23.8	21.9	35.4	29.4	28.0
Level of Service	E	C	C	C	B	B	C	C	C	D	C	C
Approach Delay (s)		25.4			18.5			27.3			30.4	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	75.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	502	187	238	645	138	178
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	1490	1770	3539	1770	1563
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1490	1770	3539	1770	1563
Peak-hour factor, PHF	0.79	0.79	0.85	0.85	0.56	0.56
Adj. Flow (vph)	635	237	280	759	246	318
RTOR Reduction (vph)	0	47	0	0	0	251
Lane Group Flow (vph)	635	190	280	759	246	67
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)	18.1	18.1	16.1	38.2	15.4	15.4
Effective Green, g (s)	18.1	18.1	16.1	38.2	15.4	15.4
Actuated g/C Ratio	0.25	0.25	0.22	0.52	0.21	0.21
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)	872	367	388	1839	371	327
v/s Ratio Prot	c0.18		c0.16	0.21	c0.14	
v/s Ratio Perm		0.13				0.04
v/c Ratio	0.73	0.52	0.72	0.41	0.66	0.20
Uniform Delay, d1	25.4	23.9	26.6	10.8	26.7	24.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1	1.2	6.5	0.2	4.4	0.3
Delay (s)	28.5	25.1	33.1	10.9	31.1	24.3
Level of Service	C	C	C	B	C	C
Approach Delay (s)	27.6			16.9	27.3	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	73.5	Sum of lost time (s)	23.9
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)	40	636	802	103	155	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	1461	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1461	1770	1583
Peak-hour factor, PHF	0.76	0.76	0.87	0.87	0.73	0.73
Adj. Flow (vph)	53	837	922	118	212	111
RTOR Reduction (vph)	0	0	0	10	0	84
Lane Group Flow (vph)	53	837	922	108	212	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)	4.4	34.0	25.6	25.6	15.0	15.0
Effective Green, g (s)	4.4	34.0	25.6	25.6	15.0	15.0
Actuated g/C Ratio	0.07	0.54	0.41	0.41	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)	124	1916	1443	596	423	378
v/s Ratio Prot	0.03	c0.24	c0.26		c0.12	
v/s Ratio Perm				0.07		0.02
v/c Ratio	0.43	0.44	0.64	0.18	0.50	0.07
Uniform Delay, d1	28.0	8.6	14.9	11.9	20.7	18.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	0.2	0.9	0.1	0.9	0.1
Delay (s)	30.4	8.8	15.8	12.0	21.6	18.6
Level of Service	C	A	B	B	C	B
Approach Delay (s)		10.1	15.4		20.6	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	62.8	Sum of lost time (s)	17.8
Intersection Capacity Utilization	44.1%	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)	29	649	124	335	768	71	59	66	140	156	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	1539	3400	3539	1523	1752	1863	1523	1770	1863	1442
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	1539	3400	3539	1523	1752	1863	1523	1770	1863	1442
Peak-hour factor, PHF	0.78	0.78	0.78	0.80	0.80	0.80	0.80	0.80	0.80	0.83	0.83	0.83
Adj. Flow (vph)	37	832	159	419	960	89	74	82	175	188	220	95
RTOR Reduction (vph)	0	0	28	0	0	7	0	0	151	0	0	26
Lane Group Flow (vph)	37	832	131	419	960	82	74	82	24	188	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	30.2	30.2	16.7	43.7	43.7	7.5	11.8	11.8	15.2	19.5	19.5
Effective Green, g (s)	3.2	30.2	30.2	16.7	43.7	43.7	7.5	11.8	11.8	15.2	19.5	19.5
Actuated g/C Ratio	0.04	0.34	0.34	0.19	0.49	0.49	0.08	0.13	0.13	0.17	0.22	0.22
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)	63	1189	517	632	1720	740	146	245	200	299	404	313
v/s Ratio Prot	0.02	c0.24		c0.12	0.27		0.04	0.04		c0.11	c0.12	
v/s Ratio Perm			0.09			0.05			0.02			0.05
v/c Ratio	0.59	0.70	0.25	0.66	0.56	0.11	0.51	0.33	0.12	0.63	0.54	0.22
Uniform Delay, d1	42.7	25.9	21.7	34.0	16.3	12.5	39.4	35.5	34.5	34.7	31.3	29.0
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	13.2	1.8	0.3	2.6	0.4	0.1	2.8	0.8	0.3	4.1	1.5	0.4
Delay (s)	55.9	27.7	21.9	36.6	16.7	12.6	42.2	36.3	34.7	38.8	32.8	29.3
Level of Service	E	C	C	D	B	B	D	D	C	D	C	C
Approach Delay (s)		27.9			22.1			36.8			34.4	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	66	130	666	77	54	930	88	90	39	53	155	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	0.96		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	0.98		1.00	0.99		1.00	0.91		1.00	0.90
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1770	3441		1770	3458		1770	1634		1770	1598
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)		1770	3441		1770	3458		1770	1634		1770	1598
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.76	0.76	0.76	0.85	0.85	0.85	0.80	0.80
Adj. Flow (vph)	80	159	812	94	71	1224	116	106	46	62	194	88
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	239	906	0	71	1340	0	106	108	0	194	257
Confl. Peds. (#/hr)				30			30			30		
Confl. Bikes (#/hr)				5			1					
Turn Type	Prot	Prot			Prot			Prot			Prot	
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases												
Actuated Green, G (s)		15.8	52.5		6.8	43.5		9.9	15.2		14.6	19.9
Effective Green, g (s)		15.8	52.5		6.8	43.5		9.9	15.2		14.6	19.9
Actuated g/C Ratio		0.15	0.50		0.06	0.41		0.09	0.14		0.14	0.19
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)		266	1719		115	1431		167	236		246	303
v/s Ratio Prot		c0.14	0.26		0.04	c0.39		0.06	0.07		c0.11	c0.16
v/s Ratio Perm												
v/c Ratio		0.90	0.53		0.62	0.94		0.63	0.46		0.79	0.85
Uniform Delay, d1		43.9	17.9		47.9	29.5		45.9	41.2		43.8	41.1
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		29.9	0.3		9.5	11.7		7.7	1.4		15.3	19.3
Delay (s)		73.7	18.2		57.4	41.2		53.5	42.6		59.1	60.4
Level of Service		E	B		E	D		D	D		E	E
Approach Delay (s)			29.8			42.0			48.0			59.8
Approach LOS			C			D			D			E

Intersection Summary			
HCM Average Control Delay	40.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	105.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	135
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.80
Adj. Flow (vph)	169
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	30
Confl. Bikes (#/hr)	3
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	58	165	12	39	112	133	15	70	35	119	58	51
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)	97	275	20	53	153	182	23	109	55	137	67	59

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	97	295	53	336	133	55	203	59
Volume Left (vph)	97	0	53	0	23	0	137	0
Volume Right (vph)	0	20	0	182	0	55	0	59
Hadj (s)	0.53	-0.01	0.53	-0.33	0.17	-0.67	0.38	-0.67
Departure Headway (s)	7.1	6.5	7.1	6.2	7.3	6.5	7.4	6.3
Degree Utilization, x	0.19	0.54	0.11	0.58	0.27	0.10	0.42	0.10
Capacity (veh/h)	482	520	481	546	448	506	460	527
Control Delay (s)	10.5	15.6	9.7	16.3	11.8	9.0	14.3	8.8
Approach Delay (s)	14.4		15.4		11.0		13.1	
Approach LOS	B		C		B		B	

Intersection Summary				
Delay	13.9			
HCM Level of Service	B			
Intersection Capacity Utilization	44.5%	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)	133	102	110	134	287	367
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	1485	1770	1792	1863	1473
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1485	1770	1792	1863	1473
Peak-hour factor, PHF	0.80	0.80	0.83	0.83	0.78	0.78
Adj. Flow (vph)	166	128	133	161	368	471
RTOR Reduction (vph)	0	101	0	0	0	290
Lane Group Flow (vph)	166	27	133	161	368	181
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	26.6	16.8	16.8
Effective Green, g (s)	9.2	9.2	5.8	26.6	16.8	16.8
Actuated g/C Ratio	0.21	0.21	0.13	0.61	0.38	0.38
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)	372	312	234	1088	715	565
v/s Ratio Prot	c0.09		c0.08	0.09	c0.20	
v/s Ratio Perm		0.02				0.12
v/c Ratio	0.45	0.09	0.57	0.15	0.51	0.32
Uniform Delay, d1	15.1	13.9	17.8	3.7	10.4	9.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	3.1	0.1	0.6	0.3
Delay (s)	15.9	14.0	21.0	3.8	11.0	9.8
Level of Service	B	B	C	A	B	A
Approach Delay (s)	15.1			11.6	10.3	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	43.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	38.6%	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	29	113	10	26	148
Peak Hour Factor	0.65	0.65	0.89	0.89	0.74	0.74
Hourly flow rate (vph)	34	45	127	11	35	200

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	78	127	11	35	200
Volume Left (vph)	34	0	0	35	0
Volume Right (vph)	45	0	11	0	0
Hadj (s)	-0.22	0.03	-0.67	0.53	0.14
Departure Headway (s)	4.5	4.9	4.2	5.3	4.9
Degree Utilization, x	0.10	0.17	0.01	0.05	0.27
Capacity (veh/h)	730	711	823	653	712
Control Delay (s)	8.0	7.8	6.1	7.4	8.6
Approach Delay (s)	8.0	7.6		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	8.1		
HCM Level of Service	A		
Intersection Capacity Utilization	18.4%	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)	28	233	12	15	267	36	10	39	11	56	63	24
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		0.99	1.00		1.00	1.00		0.99	1.00		0.98	1.00
Satd. Flow (prot)		1851	1287		1857	1422		1713	1547		1800	1366
Flt Permitted		0.93	1.00		0.97	1.00		0.94	1.00		0.85	1.00
Satd. Flow (perm)		1736	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)	41	338	17	21	366	49	14	55	15	89	100	38
RTOR Reduction (vph)	0	0	10	0	0	29	0	0	9	0	0	23
Lane Group Flow (vph)	0	379	7	0	387	20	0	69	6	0	189	15
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)		694	515		724	569		652	619		625	546
v/s Ratio Prot												
v/s Ratio Perm		c0.22	0.01		0.21	0.01		0.04	0.00		c0.12	0.01
v/c Ratio		0.55	0.01		0.53	0.03		0.11	0.01		0.30	0.03
Uniform Delay, d1		9.2	7.2		9.2	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		3.1	0.0		2.8	0.1		0.3	0.0		1.2	0.1
Delay (s)		12.3	7.3		12.0	7.4		7.8	7.3		9.4	7.4
Level of Service		B	A		B	A		A	A		A	A
Approach Delay (s)		12.1			11.5			7.7			9.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.0%	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)	10	188	83	61	254	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	0.99			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	1811			1601			1847	1440
Flt Permitted		0.98	1.00	0.54	1.00			0.81			0.93	1.00
Satd. Flow (perm)		1820	1504	989	1811			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	276	122	76	318	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	291	51	76	345	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	415	761			555			727	605
v/s Ratio Prot					c0.19							
v/s Ratio Perm		0.16	0.03	0.08				c0.19			0.18	0.01
v/c Ratio		0.38	0.08	0.18	0.45			0.45			0.43	0.02
Uniform Delay, d1		10.0	8.7	9.1	10.4			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	1.0	1.9			2.7			1.9	0.1
Delay (s)		11.5	9.0	10.1	12.3			13.1			12.1	8.6
Level of Service		B	A	B	B			B			B	A
Approach Delay (s)		10.7			11.9			13.1			11.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	11.8	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	65.6%	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)	14	234	22	50	344	83	15	110	23	78	259	48
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			0.97		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			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1825			1727		1597	1776	1415	1770	1863	1441
Flt Permitted		0.96			0.92		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1758			1604		1597	1776	1415	1770	1863	1441
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)	21	344	32	66	453	109	18	131	27	100	332	62
RTOR Reduction (vph)	0	2	0	0	5	0	0	0	21	0	0	18
Lane Group Flow (vph)	0	395	0	0	623	0	18	131	6	100	332	44
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)		40.6			40.6		1.2	15.3	15.3	7.8	21.9	21.9
Effective Green, g (s)		40.6			40.6		1.2	15.3	15.3	7.8	21.9	21.9
Actuated g/C Ratio		0.54			0.54		0.02	0.20	0.20	0.10	0.29	0.29
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)		943			860		25	359	286	182	539	417
v/s Ratio Prot							0.01	0.07		c0.06	c0.18	
v/s Ratio Perm		0.22			c0.39				0.00			0.03
v/c Ratio		0.42			0.72		0.72	0.36	0.02	0.55	0.62	0.11
Uniform Delay, d1		10.5			13.3		37.1	26.0	24.2	32.3	23.3	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			3.0		68.2	0.6	0.0	3.4	2.1	0.1
Delay (s)		10.8			16.4		105.3	26.6	24.2	35.6	25.4	19.8
Level of Service		B			B		F	C	C	D	C	B
Approach Delay (s)		10.8			16.4			34.3			26.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	75.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	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)	63	272	23	7	380	15	55	28	7	28	51	118
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)	75	324	27	9	463	18	76	39	10	35	64	148

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	75	351	490	115	10	99	148
Volume Left (vph)	75	0	9	76	0	35	0
Volume Right (vph)	0	27	18	0	10	0	148
Hadj (s)	0.53	-0.02	0.02	0.17	-0.36	0.24	-0.63
Departure Headway (s)	7.3	6.7	6.6	8.2	3.2	7.9	7.0
Degree Utilization, x	0.15	0.66	0.90	0.26	0.01	0.22	0.29
Capacity (veh/h)	471	512	532	403	1121	435	487
Control Delay (s)	10.4	20.4	44.2	14.2	6.2	11.9	11.6
Approach Delay (s)	18.7		44.2	13.5		11.7	
Approach LOS	C		E	B		B	

Intersection Summary				
Delay	26.5			
HCM Level of Service	D			
Intersection Capacity Utilization	58.4%	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)	35	214	31	28	452	38	14	69	12	30	171	91
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	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	0.98		1.00	0.95	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3256			3452		1667	1556		1763	1529	
Flt Permitted		0.99			1.00		0.25	1.00		0.69	1.00	
Satd. Flow (perm)		3256			3452		439	1556		1281	1529	
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)	45	274	40	36	579	49	18	88	15	38	219	117
RTOR Reduction (vph)	0	13	0	0	8	0	0	8	0	0	26	0
Lane Group Flow (vph)	0	346	0	0	656	0	18	95	0	38	310	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)		912			1197		94	332		273	326	
v/s Ratio Prot		c0.11			c0.19			0.06			c0.20	
v/s Ratio Perm							0.04			0.03		
v/c Ratio		0.38			0.55		0.19	0.29		0.14	0.95	
Uniform Delay, d1		21.8			19.8		24.2	24.7		23.9	29.1	
Progression Factor		1.00			0.29		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.2			1.5		4.5	2.2		1.1	38.8	
Delay (s)		23.0			7.3		28.7	26.9		25.0	67.9	
Level of Service		C			A		C	C		C	E	
Approach Delay (s)		23.0			7.3			27.1			63.6	
Approach LOS		C			A			C			E	

Intersection Summary			
HCM Average Control Delay	26.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.1%	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)	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)		7.3			21.9		24.0	24.7		24.9	25.1	
Level of Service		A			C		C	C		C	C	
Approach Delay (s)		7.3			21.9			24.5			25.0	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	18.3	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)	746	126	60	1018	49	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)	921	156	79	1339	65	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			0.89		0.92	0.89
vC, conflicting volume			999		1827	538
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			752		1393	234
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		34	90
cM capacity (veh/h)			710		99	639

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	460	460	156	79	670	670	65	63
Volume Left	0	0	0	79	0	0	65	0
Volume Right	0	0	156	0	0	0	0	63
cSH	1700	1700	1700	710	1700	1700	99	639
Volume to Capacity	0.27	0.27	0.09	0.11	0.39	0.39	0.66	0.10
Queue Length 95th (ft)	0	0	0	9	0	0	82	8
Control Delay (s)	0.0	0.0	0.0	10.7	0.0	0.0	93.3	11.2
Lane LOS				B			F	B
Approach Delay (s)	0.0			0.6			53.2	
Approach LOS							F	

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	753	40	57	1022	65	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.78	0.78	0.81	0.81
Hourly flow rate (vph)	876	47	73	1310	80	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					0.85	
vC, conflicting volume			995		1846	607
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			995		1646	607
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		0	99
cM capacity (veh/h)			649		60	388

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	584	338	73	655	655	84
Volume Left	0	0	73	0	0	80
Volume Right	0	47	0	0	0	4
cSH	1700	1700	649	1700	1700	62
Volume to Capacity	0.34	0.20	0.11	0.39	0.39	1.36
Queue Length 95th (ft)	0	0	9	0	0	179
Control Delay (s)	0.0	0.0	11.3	0.0	0.0	348.8
Lane LOS			B			F
Approach Delay (s)	0.0		0.6			348.8
Approach LOS						F

Intersection Summary			
Average Delay	12.6		
Intersection Capacity Utilization	48.2%	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)	204	409	171	70	539	90	195	125	42	129	259	322
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	1140	1736	3539	1541	1752	1712	1497	1752	1827	1548
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	1140	1736	3539	1541	1752	1712	1497	1752	1827	1548
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.78	0.78	0.78	0.80	0.80	0.80
Adj. Flow (vph)	249	499	209	85	657	110	250	160	54	161	324	402
RTOR Reduction (vph)	0	0	146	0	0	49	0	0	32	0	0	259
Lane Group Flow (vph)	249	499	63	85	657	61	250	160	22	161	324	143
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)	11.0	20.6	20.6	6.6	16.2	16.2	10.0	17.6	17.6	7.9	15.5	15.5
Effective Green, g (s)	11.0	20.6	20.6	6.6	16.2	16.2	10.0	17.6	17.6	7.9	15.5	15.5
Actuated g/C Ratio	0.16	0.30	0.30	0.10	0.24	0.24	0.15	0.26	0.26	0.11	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)	283	1061	342	167	835	363	255	439	384	201	412	349
v/s Ratio Prot	c0.14	0.14		0.05	c0.19		c0.14	0.09		0.09	c0.18	
v/s Ratio Perm			0.05			0.04			0.01			0.09
v/c Ratio	0.88	0.47	0.18	0.51	0.79	0.17	0.98	0.36	0.06	0.80	0.79	0.41
Uniform Delay, d1	28.2	19.6	17.8	29.5	24.6	20.9	29.3	21.0	19.3	29.6	25.0	22.7
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	25.2	0.3	0.3	2.4	4.9	0.2	50.7	0.5	0.1	20.0	9.5	0.8
Delay (s)	53.4	19.9	18.1	31.9	29.6	21.1	79.9	21.5	19.4	49.7	34.6	23.5
Level of Service	D	B	B	C	C	C	E	C	B	D	C	C
Approach Delay (s)		28.2			28.7			52.7			32.3	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	68.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	535	45	53	629	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	1477	1770	3539	1770	1558
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1477	1770	3539	1770	1558
Peak-hour factor, PHF	0.75	0.75	0.77	0.77	0.47	0.47
Adj. Flow (vph)	713	60	69	817	149	104
RTOR Reduction (vph)	0	26	0	0	0	75
Lane Group Flow (vph)	713	34	69	817	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)	27.5	27.5	6.9	38.4	12.3	12.3
Effective Green, g (s)	27.5	27.5	6.9	38.4	12.3	12.3
Actuated g/C Ratio	0.37	0.37	0.09	0.51	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)	1292	544	164	1822	292	257
v/s Ratio Prot	c0.20		0.04	c0.23	c0.08	
v/s Ratio Perm		0.02				0.02
v/c Ratio	0.55	0.06	0.42	0.45	0.51	0.11
Uniform Delay, d1	18.7	15.2	32.0	11.4	28.4	26.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.0	1.7	0.2	1.5	0.2
Delay (s)	19.2	15.3	33.7	11.6	29.9	26.7
Level of Service	B	B	C	B	C	C
Approach Delay (s)	18.9			13.3	28.6	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	74.6	Sum of lost time (s)	27.9
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	63	568	490	62	138	139
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	1542
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1719	3539	3505	1523	1770	1542
Peak-hour factor, PHF	0.86	0.86	0.75	0.75	0.75	0.75
Adj. Flow (vph)	73	660	653	83	184	185
RTOR Reduction (vph)	0	0	0	24	0	93
Lane Group Flow (vph)	73	660	653	59	184	92
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)	4.8	27.3	18.5	18.5	13.0	13.0
Effective Green, g (s)	4.8	27.3	18.5	18.5	13.0	13.0
Actuated g/C Ratio	0.09	0.51	0.34	0.34	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)	153	1789	1201	522	426	371
v/s Ratio Prot	0.04	c0.19	c0.19		c0.10	
v/s Ratio Perm				0.04		0.06
v/c Ratio	0.48	0.37	0.54	0.11	0.43	0.25
Uniform Delay, d1	23.4	8.1	14.3	12.1	17.4	16.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	0.1	0.5	0.1	0.7	0.4
Delay (s)	25.7	8.2	14.8	12.2	18.1	16.9
Level of Service	C	A	B	B	B	B
Approach Delay (s)		10.0	14.6		17.5	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	17.7
Intersection Capacity Utilization	36.7%	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 (veh/h)	1	662	32	20	523	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	704	34	26	688	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				0.97			0.97	0.97	0.97	0.97	0.97	
vC, conflicting volume	688			750			1140	1476	381	1156	1493	344
vC1, stage 1 conf vol							735	735		741	741	
vC2, stage 2 conf vol							405	741		416	752	
vCu, unblocked vol	688			688			1088	1434	308	1105	1451	344
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	91	100	100	99
cM capacity (veh/h)	902			819			345	314	657	318	302	652

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	1	470	269	370	344	100	8
Volume Left	1	0	0	26	0	39	0
Volume Right	0	0	34	0	0	61	8
cSH	902	1700	1700	819	1700	487	652
Volume to Capacity	0.00	0.28	0.16	0.03	0.20	0.21	0.01
Queue Length 95th (ft)	0	0	0	2	0	19	1
Control Delay (s)	9.0	0.0	0.0	1.0	0.0	14.3	10.6
Lane LOS	A			A		B	B
Approach Delay (s)	0.0			0.5		14.3	10.6
Approach LOS						B	B

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	46.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	588	112	4	381	160	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)	668	127	5	495	235	37
RTOR Reduction (vph)	0	38	0	0	0	9
Lane Group Flow (vph)	668	89	5	495	235	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)	20.2	20.2	0.6	24.8	10.8	10.8
Effective Green, g (s)	20.2	20.2	0.6	24.8	10.8	10.8
Actuated g/C Ratio	0.46	0.46	0.01	0.57	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)	1640	712	20	1049	438	387
v/s Ratio Prot	0.19		0.00	c0.27	c0.13	
v/s Ratio Perm		0.06				0.02
v/c Ratio	0.41	0.12	0.25	0.47	0.54	0.07
Uniform Delay, d1	7.7	6.7	21.3	5.5	14.2	12.6
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	1.3	0.1
Delay (s)	7.9	6.7	27.8	5.9	15.5	12.6
Level of Service	A	A	C	A	B	B
Approach Delay (s)	7.7			6.1	15.1	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	43.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	572	39	37	371	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)	622	42	49	488	26	1
RTOR Reduction (vph)	0	16	0	0	0	1
Lane Group Flow (vph)	622	26	49	488	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)	24.4	24.4	2.5	30.9	1.1	1.1
Effective Green, g (s)	24.4	24.4	2.5	30.9	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)	2159	946	111	1411	47	44
v/s Ratio Prot	0.18		0.03	c0.27	c0.02	
v/s Ratio Perm		0.02				0.00
v/c Ratio	0.29	0.03	0.44	0.35	0.55	0.00
Uniform Delay, d1	3.7	3.1	18.1	1.4	19.2	18.9
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	13.3	0.0
Delay (s)	3.8	3.1	20.9	1.6	32.5	18.9
Level of Service	A	A	C	A	C	B
Approach Delay (s)	3.7			3.3	32.0	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	4.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	32.5%	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	434	724	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	668	953	26
RTOR Reduction (vph)	0	315	0	0	0	15
Lane Group Flow (vph)	22	55	174	668	953	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	11.8	38.8	23.0	23.0
Effective Green, g (s)	8.1	8.1	11.8	38.8	23.0	23.0
Actuated g/C Ratio	0.15	0.15	0.21	0.71	0.42	0.42
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	261	234	366	1304	1483	623
v/s Ratio Prot	0.01		0.10	c0.36	c0.27	
v/s Ratio Perm		c0.03				0.01
v/c Ratio	0.08	0.23	0.48	0.51	0.64	0.02
Uniform Delay, d1	20.2	20.7	18.8	3.7	12.7	9.3
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	1.0	0.0
Delay (s)	20.3	21.2	19.8	4.0	13.6	9.3
Level of Service	C	C	B	A	B	A
Approach Delay (s)	21.1			7.3	13.5	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	54.9	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)	24	21	248	11	18	17	471	511	15	48	1009	31
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	3447		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	3447		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)	29	25	295	13	22	21	554	601	18	56	1173	36
RTOR Reduction (vph)	0	0	261	0	19	0	0	2	0	0	0	23
Lane Group Flow (vph)	29	25	34	13	24	0	554	617	0	56	1173	13
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	2181		86	1287	533
v/s Ratio Prot	c0.02	0.01		0.01	0.01		c0.32	0.18		0.03	c0.33	
v/s Ratio Perm			c0.02									0.01
v/c Ratio	0.97	0.13	0.20	1.00	0.14		1.00	0.28		0.65	0.91	0.02
Uniform Delay, d1	40.5	32.7	33.0	40.9	33.3		28.1	6.8		38.6	25.0	16.9
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	149.0	0.3	0.5	249.6	0.3		37.0	0.1		16.3	9.9	0.0
Delay (s)	189.5	33.0	33.5	290.5	33.7		65.1	6.8		54.8	34.9	16.9
Level of Service	F	C	C	F	C		E	A		D	C	B
Approach Delay (s)		46.4			93.3			34.4			35.2	
Approach LOS		D			F			C			D	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	82.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.0%	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)	394	149	100	17	48	295	10	524	72	166	263	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	364	12	655	90	202	321	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	144	12	655	68	202	321	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)	22.7	22.7	22.7	10.4	10.4	10.4	0.8	20.0	20.0	10.9	30.1	30.1
Effective Green, g (s)	22.7	22.7	22.7	10.4	10.4	10.4	0.8	20.0	20.0	10.9	30.1	30.1
Actuated g/C Ratio	0.28	0.28	0.28	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)	502	976	422	230	242	202	18	868	390	237	1294	577
v/s Ratio Prot	c0.23	0.05		0.01	0.03		0.01	c0.19		c0.12	0.09	
v/s Ratio Perm			0.02			c0.09			0.04			0.08
v/c Ratio	0.83	0.16	0.07	0.09	0.24	0.71	0.67	0.75	0.17	0.85	0.25	0.22
Uniform Delay, d1	26.8	21.5	20.9	30.6	31.3	33.4	39.5	27.7	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	14.4	0.4	0.3	0.2	0.5	11.2	66.1	3.8	0.2	24.4	0.1	0.2
Delay (s)	41.2	21.9	21.3	30.8	31.8	44.6	105.6	31.5	23.7	58.1	17.3	17.2
Level of Service	D	C	C	C	C	D	F	C	C	E	B	B
Approach Delay (s)		33.6			42.3			31.7			26.8	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.6%	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)	81	9	300	35	6	561
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)	88	10	326	38	7	610
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	949	326			364	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	949	326			364	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	69	99			99	
cM capacity (veh/h)	287	715			1194	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	98	326	38	7	610
Volume Left	88	0	0	7	0
Volume Right	10	0	38	0	0
cSH	319	1700	1700	1194	1700
Volume to Capacity	0.31	0.19	0.02	0.01	0.36
Queue Length 95th (ft)	32	0	0	0	0
Control Delay (s)	21.7	0.0	0.0	8.0	0.0
Lane LOS	C			A	
Approach Delay (s)	21.7	0.0		0.1	
Approach LOS	C				

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	40.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	89	16	319	100	20	622
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)	97	17	347	109	22	676
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	1066	347			455	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1066	347			455	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	60	98			98	
cM capacity (veh/h)	241	696			1105	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	114	347	109	22	676
Volume Left	97	0	0	22	0
Volume Right	17	0	109	0	0
cSH	285	1700	1700	1105	1700
Volume to Capacity	0.40	0.20	0.06	0.02	0.40
Queue Length 95th (ft)	46	0	0	2	0
Control Delay (s)	26.6	0.0	0.0	8.3	0.0
Lane LOS	D			A	
Approach Delay (s)	26.6	0.0		0.3	
Approach LOS	D				

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	44.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	177	45	260	79	24	387
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)	227	58	329	100	31	496
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	899	341			441	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	899	341			441	
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	92			97	
cM capacity (veh/h)	298	694			1097	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	285	329	100	31	496
Volume Left	227	0	0	31	0
Volume Right	58	0	100	0	0
cSH	374	1700	1700	1097	1700
Volume to Capacity	0.76	0.19	0.06	0.03	0.29
Queue Length 95th (ft)	154	0	0	2	0
Control Delay (s)	39.8	0.0	0.0	8.4	0.0
Lane LOS	E			A	
Approach Delay (s)	39.8	0.0		0.5	
Approach LOS	E				

Intersection Summary				
Average Delay	9.3			
Intersection Capacity Utilization	36.8%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	61	51	347	442	49
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.74	0.74	0.70	0.70
Hourly flow rate (vph)	19	77	69	469	631	70
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	1273	666	701			
vC1, stage 1 conf vol	666					
vC2, stage 2 conf vol	607					
vCu, unblocked vol	1232	515	557			
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	84	92			
cM capacity (veh/h)	377	470	854			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	96	69	469	701
Volume Left	19	69	0	0
Volume Right	77	0	0	70
cSH	449	854	1700	1700
Volume to Capacity	0.21	0.08	0.28	0.41
Queue Length 95th (ft)	20	7	0	0
Control Delay (s)	15.2	9.6	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	15.2	1.2		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	128	116	283	24	83	412
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	0.91	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	1441	1818		1719	1845
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1441	1818		1719	1845
Peak-hour factor, PHF	0.70	0.70	0.83	0.83	0.90	0.90
Adj. Flow (vph)	183	166	341	29	92	458
RTOR Reduction (vph)	0	128	3	0	0	0
Lane Group Flow (vph)	183	38	367	0	92	458
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)	11.3	11.3	16.0		4.3	24.3
Effective Green, g (s)	11.3	11.3	16.0		4.3	24.3
Actuated g/C Ratio	0.23	0.23	0.32		0.09	0.49
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)	404	329	588		149	906
v/s Ratio Prot	c0.10		c0.20		0.05	c0.25
v/s Ratio Perm		0.03				
v/c Ratio	0.45	0.12	0.62		0.62	0.51
Uniform Delay, d1	16.4	15.1	14.2		21.8	8.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	0.2	2.1		7.4	0.4
Delay (s)	17.2	15.3	16.3		29.2	9.0
Level of Service	B	B	B		C	A
Approach Delay (s)	16.3		16.3			12.4
Approach LOS	B		B			B

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	49.5	Sum of lost time (s)	17.9
Intersection Capacity Utilization	38.1%	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)	49	44	110	42	104	26	103	231	23	13	423	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	1502		1833	1416	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)		1360	1502		1622	1416	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	30	126	282	28	14	455	113
RTOR Reduction (vph)	0	0	97	0	0	24	0	0	14	0	0	72
Lane Group Flow (vph)	0	101	23	0	166	6	126	282	14	14	455	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	20.0	20.0	0.6	14.8	14.8
Effective Green, g (s)		7.7	7.7		7.7	7.7	5.8	20.0	20.0	0.6	14.8	14.8
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.14	0.50	0.50	0.01	0.37	0.37
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)		260	287		310	271	255	925	717	26	684	548
v/s Ratio Prot							c0.07	0.15		0.01	c0.24	
v/s Ratio Perm		0.07	0.02		c0.10	0.00			0.01			0.03
v/c Ratio		0.39	0.08		0.54	0.02	0.49	0.30	0.02	0.54	0.67	0.08
Uniform Delay, d1		14.2	13.4		14.7	13.2	15.9	6.0	5.2	19.7	10.7	8.3
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		1.0	0.1		1.8	0.0	1.5	0.2	0.0	19.8	2.4	0.1
Delay (s)		15.2	13.5		16.5	13.3	17.4	6.2	5.2	39.5	13.1	8.4
Level of Service		B	B		B	B	B	A	A	D	B	A
Approach Delay (s)		14.3			16.0			9.4			12.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	40.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.4%	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)	40	124	103	96	225	68	217	254	117	140	343	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	0.96	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)	1687	3505	1335	1719	3471	1475	1770	1863	1527	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	1335	1719	3471	1475	1770	1863	1527	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	79	271	318	146	157	385	138
RTOR Reduction (vph)	0	0	106	0	0	35	0	0	31	0	0	23
Lane Group Flow (vph)	49	151	20	112	262	44	271	318	115	157	385	115
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	12.2	12.2	8.2	16.9	16.9	18.1	28.4	28.4	12.6	22.9	22.9
Effective Green, g (s)	3.5	12.2	12.2	8.2	16.9	16.9	18.1	28.4	28.4	12.6	22.9	22.9
Actuated g/C Ratio	0.05	0.16	0.16	0.11	0.22	0.22	0.23	0.37	0.37	0.16	0.30	0.30
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)	76	552	210	182	758	322	414	684	560	288	551	432
v/s Ratio Prot	0.03	0.04		c0.07	c0.08		c0.15	0.17		0.09	c0.21	
v/s Ratio Perm			0.01			0.03			0.08			0.08
v/c Ratio	0.64	0.27	0.09	0.62	0.35	0.14	0.65	0.46	0.21	0.55	0.70	0.27
Uniform Delay, d1	36.3	28.7	27.9	33.1	25.6	24.4	26.8	18.7	16.8	29.8	24.2	20.8
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	17.2	0.3	0.2	6.1	0.3	0.2	3.7	0.5	0.2	2.1	3.9	0.3
Delay (s)	53.6	29.0	28.1	39.1	25.9	24.6	30.5	19.2	17.0	31.9	28.0	21.2
Level of Service	D	C	C	D	C	C	C	B	B	C	C	C
Approach Delay (s)		32.3			28.9			22.9			27.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	77.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	3	14	22	19	14	17	60	7	18	119	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	20	20	72	8	28	183	45

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	44	80	101	255
Volume Left (vph)	21	32	20	28
Volume Right (vph)	19	20	8	45
Hadj (s)	-0.12	-0.04	0.02	-0.05
Departure Headway (s)	4.7	4.7	4.5	4.3
Degree Utilization, x	0.06	0.10	0.13	0.30
Capacity (veh/h)	700	700	762	809
Control Delay (s)	8.0	8.3	8.2	9.1
Approach Delay (s)	8.0	8.3	8.2	9.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.7		
HCM Level of Service	A		
Intersection Capacity Utilization	25.1%	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)	5	212	82	37	286	12	61	64	40	34	114	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		1760	1863	1511	1752	1760	
Flt Permitted	0.42	1.00		0.47	1.00		0.60	1.00	1.00	0.71	1.00	
Satd. Flow (perm)	775	1740		868	1843		1119	1863	1511	1312	1760	
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	70	44	51	170	63
RTOR Reduction (vph)	0	28	0	0	3	0	0	0	26	0	27	0
Lane Group Flow (vph)	6	326	0	49	394	0	67	70	18	51	206	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		470	782	635	551	739	
v/s Ratio Prot		0.19			c0.21			0.04			c0.12	
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	0.09	0.03	0.09	0.28	
Uniform Delay, d1	8.5	10.3		8.9	10.7		8.9	8.7	8.5	8.8	9.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	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		9.6	9.0	8.6	9.1	10.5	
Level of Service	A	B		A	B		A	A	A	A	B	
Approach Delay (s)		12.3			12.7			9.1			10.2	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
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	71	35	52	142	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	0.93
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	1502	1770	1863	1376	1770	1863	1468
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	1502	1770	1863	1376	1770	1863	1468
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	109	54	67	182	119
RTOR Reduction (vph)	0	15	0	0	0	38	0	0	39	0	0	92
Lane Group Flow (vph)	51	277	0	65	620	17	83	109	15	67	182	27
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)	4.0	17.7		4.1	17.8	17.8	6.5	15.7	15.7	4.0	13.2	13.2
Effective Green, g (s)	4.0	17.7		4.1	17.8	17.8	6.5	15.7	15.7	4.0	13.2	13.2
Actuated g/C Ratio	0.07	0.31		0.07	0.31	0.31	0.11	0.27	0.27	0.07	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
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	523		117	1096	465	200	509	376	123	428	337
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			0.02
v/c Ratio	0.41	0.53		0.56	0.57	0.04	0.42	0.21	0.04	0.54	0.43	0.08
Uniform Delay, d1	25.6	16.5		25.8	16.6	13.9	23.7	16.1	15.4	25.9	18.9	17.4
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	1.0		5.6	0.7	0.0	1.4	0.2	0.0	4.9	0.7	0.1
Delay (s)	27.9	17.5		31.4	17.3	13.9	25.1	16.3	15.4	30.7	19.6	17.5
Level of Service	C	B		C	B	B	C	B	B	C	B	B
Approach Delay (s)		19.0			18.3			19.1			20.9	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	939	1079	142	0	97
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.82	0.82	0.76	0.76	0.80	0.80
Hourly flow rate (vph)	0	1145	1420	187	0	121
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		851	926			
pX, platoon unblocked	0.64				0.74	0.64
vC, conflicting volume	1607				2086	803
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	831				594	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	83
cM capacity (veh/h)	512				322	697

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	573	573	946	660	121
Volume Left	0	0	0	0	0
Volume Right	0	0	0	187	121
cSH	1700	1700	1700	1700	697
Volume to Capacity	0.34	0.34	0.56	0.39	0.17
Queue Length 95th (ft)	0	0	0	0	16
Control Delay (s)	0.0	0.0	0.0	0.0	11.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.3
Approach LOS					B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	547	8	221	619	23	12	4	236	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	1531	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	1531	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	608	9	263	737	27	13	4	265	80	5	31
RTOR Reduction (vph)	0	0	5	0	0	6	0	0	196	0	21	0
Lane Group Flow (vph)	8	608	4	263	737	21	13	4	69	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	23.1	23.1	33.3	55.6	55.6	2.4	28.6	28.6	9.0	35.2	
Effective Green, g (s)	0.8	23.1	23.1	33.3	55.6	55.6	2.4	28.6	28.6	9.0	35.2	
Actuated g/C Ratio	0.01	0.21	0.21	0.30	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	736	322	1039	1789	771	36	484	400	145	491	
v/s Ratio Prot	0.00	c0.17		0.08	c0.21		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	0.25	0.41	0.03	0.36	0.01	0.17	0.55	0.03	
Uniform Delay, d1	54.4	41.5	34.4	29.0	17.0	13.6	53.0	30.2	31.5	48.6	25.7	
Progression Factor	1.00	1.00	1.00	0.86	0.65	0.24	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	64.0	7.5	0.0	0.1	0.7	0.1	6.1	0.0	0.9	4.5	0.1	
Delay (s)	118.5	49.1	34.4	25.1	11.8	3.3	59.1	30.2	32.5	53.0	25.8	
Level of Service	F	D	C	C	B	A	E	C	C	D	C	
Approach Delay (s)		49.8			15.0			33.7			44.6	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	35	804	801	191	251	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	893	843	201	335	79
RTOR Reduction (vph)	0	0	0	33	0	60
Lane Group Flow (vph)	39	893	843	168	335	19
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	3.6	75.7	68.1	68.1	26.3	26.3
Effective Green, g (s)	3.6	75.7	68.1	68.1	26.3	26.3
Actuated g/C Ratio	0.03	0.69	0.62	0.62	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)	58	2435	2191	980	423	378
v/s Ratio Prot	c0.02	0.25	c0.24		c0.19	
v/s Ratio Perm				0.11		0.01
v/c Ratio	0.67	0.37	0.38	0.17	0.79	0.05
Uniform Delay, d1	52.6	7.2	10.5	8.9	39.3	32.2
Progression Factor	1.10	0.27	1.00	1.00	1.00	1.00
Incremental Delay, d2	24.1	0.4	0.5	0.4	9.8	0.1
Delay (s)	82.0	2.3	11.0	9.3	49.1	32.3
Level of Service	F	A	B	A	D	C
Approach Delay (s)		5.7	10.7		45.9	
Approach LOS		A	B		D	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.4%	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)	147	775	118	33	719	101	108	93	47	152	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	0.90
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	1514	1770	3539	1451	1770	1863	1421	1770	1863	1418
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	1514	1770	3539	1451	1770	1863	1421	1770	1863	1418
Peak-hour factor, PHF	0.91	0.91	0.91	0.79	0.79	0.79	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	162	852	130	42	910	128	124	107	54	171	97	129
RTOR Reduction (vph)	0	0	18	0	0	17	0	0	20	0	0	88
Lane Group Flow (vph)	162	852	112	42	910	111	124	107	34	171	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)	13.6	42.3	42.3	3.1	31.8	31.8	13.1	13.1	13.1	14.1	14.1	14.1
Effective Green, g (s)	13.6	42.3	42.3	3.1	31.8	31.8	13.1	13.1	13.1	14.1	14.1	14.1
Actuated g/C Ratio	0.15	0.48	0.48	0.03	0.36	0.36	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)	272	1690	723	62	1270	521	262	275	210	282	296	226
v/s Ratio Prot	c0.09	0.24		0.02	c0.26		c0.07	0.06		c0.10	0.05	
v/s Ratio Perm			0.07			0.08			0.02			0.03
v/c Ratio	0.60	0.50	0.15	0.68	0.72	0.21	0.47	0.39	0.16	0.61	0.33	0.18
Uniform Delay, d1	34.9	15.9	13.1	42.3	24.5	19.7	34.6	34.1	32.9	34.7	33.0	32.2
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	3.5	0.2	0.1	25.5	2.0	0.2	1.4	0.9	0.4	3.7	0.7	0.4
Delay (s)	38.4	16.2	13.2	67.8	26.5	19.9	35.9	35.0	33.3	38.3	33.7	32.6
Level of Service	D	B	B	E	C	B	D	D	C	D	C	C
Approach Delay (s)		19.0			27.3			35.1			35.3	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	88.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.1%	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)	71	742	127	128	542	95	216	203	154	101	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	0.87	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)	1736	3539	1517	1770	3539	1435	1752	1827	1385	1770	3406	1443
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	1517	1770	3539	1435	1752	1827	1385	1770	3406	1443
Peak-hour factor, PHF	0.95	0.95	0.95	0.88	0.88	0.88	0.91	0.91	0.91	0.74	0.74	0.74
Adj. Flow (vph)	75	781	134	145	616	108	237	223	169	136	207	70
RTOR Reduction (vph)	0	0	20	0	0	60	0	0	72	0	0	44
Lane Group Flow (vph)	75	781	114	145	616	48	237	223	97	136	207	26
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)	6.8	24.6	24.6	11.4	29.2	29.2	16.2	17.0	17.0	10.8	11.6	11.6
Effective Green, g (s)	6.8	24.6	24.6	11.4	29.2	29.2	16.2	17.0	17.0	10.8	11.6	11.6
Actuated g/C Ratio	0.09	0.31	0.31	0.14	0.37	0.37	0.20	0.21	0.21	0.14	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	1091	468	253	1295	525	356	389	295	240	495	210
v/s Ratio Prot	0.04	c0.22		c0.08	0.17		c0.14	c0.12		0.08	0.06	
v/s Ratio Perm			0.08			0.03			0.07			0.02
v/c Ratio	0.51	0.72	0.24	0.57	0.48	0.09	0.67	0.57	0.33	0.57	0.42	0.13
Uniform Delay, d1	34.9	24.5	20.6	31.9	19.4	16.6	29.3	28.1	26.6	32.3	31.0	29.7
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	2.7	2.3	0.3	3.1	0.3	0.1	4.6	2.0	0.7	3.1	0.6	0.3
Delay (s)	37.6	26.8	20.9	35.0	19.7	16.7	34.0	30.2	27.2	35.4	31.6	30.0
Level of Service	D	C	C	D	B	B	C	C	C	D	C	C
Approach Delay (s)		26.8			21.9			30.8			32.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

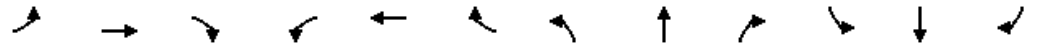
c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	886	129	128	658	124	142
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	1550
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1508	1770	3539	1770	1550
Peak-hour factor, PHF	0.84	0.84	0.94	0.94	0.90	0.90
Adj. Flow (vph)	1055	154	136	700	138	158
RTOR Reduction (vph)	0	17	0	0	0	132
Lane Group Flow (vph)	1055	137	136	700	138	26
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)	27.4	27.4	8.0	39.4	10.6	10.6
Effective Green, g (s)	27.4	27.4	8.0	39.4	10.6	10.6
Actuated g/C Ratio	0.43	0.43	0.12	0.61	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)	1510	644	221	2172	292	256
v/s Ratio Prot	c0.30		c0.08	0.20	c0.08	
v/s Ratio Perm		0.09				0.02
v/c Ratio	0.70	0.21	0.62	0.32	0.47	0.10
Uniform Delay, d1	15.0	11.6	26.6	6.0	24.3	22.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.2	5.0	0.1	1.2	0.2
Delay (s)	16.5	11.8	31.7	6.1	25.5	22.9
Level of Service	B	B	C	A	C	C
Approach Delay (s)	15.9			10.2	24.1	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	64.2	Sum of lost time (s)	18.2
Intersection Capacity Utilization	49.4%	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	955	737	176	141	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	1507	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1507	1770	1583
Peak-hour factor, PHF	0.84	0.84	0.97	0.97	0.85	0.85
Adj. Flow (vph)	89	1137	760	181	166	60
RTOR Reduction (vph)	0	0	0	19	0	48
Lane Group Flow (vph)	89	1137	760	162	166	12
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)	7.4	34.5	23.1	23.1	12.6	12.6
Effective Green, g (s)	7.4	34.5	23.1	23.1	12.6	12.6
Actuated g/C Ratio	0.12	0.57	0.38	0.38	0.21	0.21
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)	215	2005	1342	572	366	328
v/s Ratio Prot	0.05	c0.32	0.21		c0.09	
v/s Ratio Perm				0.11		0.01
v/c Ratio	0.41	0.57	0.57	0.28	0.45	0.04
Uniform Delay, d1	24.7	8.4	14.9	13.1	21.1	19.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	0.4	0.6	0.3	0.9	0.0
Delay (s)	26.0	8.8	15.5	13.4	22.0	19.4
Level of Service	C	A	B	B	C	B
Approach Delay (s)		10.1	15.1		21.3	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	60.9	Sum of lost time (s)	13.8
Intersection Capacity Utilization	42.3%	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)	67	836	176	246	701	158	180	162	230	108	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	1501	3433	3539	1500	1770	1863	1523	1770	1863	1521
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	1501	3433	3539	1500	1770	1863	1523	1770	1863	1521
Peak-hour factor, PHF	0.86	0.86	0.86	0.95	0.95	0.95	0.79	0.79	0.79	0.85	0.85	0.85
Adj. Flow (vph)	78	972	205	259	738	166	228	205	291	127	126	58
RTOR Reduction (vph)	0	0	33	0	0	18	0	0	113	0	0	29
Lane Group Flow (vph)	78	972	172	259	738	148	228	205	178	127	126	29
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	32.8	32.8	11.1	36.9	36.9	17.0	17.7	17.7	11.3	12.0	12.0
Effective Green, g (s)	7.0	32.8	32.8	11.1	36.9	36.9	17.0	17.7	17.7	11.3	12.0	12.0
Actuated g/C Ratio	0.08	0.37	0.37	0.12	0.42	0.42	0.19	0.20	0.20	0.13	0.13	0.13
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)	139	1306	554	429	1469	623	338	371	303	225	251	205
v/s Ratio Prot	0.04	c0.27		c0.08	0.21		c0.13	0.11		0.07	0.07	
v/s Ratio Perm			0.11			0.10			c0.12			0.02
v/c Ratio	0.56	0.74	0.31	0.60	0.50	0.24	0.67	0.55	0.59	0.56	0.50	0.14
Uniform Delay, d1	39.5	24.4	20.0	36.8	19.2	16.9	33.4	32.0	32.3	36.5	35.7	33.9
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	5.1	2.3	0.3	2.4	0.3	0.2	5.2	1.8	2.9	3.2	1.6	0.3
Delay (s)	44.6	26.7	20.3	39.2	19.5	17.1	38.6	33.8	35.2	39.7	37.3	34.2
Level of Service	D	C	C	D	B	B	D	C	D	D	D	C
Approach Delay (s)		26.8			23.5			35.9			37.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	88.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	74	165	860	83	50	852	109	120	44	94	163	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	0.96		1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.99		1.00	0.98		1.00	0.90		1.00	0.90
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1770	3460		1770	3437		1770	1601		1770	1611
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)		1770	3460		1770	3437		1770	1601		1770	1611
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	188	977	94	55	936	120	133	49	104	181	71
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	272	1071	0	55	1056	0	133	153	0	181	204
Confl. Peds. (#/hr)				30			30			30		
Confl. Bikes (#/hr)									1			1
Turn Type	Prot	Prot			Prot			Prot			Prot	
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases												
Actuated Green, G (s)		17.0	43.7		5.9	32.6		10.2	13.7		13.5	17.0
Effective Green, g (s)		17.0	43.7		5.9	32.6		10.2	13.7		13.5	17.0
Actuated g/C Ratio		0.18	0.47		0.06	0.35		0.11	0.15		0.15	0.18
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)		324	1629		113	1207		195	236		257	295
v/s Ratio Prot		c0.15	0.31		0.03	c0.31		0.08	0.10		c0.10	c0.13
v/s Ratio Perm												
v/c Ratio		0.84	0.66		0.49	0.87		0.68	0.65		0.70	0.69
Uniform Delay, d1		36.6	18.8		42.0	28.2		39.7	37.3		37.7	35.4
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		17.1	1.0		3.3	7.3		9.4	6.0		8.5	6.8
Delay (s)		53.7	19.8		45.3	35.5		49.2	43.3		46.2	42.3
Level of Service		D	B		D	D		D	D		D	D
Approach Delay (s)			26.7			36.0			46.0			44.1
Approach LOS			C			D			D			D

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	92.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	120
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	133
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	30
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	81	11	6	112	107	17	58	13	120	67	43
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)	28	107	14	7	127	122	24	81	18	145	81	52

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	28	121	7	249	104	18	225	52
Volume Left (vph)	28	0	7	0	24	0	145	0
Volume Right (vph)	0	14	0	122	0	18	0	52
Hadj (s)	0.59	-0.05	0.53	-0.31	0.18	-0.67	0.37	-0.67
Departure Headway (s)	6.5	5.9	6.4	5.5	6.2	5.3	6.1	5.1
Degree Utilization, x	0.05	0.20	0.01	0.38	0.18	0.03	0.38	0.07
Capacity (veh/h)	514	572	534	622	546	624	559	663
Control Delay (s)	8.7	9.2	8.2	10.7	9.3	7.3	11.7	7.3
Approach Delay (s)	9.1		10.6		9.0		10.9	
Approach LOS	A		B		A		B	

Intersection Summary				
Delay	10.2			
HCM Level of Service	B			
Intersection Capacity Utilization	41.0%	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)	193	96	87	398	349	172
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)	214	107	109	498	388	191
RTOR Reduction (vph)	0	82	0	0	0	133
Lane Group Flow (vph)	214	25	109	498	388	58
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)	7.8	7.8	3.4	17.4	10.0	10.0
Effective Green, g (s)	7.8	7.8	3.4	17.4	10.0	10.0
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	181	976	561	459
v/s Ratio Prot	c0.12		0.06	c0.27	c0.21	
v/s Ratio Perm		0.02				0.04
v/c Ratio	0.51	0.07	0.60	0.51	0.69	0.13
Uniform Delay, d1	11.1	9.9	14.3	5.1	10.2	8.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.1	5.5	0.5	3.7	0.1
Delay (s)	12.1	10.0	19.8	5.6	13.9	8.5
Level of Service	B	A	B	A	B	A
Approach Delay (s)	11.4			8.1	12.1	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	33.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.2%	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	26	183	18	14	151
Peak Hour Factor	0.77	0.77	0.71	0.71	0.81	0.81
Hourly flow rate (vph)	19	34	258	25	17	186

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	53	283	17	186
Volume Left (vph)	19	0	17	0
Volume Right (vph)	34	25	0	0
Hadj (s)	-0.27	-0.02	0.53	0.03
Departure Headway (s)	4.7	4.3	5.4	4.9
Degree Utilization, x	0.07	0.34	0.03	0.25
Capacity (veh/h)	688	812	651	722
Control Delay (s)	8.1	9.6	7.3	8.3
Approach Delay (s)	8.1	9.6	8.2	
Approach LOS	A	A	A	

Intersection Summary			
Delay	8.9		
HCM Level of Service	A		
Intersection Capacity Utilization	22.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	260	7	10	252	33	9	41	20	26	43	24
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)		1857	1479		1859	1462		1746	1431		1804	1508
Flt Permitted		0.97	1.00		0.99	1.00		0.96	1.00		0.91	1.00
Satd. Flow (perm)		1813	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)	18	295	8	12	315	41	12	54	26	32	52	29
RTOR Reduction (vph)	0	0	5	0	0	25	0	0	16	0	0	17
Lane Group Flow (vph)	0	313	3	0	327	16	0	66	10	0	84	12
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)		725	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		0.43	0.01		0.45	0.03		0.10	0.02		0.13	0.02
Uniform Delay, d1		8.7	7.2		8.8	7.3		7.5	7.3		7.6	7.3
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.9	0.0		2.0	0.1		0.3	0.1		0.4	0.1
Delay (s)		10.6	7.2		10.7	7.4		7.8	7.3		8.0	7.3
Level of Service		B	A		B	A		A	A		A	A
Approach Delay (s)		10.5			10.3			7.6			7.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
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	278	60	47	219	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	1839			1570			1818	
Flt Permitted		0.99	1.00	0.50	1.00			0.88			0.97	
Satd. Flow (perm)		1838	1328	903	1839			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	316	68	58	270	16	76	140	56	15	133	19
RTOR Reduction (vph)	0	0	39	0	4	0	0	19	0	0	9	0
Lane Group Flow (vph)	0	328	29	58	282	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	379	772			589			742	
v/s Ratio Prot					0.15							
v/s Ratio Perm		c0.18	0.02	0.06				c0.18			0.09	
v/c Ratio		0.42	0.05	0.15	0.37			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		1.7	0.2	0.9	1.3			2.3			0.7	
Delay (s)		11.9	8.8	9.8	11.3			12.6			9.9	
Level of Service		B	A	A	B			B			A	
Approach Delay (s)		11.4			11.0			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	0.43		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	253	32	53	206	70	38	381	67	85	307	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	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)		1792			1748		1770	1863	1429	1770	1863	1458
Flt Permitted		0.95			0.87		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1712			1536		1770	1863	1429	1770	1863	1458
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)	35	312	40	60	231	79	49	488	86	88	316	27
RTOR Reduction (vph)	0	4	0	0	9	0	0	0	13	0	0	6
Lane Group Flow (vph)	0	383	0	0	361	0	49	488	73	88	316	21
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)		24.1			24.1		3.5	27.6	27.6	7.2	31.3	31.3
Effective Green, g (s)		24.1			24.1		3.5	27.6	27.6	7.2	31.3	31.3
Actuated g/C Ratio		0.34			0.34		0.05	0.39	0.39	0.10	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)		582			522		87	725	556	180	822	644
v/s Ratio Prot							0.03	c0.26		c0.05	c0.17	
v/s Ratio Perm		0.22			c0.23				0.05			0.01
v/c Ratio		0.66			0.69		0.56	0.67	0.13	0.49	0.38	0.03
Uniform Delay, d1		19.9			20.2		33.0	17.9	13.9	30.1	13.3	11.2
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.7			3.9		8.1	2.5	0.1	2.1	0.3	0.0
Delay (s)		22.6			24.1		41.0	20.4	14.0	32.2	13.6	11.2
Level of Service		C			C		D	C	B	C	B	B
Approach Delay (s)		22.6			24.1			21.1			17.3	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	70.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.2%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	132	341	18	6	283	29	28	63	4	35	50	91
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)	152	392	21	8	358	37	55	124	8	40	57	105

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	152	413	403	178	8	98	105
Volume Left (vph)	152	0	8	55	0	40	0
Volume Right (vph)	0	21	37	0	8	0	105
Hadj (s)	0.53	0.00	-0.02	0.10	-0.57	0.24	-0.63
Departure Headway (s)	7.3	6.8	7.0	8.1	3.2	8.2	7.3
Degree Utilization, x	0.31	0.78	0.78	0.40	0.01	0.22	0.21
Capacity (veh/h)	473	516	502	400	1121	401	427
Control Delay (s)	12.4	28.5	30.2	16.3	6.2	12.4	11.1
Approach Delay (s)	24.1		30.2	15.9		11.7	
Approach LOS	C		D	C		B	

Intersection Summary				
Delay	22.9			
HCM Level of Service	C			
Intersection Capacity Utilization	58.2%	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)	100	471	53	50	370	65	37	221	49	38	237	87
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	0.96	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3442			3435		1790	1578		1740	1548	
Flt Permitted		0.99			0.99		0.20	1.00		0.24	1.00	
Satd. Flow (perm)		3442			3435		377	1578		443	1548	
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)	133	628	71	58	430	76	45	266	59	41	255	94
RTOR Reduction (vph)	0	8	0	0	14	0	0	9	0	0	15	0
Lane Group Flow (vph)	0	824	0	0	550	0	45	316	0	41	334	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)		1568			649		84	351		98	344	
v/s Ratio Prot		c0.24			c0.16			0.20			c0.22	
v/s Ratio Perm							0.12			0.09		
v/c Ratio		0.53			0.85		0.54	0.90		0.42	0.97	
Uniform Delay, d1		17.5			35.3		30.9	34.0		30.0	34.7	
Progression Factor		1.00			0.92		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3			9.4		22.3	28.6		12.6	41.9	
Delay (s)		18.8			41.8		53.2	62.6		42.6	76.6	
Level of Service		B			D		D	E		D	E	
Approach Delay (s)		18.8			41.8			61.5			73.0	
Approach LOS		B			D			E			E	

Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	471	56	75	409	60	58	103	53	26	59	28
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	1553	
Flt Permitted		1.00			0.99		0.63	1.00		0.48	1.00	
Satd. Flow (perm)		3451			3438		1171	1516		864	1553	
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	38	86	41
RTOR Reduction (vph)	0	9	0	0	11	0	0	20	0	0	19	0
Lane Group Flow (vph)	0	655	0	0	555	0	74	180	0	38	108	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		260	337		192	345	
v/s Ratio Prot		c0.19			c0.16			c0.12			0.07	
v/s Ratio Perm							0.06			0.04		
v/c Ratio		0.42			0.86		0.28	0.53		0.20	0.31	
Uniform Delay, d1		16.5			35.3		29.1	30.9		28.5	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		2.3	2.3	
Delay (s)		5.4			48.9		31.8	36.8		30.8	31.6	
Level of Service		A			D		C	D		C	C	
Approach Delay (s)		5.4			48.9			35.5			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)	1020	106	55	942	77	114
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	1146	119	59	1013	83	123
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			0.81		0.84	0.81
vC, conflicting volume			1178		1835	637
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			753		1342	86
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		20	83
cM capacity (veh/h)			673		103	734

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	573	573	119	59	506	506	83	123
Volume Left	0	0	0	59	0	0	83	0
Volume Right	0	0	119	0	0	0	0	123
cSH	1700	1700	1700	673	1700	1700	103	734
Volume to Capacity	0.34	0.34	0.07	0.09	0.30	0.30	0.80	0.17
Queue Length 95th (ft)	0	0	0	7	0	0	111	15
Control Delay (s)	0.0	0.0	0.0	10.9	0.0	0.0	115.4	10.9
Lane LOS				B			F	B
Approach Delay (s)	0.0			0.6			53.0	
Approach LOS							F	

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1058	85	62	872	128	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.95	0.95	0.84	0.84
Hourly flow rate (vph)	1163	93	65	918	152	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					0.89	
vC, conflicting volume			1263		1813	642
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1263		1667	642
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		0	94
cM capacity (veh/h)			543		68	412

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	775	481	65	459	459	176
Volume Left	0	0	65	0	0	152
Volume Right	0	93	0	0	0	24
cSH	1700	1700	543	1700	1700	76
Volume to Capacity	0.46	0.28	0.12	0.27	0.27	2.31
Queue Length 95th (ft)	0	0	10	0	0	412
Control Delay (s)	0.0	0.0	12.5	0.0	0.0	716.1
Lane LOS			B			F
Approach Delay (s)	0.0		0.8			716.1
Approach LOS						F

Intersection Summary			
Average Delay	52.6		
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	359	522	196	104	476	121	195	250	52	166	236	257
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	0.80	1.00	1.00	0.96	1.00	1.00	0.92	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	1267	1770	3539	1515	1770	1863	1463	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	1267	1770	3539	1515	1770	1863	1463	1770	1863	1559
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.86	0.86	0.86	0.87	0.87	0.87
Adj. Flow (vph)	417	607	228	114	523	133	227	291	60	191	271	295
RTOR Reduction (vph)	0	0	117	0	0	47	0	0	12	0	0	236
Lane Group Flow (vph)	417	607	111	114	523	86	227	291	48	191	271	59
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)	27.4	34.3	34.3	11.4	18.3	18.3	15.5	20.2	20.2	14.6	19.3	19.3
Effective Green, g (s)	27.4	34.3	34.3	11.4	18.3	18.3	15.5	20.2	20.2	14.6	19.3	19.3
Actuated g/C Ratio	0.28	0.36	0.36	0.12	0.19	0.19	0.16	0.21	0.21	0.15	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	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)	503	1258	450	209	671	287	284	390	306	268	373	312
v/s Ratio Prot	c0.24	0.17		0.06	c0.15		c0.13	c0.16		0.11	0.15	
v/s Ratio Perm			0.09			0.06			0.03			0.04
v/c Ratio	0.83	0.48	0.25	0.55	0.78	0.30	0.80	0.75	0.16	0.71	0.73	0.19
Uniform Delay, d1	32.4	24.2	22.0	40.1	37.2	33.6	39.0	35.7	31.2	39.0	36.1	32.1
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	10.8	0.3	0.3	2.9	5.7	0.6	14.5	7.6	0.2	8.7	6.9	0.3
Delay (s)	43.2	24.5	22.3	43.0	42.9	34.2	53.5	43.3	31.4	47.6	43.0	32.4
Level of Service	D	C	C	D	D	C	D	D	C	D	D	C
Approach Delay (s)		30.3			41.4			46.1			40.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	96.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	700	35	26	671	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)	824	41	28	729	51	13
RTOR Reduction (vph)	0	0	0	0	0	12
Lane Group Flow (vph)	824	41	28	729	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)	32.5	32.5	2.3	38.8	4.2	4.2
Effective Green, g (s)	32.5	32.5	2.3	38.8	4.2	4.2
Actuated g/C Ratio	0.57	0.57	0.04	0.68	0.07	0.07
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)	2021	834	72	2413	131	117
v/s Ratio Prot	c0.23		0.02	c0.21	c0.03	
v/s Ratio Perm		0.03				0.00
v/c Ratio	0.41	0.05	0.39	0.30	0.39	0.01
Uniform Delay, d1	6.8	5.4	26.6	3.6	25.1	24.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	3.5	0.1	1.9	0.0
Delay (s)	7.0	5.4	30.1	3.7	27.0	24.4
Level of Service	A	A	C	A	C	C
Approach Delay (s)	6.9			4.7	26.5	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	6.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	56.9	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)	109	511	624	131	63	77
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	1510	1736	1544
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1510	1736	1544
Peak-hour factor, PHF	0.86	0.86	0.96	0.96	0.73	0.73
Adj. Flow (vph)	127	594	650	136	86	105
RTOR Reduction (vph)	0	0	0	36	0	91
Lane Group Flow (vph)	127	594	650	100	86	14
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)	7.8	32.5	20.7	20.7	7.0	7.0
Effective Green, g (s)	7.8	32.5	20.7	20.7	7.0	7.0
Actuated g/C Ratio	0.15	0.61	0.39	0.39	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)	260	2162	1377	588	228	203
v/s Ratio Prot	c0.07	0.17	c0.18		c0.05	
v/s Ratio Perm				0.07		0.01
v/c Ratio	0.49	0.27	0.47	0.17	0.38	0.07
Uniform Delay, d1	20.9	4.8	12.2	10.6	21.1	20.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.1	0.3	0.1	1.0	0.1
Delay (s)	22.3	4.9	12.4	10.8	22.2	20.4
Level of Service	C	A	B	B	C	C
Approach Delay (s)		8.0	12.1		21.2	
Approach LOS		A	B		C	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	53.2	Sum of lost time (s)	17.7
Intersection Capacity Utilization	40.2%	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 (veh/h)	1	545	29	50	729	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	681	36	53	776	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	776			722			1206	1589	414	1323	1607	393
vC1, stage 1 conf vol							707	707		882	882	
vC2, stage 2 conf vol							499	882		441	725	
vCu, unblocked vol	776			722			1206	1589	414	1323	1607	393
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			80	100	91	97	100	100
cM capacity (veh/h)	836			833			319	277	555	250	262	604

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	342	377	53	517	259	112	8
Volume Left	1	0	53	0	0	63	8
Volume Right	0	36	0	0	0	48	0
cSH	836	1700	833	1700	1700	391	250
Volume to Capacity	0.00	0.22	0.06	0.30	0.15	0.29	0.03
Queue Length 95th (ft)	0	0	5	0	0	29	2
Control Delay (s)	0.1	0.0	9.6	0.0	0.0	17.9	19.9
Lane LOS	A		A			C	C
Approach Delay (s)	0.0		0.6			17.9	19.9
Approach LOS						C	C

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	57.9%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	434	132	19	684	98	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)	482	147	20	728	126	8
RTOR Reduction (vph)	0	43	0	0	0	4
Lane Group Flow (vph)	482	104	20	728	126	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)	30.5	30.5	1.2	35.7	7.4	7.4
Effective Green, g (s)	30.5	30.5	1.2	35.7	7.4	7.4
Actuated g/C Ratio	0.60	0.60	0.02	0.70	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)	2112	908	42	1302	251	229
v/s Ratio Prot	0.14		0.01	c0.39	c0.07	
v/s Ratio Perm		0.07				0.00
v/c Ratio	0.23	0.11	0.48	0.56	0.50	0.02
Uniform Delay, d1	4.8	4.5	24.6	3.8	20.2	18.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	8.3	0.5	1.6	0.0
Delay (s)	4.9	4.5	32.9	4.3	21.7	18.8
Level of Service	A	A	C	A	C	B
Approach Delay (s)	4.8			5.1	21.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	6.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	51.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	430	15	22	688	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)	531	19	23	732	25	7
RTOR Reduction (vph)	0	7	0	0	0	7
Lane Group Flow (vph)	531	12	23	732	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)	28.5	28.5	1.3	33.8	2.3	2.3
Effective Green, g (s)	28.5	28.5	1.3	33.8	2.3	2.3
Actuated g/C Ratio	0.65	0.65	0.03	0.77	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)	2287	1000	52	1428	92	83
v/s Ratio Prot	0.15		0.01	c0.39	c0.01	
v/s Ratio Perm		0.01				0.00
v/c Ratio	0.23	0.01	0.44	0.51	0.27	0.00
Uniform Delay, d1	3.2	2.8	21.0	2.0	20.1	19.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	5.9	0.3	1.6	0.0
Delay (s)	3.3	2.8	26.9	2.3	21.7	19.8
Level of Service	A	A	C	A	C	B
Approach Delay (s)	3.3			3.0	21.3	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	3.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	44.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	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	660	487	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	742	573	21
RTOR Reduction (vph)	0	199	0	0	0	15
Lane Group Flow (vph)	20	33	373	742	573	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	17.1	36.4	15.3	15.3
Effective Green, g (s)	7.4	7.4	17.1	36.4	15.3	15.3
Actuated g/C Ratio	0.14	0.14	0.33	0.70	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)	253	223	584	1309	1045	457
v/s Ratio Prot	0.01		c0.21	c0.40	0.16	
v/s Ratio Perm		c0.02				0.00
v/c Ratio	0.08	0.15	0.64	0.57	0.55	0.01
Uniform Delay, d1	19.2	19.4	14.7	3.8	15.3	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	0.6	0.6	0.0
Delay (s)	19.4	19.8	17.0	4.4	15.9	12.9
Level of Service	B	B	B	A	B	B
Approach Delay (s)	19.7			8.6	15.8	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	51.8	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)	114	126	517	18	19	35	459	846	54	78	564	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
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	3502		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	3502		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)	139	154	630	26	28	51	534	984	63	83	600	52
RTOR Reduction (vph)	0	0	60	0	46	0	0	5	0	0	0	40
Lane Group Flow (vph)	139	154	570	26	33	0	534	1042	0	83	600	12
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	15.7	43.5	1.8	8.5		27.8	39.6		6.4	18.2	18.2
Effective Green, g (s)	9.0	15.7	43.5	1.8	8.5		27.8	39.6		6.4	18.2	18.2
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)	200	368	938	39	177		619	1744		141	810	352
v/s Ratio Prot	c0.08	0.08	c0.21	0.02	0.02		c0.30	0.30		0.05	c0.17	
v/s Ratio Perm			0.15									0.01
v/c Ratio	0.70	0.42	0.61	0.67	0.19		0.86	0.60		0.59	0.74	0.03
Uniform Delay, d1	33.9	27.9	12.2	38.6	32.4		24.1	14.3		35.3	28.5	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	10.0	0.8	1.1	35.5	0.5		11.9	0.6		6.2	3.7	0.0
Delay (s)	43.9	28.7	13.3	74.1	32.9		36.0	14.8		41.4	32.1	23.9
Level of Service	D	C	B	E	C		D	B		D	C	C
Approach Delay (s)		20.5			43.1			22.0			32.6	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	79.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.7%	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)	380	330	170	30	40	194	26	475	109	248	427	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	209	27	490	112	276	474	304
RTOR Reduction (vph)	0	0	112	0	0	191	0	0	32	0	0	194
Lane Group Flow (vph)	392	340	63	32	43	18	27	490	80	276	474	110
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)	34.3	34.3	34.3	8.3	8.3	8.3	2.0	18.7	18.7	17.7	34.4	34.4
Effective Green, g (s)	34.3	34.3	34.3	8.3	8.3	8.3	2.0	18.7	18.7	17.7	34.4	34.4
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)	639	1278	564	155	163	136	37	690	306	330	1281	566
v/s Ratio Prot	c0.22	0.10		0.02	c0.02		0.02	c0.14		c0.16	0.13	
v/s Ratio Perm			0.04			0.01			0.05			0.07
v/c Ratio	0.61	0.27	0.11	0.21	0.26	0.13	0.73	0.71	0.26	0.84	0.37	0.19
Uniform Delay, d1	24.9	21.5	20.2	40.3	40.5	40.0	46.2	35.6	32.3	37.3	22.3	20.8
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	4.1	0.5	0.4	0.7	0.9	0.5	52.2	3.4	0.5	16.6	0.2	0.2
Delay (s)	24.6	17.9	25.7	41.0	41.4	40.5	98.4	39.1	32.8	53.8	22.5	21.0
Level of Service	C	B	C	D	D	D	F	D	C	D	C	C
Approach Delay (s)		22.3			40.7			40.5			30.3	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.6%	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)	55	12	571	65	9	496
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)	60	13	621	71	10	539
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	1179	621			691	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1179	621			691	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	71	97			99	
cM capacity (veh/h)	208	488			904	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	73	621	71	10	539
Volume Left	60	0	0	10	0
Volume Right	13	0	71	0	0
cSH	254	1700	1700	904	1700
Volume to Capacity	0.29	0.37	0.04	0.01	0.32
Queue Length 95th (ft)	29	0	0	1	0
Control Delay (s)	26.2	0.0	0.0	9.0	0.0
Lane LOS	D			A	
Approach Delay (s)	26.2	0.0		0.2	
Approach LOS	D				

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	127	24	612	118	20	532
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)	138	26	665	128	22	578
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	1287	665			793	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1259	557			702	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	15	94			97	
cM capacity (veh/h)	162	469			793	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	164	665	128	22	578
Volume Left	138	0	0	22	0
Volume Right	26	0	128	0	0
cSH	193	1700	1700	793	1700
Volume to Capacity	0.85	0.39	0.08	0.03	0.34
Queue Length 95th (ft)	156	0	0	2	0
Control Delay (s)	79.4	0.0	0.0	9.7	0.0
Lane LOS	F			A	
Approach Delay (s)	79.4	0.0		0.4	
Approach LOS	F				

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	128	25	457	188	44	334
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)	160	31	531	219	49	375
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	1012	538			756	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1012	538			756	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	36	94			94	
cM capacity (veh/h)	249	540			850	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	191	531	219	49	375
Volume Left	160	0	0	49	0
Volume Right	31	0	219	0	0
cSH	297	1700	1700	850	1700
Volume to Capacity	0.64	0.31	0.13	0.06	0.22
Queue Length 95th (ft)	103	0	0	5	0
Control Delay (s)	37.4	0.0	0.0	9.5	0.0
Lane LOS	E			A	
Approach Delay (s)	37.4	0.0		1.1	
Approach LOS	E				

Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	44.5%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	53	101	72	448	451	92
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.77	0.77	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	69	131	88	546	550	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	1337	618	671			
vC1, stage 1 conf vol	615					
vC2, stage 2 conf vol	722					
vCu, unblocked vol	1313	486	547			
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 %	81	74	90			
cM capacity (veh/h)	353	500	883			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	200	88	546	662
Volume Left	69	88	0	0
Volume Right	131	0	0	112
cSH	438	883	1700	1700
Volume to Capacity	0.46	0.10	0.32	0.39
Queue Length 95th (ft)	59	8	0	0
Control Delay (s)	20.0	9.5	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	20.0	1.3		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	79	81	477	110	100	403
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	0.80	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	1212	1804		1770	1863
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1212	1804		1770	1863
Peak-hour factor, PHF	0.85	0.85	0.86	0.86	0.87	0.87
Adj. Flow (vph)	93	95	555	128	115	463
RTOR Reduction (vph)	0	87	9	0	0	0
Lane Group Flow (vph)	93	8	674	0	115	463
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)	5.0	5.0	28.8		5.0	37.8
Effective Green, g (s)	5.0	5.0	28.8		5.0	37.8
Actuated g/C Ratio	0.09	0.09	0.51		0.09	0.66
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)	155	106	911		155	1235
v/s Ratio Prot	c0.05		c0.37		c0.06	0.25
v/s Ratio Perm		0.01				
v/c Ratio	0.60	0.08	0.74		0.74	0.37
Uniform Delay, d1	25.0	23.9	11.1		25.4	4.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	6.4	0.3	3.2		17.3	0.2
Delay (s)	31.4	24.2	14.3		42.7	4.5
Level of Service	C	C	B		D	A
Approach Delay (s)	27.8		14.3			12.1
Approach LOS	C		B			B

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	51.7%	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)	116	114	167	40	65	25	138	460	61	26	375	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	1458		1821	1516	1770	1863	1516	1770	1863	1507
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)		1447	1458		1526	1516	1770	1863	1516	1770	1863	1507
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	28	157	523	69	29	412	121
RTOR Reduction (vph)	0	0	136	0	0	20	0	0	37	0	0	78
Lane Group Flow (vph)	0	258	52	0	119	8	157	523	32	29	412	43
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	23.3	23.3	1.3	17.8	17.8
Effective Green, g (s)		13.9	13.9		13.9	13.9	6.8	23.3	23.3	1.3	17.8	17.8
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.13	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)		398	401		420	417	238	860	699	46	657	531
v/s Ratio Prot							c0.09	c0.28		0.02	0.22	
v/s Ratio Perm		c0.18	0.04		0.08	0.01			0.02			0.03
v/c Ratio		0.65	0.13		0.28	0.02	0.66	0.61	0.05	0.63	0.63	0.08
Uniform Delay, d1		16.1	13.8		14.4	13.3	20.8	10.2	7.5	24.4	13.6	10.9
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		3.6	0.1		0.4	0.0	6.5	1.2	0.0	24.9	1.9	0.1
Delay (s)		19.8	13.9		14.8	13.3	27.2	11.4	7.5	49.2	15.5	11.0
Level of Service		B	B		B	B	C	B	A	D	B	B
Approach Delay (s)		17.3			14.5			14.4			16.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	50.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	201	210	133	171	191	181	402	179	163	369	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	1453	1770	3505	1342	1770	1863	1525	1770	1863	1482
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	1453	1770	3505	1342	1770	1863	1525	1770	1863	1482
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	227	199	442	197	177	401	121
RTOR Reduction (vph)	0	0	152	0	0	129	0	0	29	0	0	20
Lane Group Flow (vph)	126	209	67	158	204	98	199	442	168	177	401	101
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)	9.2	13.1	13.1	12.7	16.6	16.6	14.6	25.5	25.5	13.6	24.5	24.5
Effective Green, g (s)	9.2	13.1	13.1	12.7	16.6	16.6	14.6	25.5	25.5	13.6	24.5	24.5
Actuated g/C Ratio	0.11	0.16	0.16	0.16	0.21	0.21	0.18	0.32	0.32	0.17	0.30	0.30
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)	201	573	235	278	719	275	319	587	481	298	564	449
v/s Ratio Prot	0.07	0.06		c0.09	0.06		c0.11	c0.24		0.10	0.22	
v/s Ratio Perm			0.05			c0.07			0.11			0.07
v/c Ratio	0.63	0.36	0.29	0.57	0.28	0.36	0.62	0.75	0.35	0.59	0.71	0.23
Uniform Delay, d1	34.2	30.2	29.8	31.6	27.1	27.6	30.6	24.9	21.3	31.1	25.1	21.1
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	6.0	0.4	0.7	2.7	0.2	0.8	3.8	5.4	0.4	3.2	4.2	0.3
Delay (s)	40.2	30.6	30.5	34.2	27.4	28.4	34.4	30.3	21.8	34.3	29.3	21.4
Level of Service	D	C	C	C	C	C	C	C	C	C	C	C
Approach Delay (s)		32.7			29.6			29.3			29.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	80.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	8	10	8	18	25	16	13	145	14	17	94	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	21	16	175	17	22	124	20

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	40	76	207	166
Volume Left (vph)	12	23	16	22
Volume Right (vph)	12	21	17	20
Hadj (s)	-0.09	-0.07	0.00	-0.01
Departure Headway (s)	4.8	4.7	4.4	4.4
Degree Utilization, x	0.05	0.10	0.25	0.20
Capacity (veh/h)	687	697	794	781
Control Delay (s)	8.0	8.3	8.8	8.5
Approach Delay (s)	8.0	8.3	8.8	8.5
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.6			
HCM Level of Service	A			
Intersection Capacity Utilization	23.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	264	74	24	219	19	66	154	79	15	86	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	1793	
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		1219	1863	1515	1200	1793	
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	175	90	22	125	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	175	38	22	139	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		512	782	636	504	753	
v/s Ratio Prot		c0.20			0.15			c0.09			0.08	
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	0.22	0.06	0.04	0.18	
Uniform Delay, d1	8.7	10.5		8.7	10.0		9.0	9.3	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	0.7	0.2	0.2	0.5	
Delay (s)	9.1	12.6		9.2	11.3		9.6	9.9	8.8	8.7	9.7	
Level of Service	A	B		A	B		A	A	A	A	A	
Approach Delay (s)		12.3			11.1			9.6			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
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	168	122	47	99	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	1490
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	1490
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	193	140	67	141	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	193	34	67	141	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	25.5		4.2	22.8	22.8	6.9	16.1	16.1	4.1	13.3	13.3
Effective Green, g (s)	6.9	25.5		4.2	22.8	22.8	6.9	16.1	16.1	4.1	13.3	13.3
Actuated g/C Ratio	0.10	0.39		0.06	0.35	0.35	0.10	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)	185	688		109	1224	521	185	455	366	110	376	301
v/s Ratio Prot	c0.06	c0.28		0.04	0.12		c0.06	c0.10		0.04	0.08	
v/s Ratio Perm						0.02			0.02			0.01
v/c Ratio	0.55	0.73		0.63	0.34	0.05	0.54	0.42	0.09	0.61	0.38	0.05
Uniform Delay, d1	28.0	17.3		30.1	16.0	14.3	28.0	21.0	19.3	30.1	22.7	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	3.3	3.9		11.4	0.2	0.0	3.2	0.6	0.1	9.2	0.6	0.1
Delay (s)	31.3	21.1		41.5	16.2	14.4	31.2	21.6	19.4	39.3	23.3	21.3
Level of Service	C	C		D	B	B	C	C	B	D	C	C
Approach Delay (s)		22.8			19.1			23.1			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)	65.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	1182	997	169	0	116
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.91	0.91	0.90	0.90
Hourly flow rate (vph)	0	1244	1096	186	0	129
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		862	915			
pX, platoon unblocked	0.74				0.85	0.74
vC, conflicting volume	1281				1811	641
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	681				454	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	84
cM capacity (veh/h)	673				454	804

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	622	622	730	551	129
Volume Left	0	0	0	0	0
Volume Right	0	0	0	186	129
cSH	1700	1700	1700	1700	804
Volume to Capacity	0.37	0.37	0.43	0.32	0.16
Queue Length 95th (ft)	0	0	0	0	14
Control Delay (s)	0.0	0.0	0.0	0.0	10.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.3
Approach LOS					B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

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

Scenario: Existing + Project
Peak Hour: AM

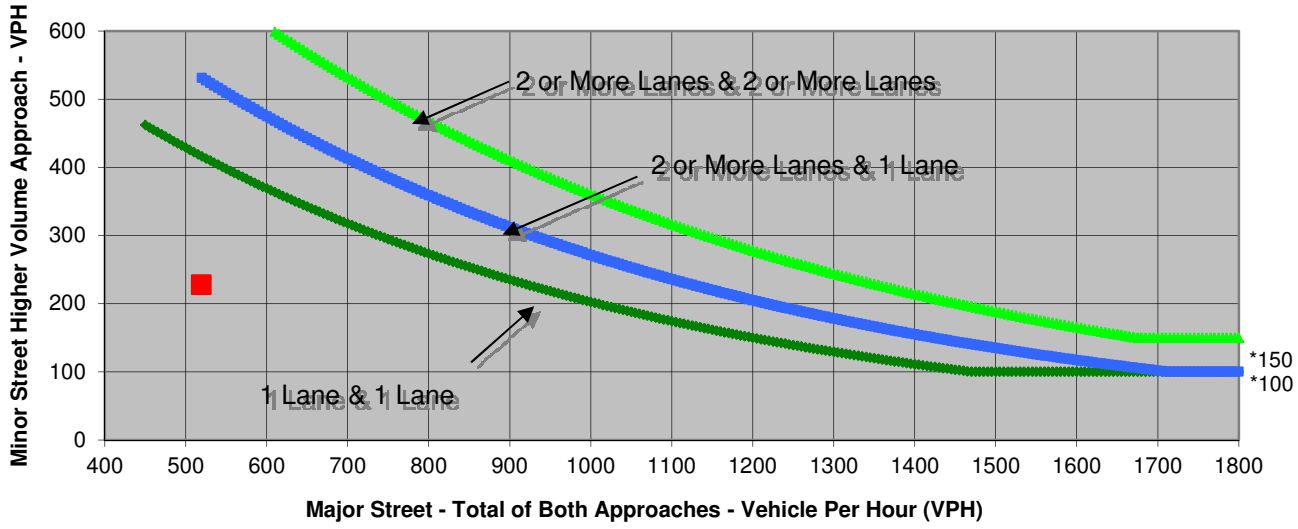
Turn Movement Volumes

	NB	SB	EB	WB
Left	15	119	58	39
Through	70	58	165	112
Right	35	51	12	133
Total	120	228	235	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) *	519	228	

* 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 + Project
Peak Hour: PM

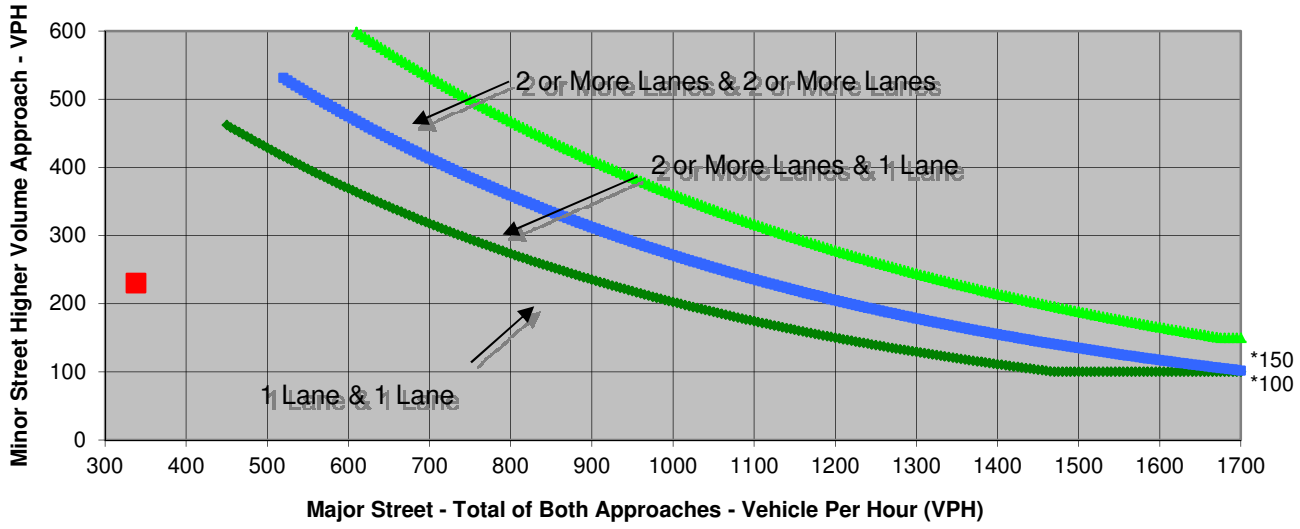
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	120	21	6
Through	58	67	81	112
Right	13	43	11	107
Total	88	230	113	225

Major Street Direction

	North/South
x	East/West

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



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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) *	338	230	

* 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 + Project
Peak Hour: AM

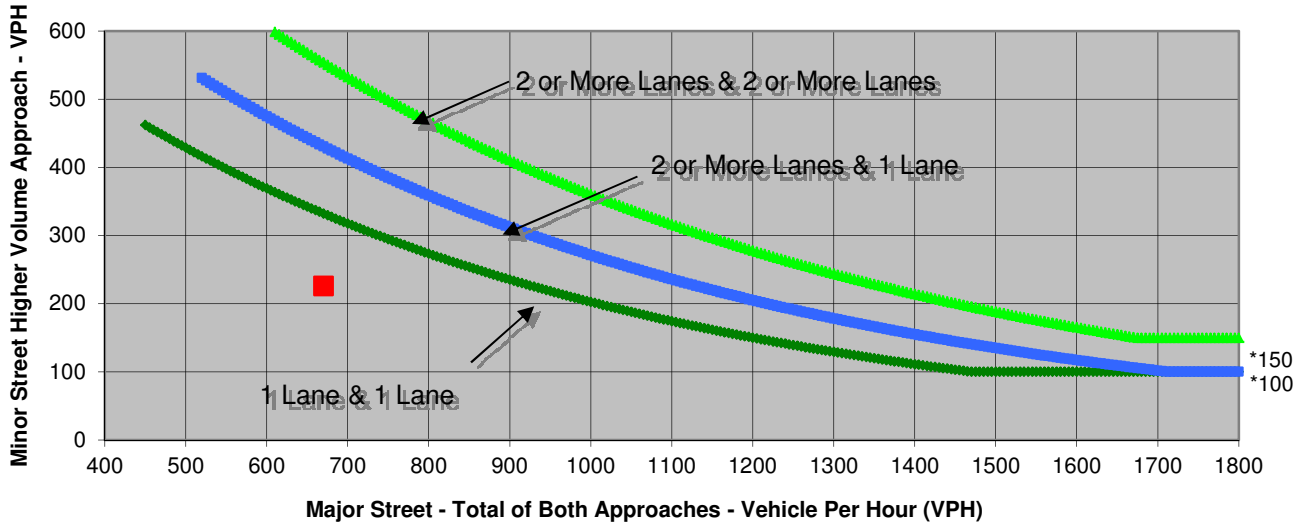
Turn Movement Volumes

	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)



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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 + Project
Peak Hour: PM

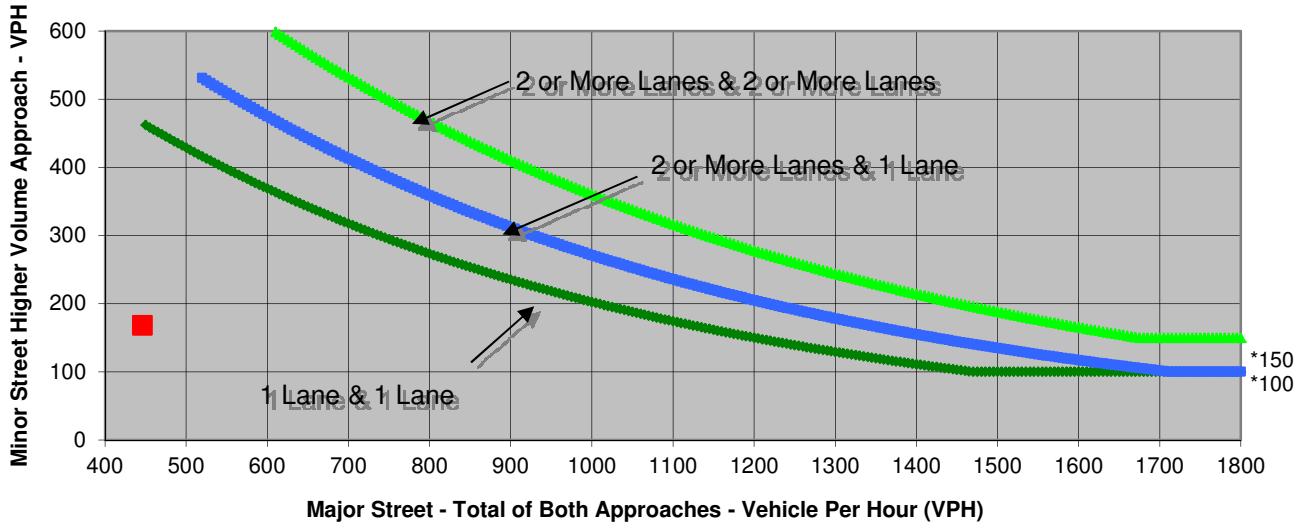
Turn Movement Volumes

	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)



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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 + Project
Peak Hour: AM

Turn Movement Volumes

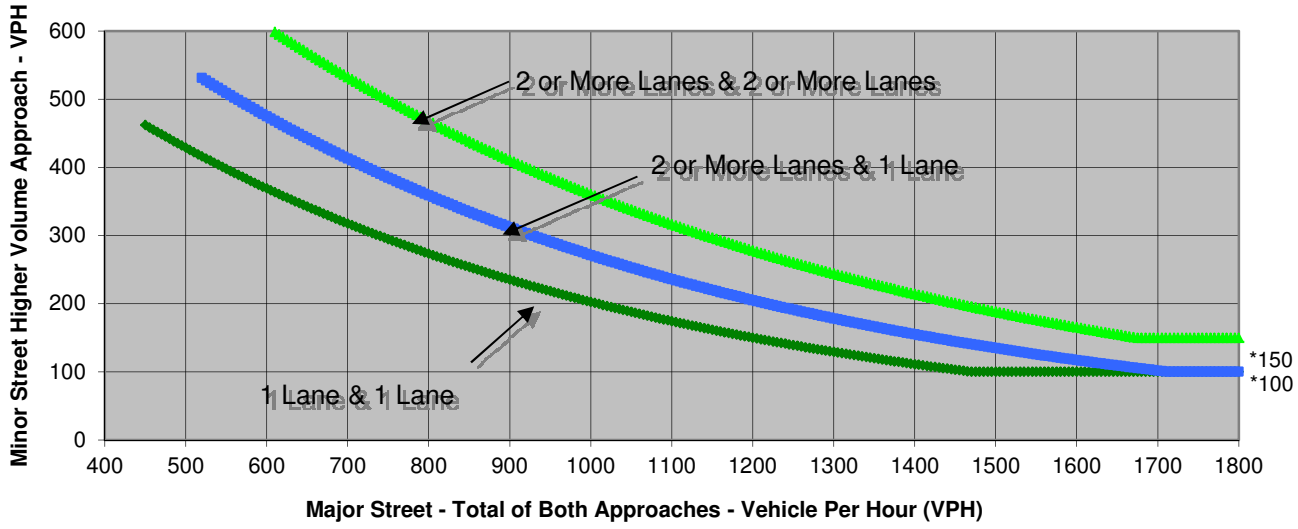
	NB	SB	EB	WB
Left	0	26	0	22
Through	113	148	0	0
Right	10	0	0	29
Total	123	174	0	51

Major Street Direction

x North/South

East/West

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



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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) *	297	51	

* 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 + Project
Peak Hour: PM

Turn Movement Volumes

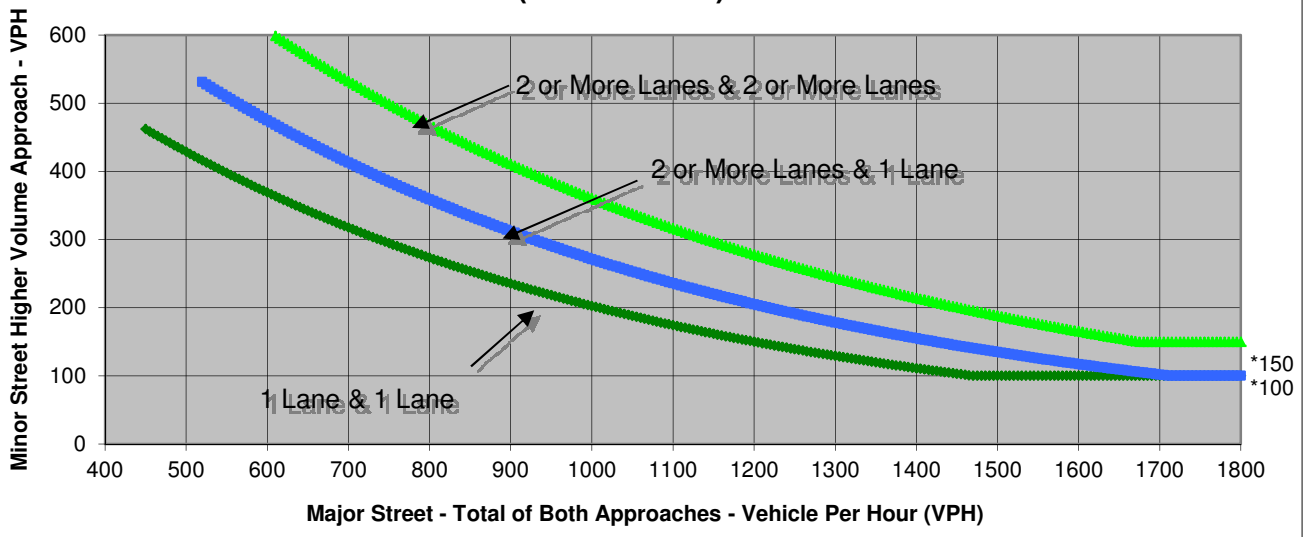
	NB	SB	EB	WB
Left	0	14	0	15
Through	183	151	0	0
Right	18	0	0	26
Total	201	165	0	41

Major Street Direction

x North/South

East/West

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



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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) *	366	41	

* 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 + Project
Peak Hour: AM

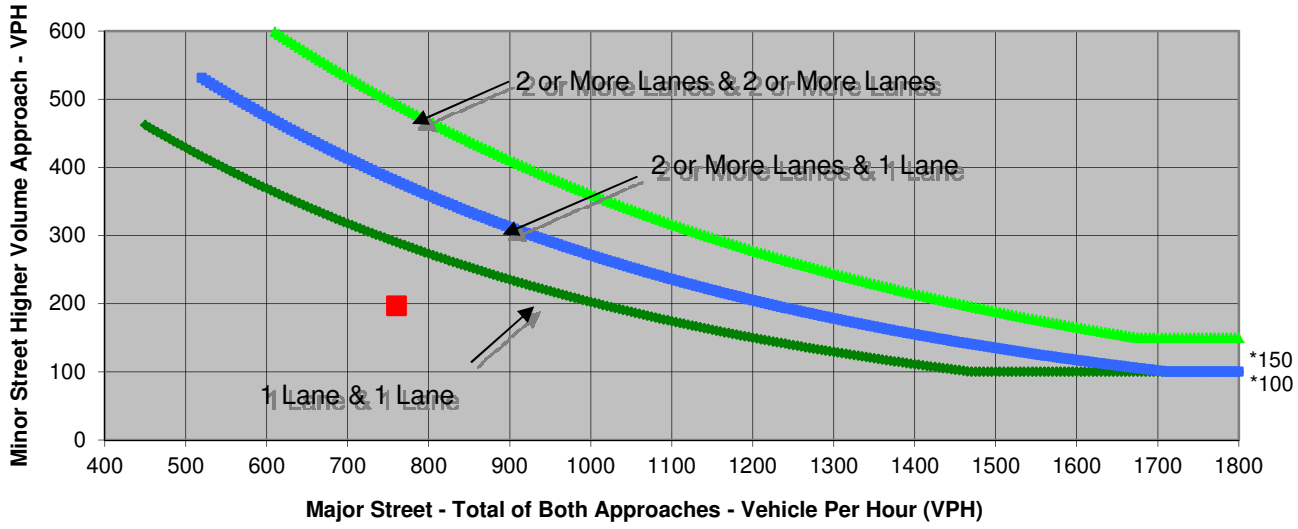
Turn Movement Volumes

	NB	SB	EB	WB
Left	55	28	63	7
Through	28	51	272	380
Right	7	118	23	15
Total	90	197	358	402

Major Street Direction

	North/South
x	East/West

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



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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) *	760	197	

* 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 + Project
Peak Hour: PM

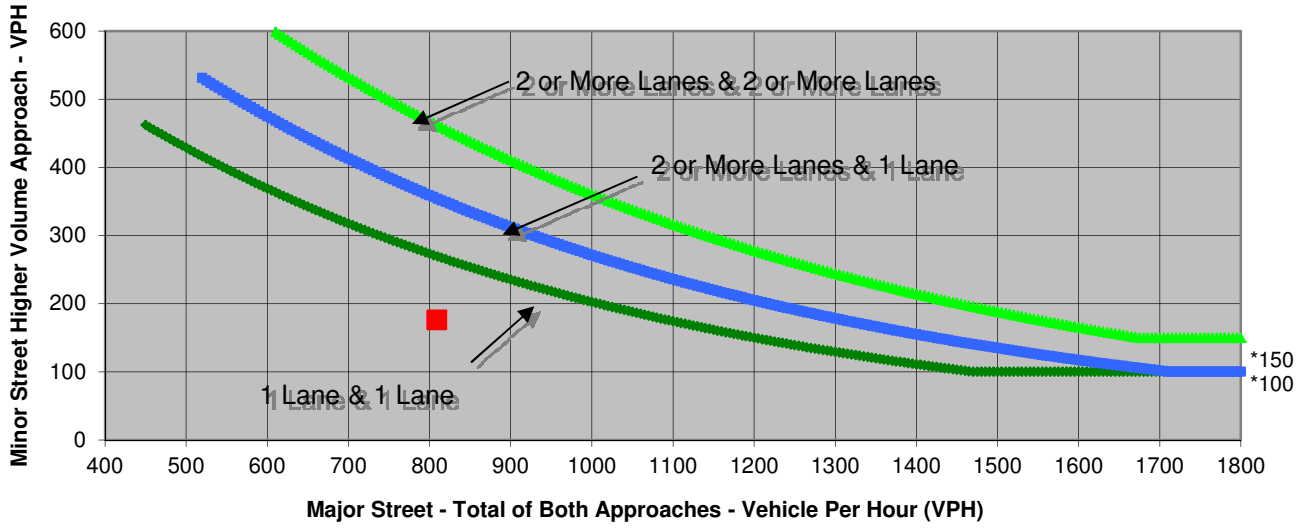
Turn Movement Volumes

	NB	SB	EB	WB
Left	28	35	132	6
Through	63	50	341	283
Right	4	91	18	29
Total	95	176	491	318

Major Street Direction

	North/South
x	East/West

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



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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) *	809	176	

* 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 + Project
Peak Hour: AM

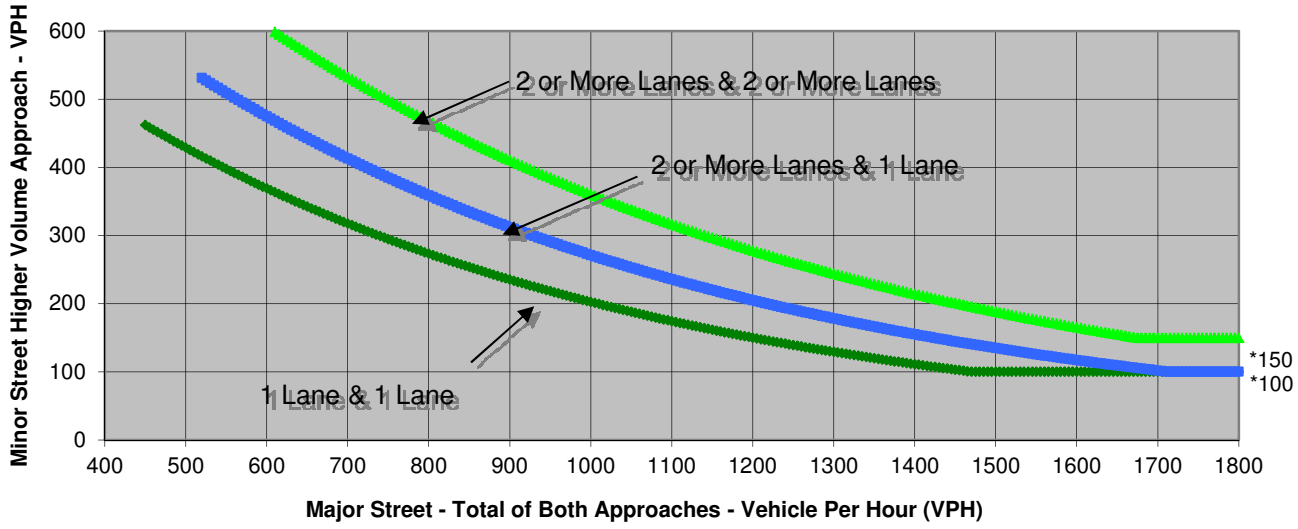
Turn Movement Volumes

	NB	SB	EB	WB
Left	49	0	0	60
Through	0	0	746	1,018
Right	0	0	0	0
Total	49	0	746	1,078

Major Street Direction

	North/South
x	East/West

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



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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) *	1,824	49	

* 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 + Project
Peak Hour: PM

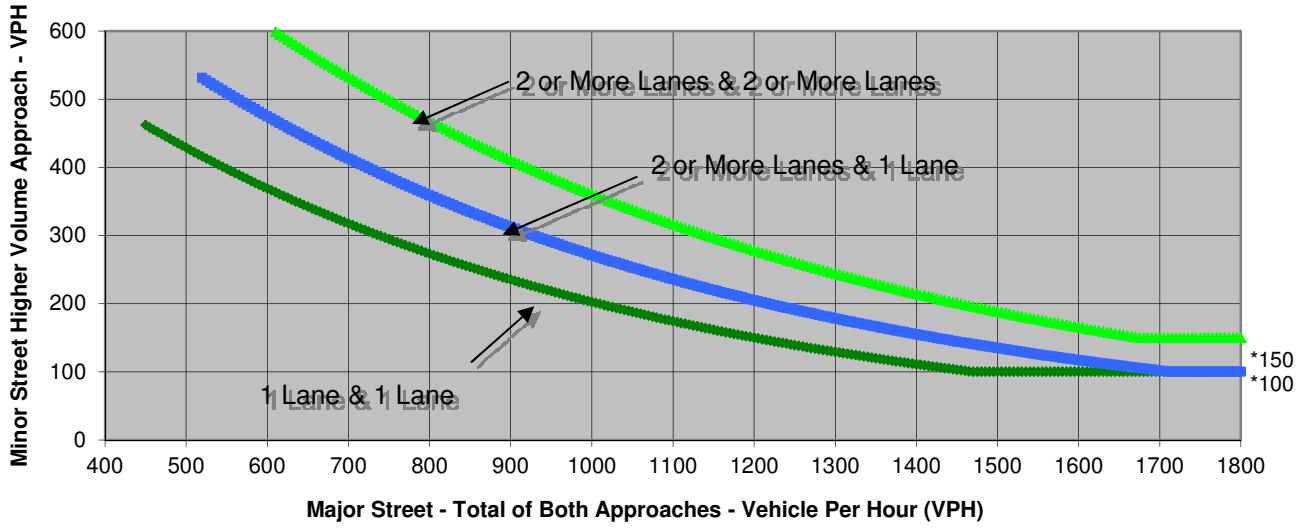
Turn Movement Volumes

	NB	SB	EB	WB
Left	77	0	0	55
Through	0	0	1,020	942
Right	0	0	0	0
Total	77	0	1,020	997

Major Street Direction

	North/South
x	East/West

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



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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) *	2,017	77	

* 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 + Project
Peak Hour: AM

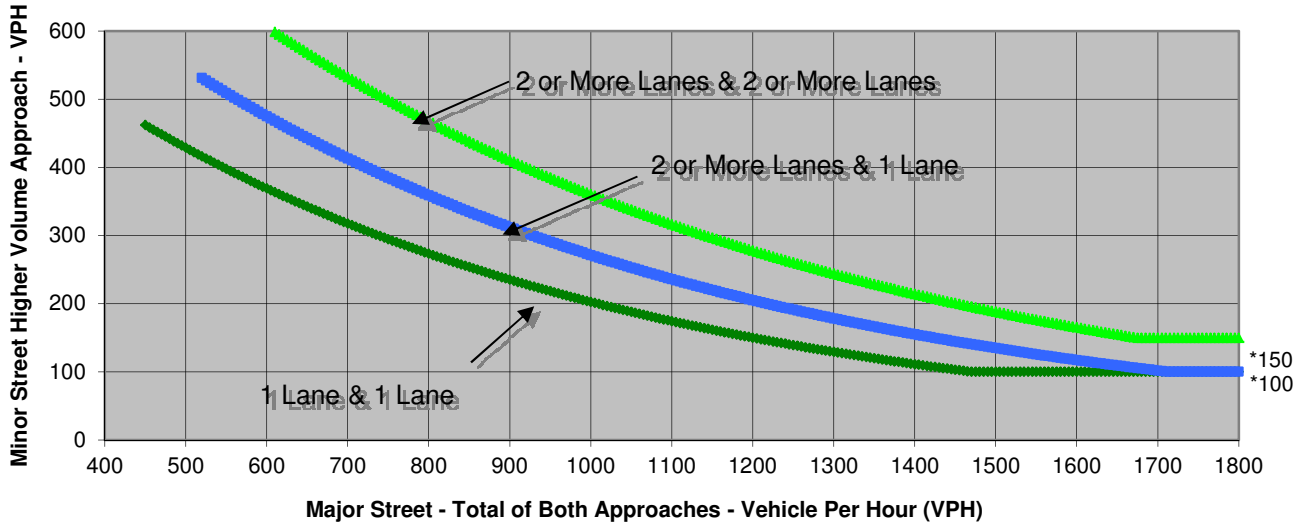
Turn Movement Volumes

	NB	SB	EB	WB
Left	65	0	0	57
Through	0	0	753	1,022
Right	3	0	40	0
Total	68	0	793	1,079

Major Street Direction

	North/South
x	East/West

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



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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	NO
Traffic Volume (VPH) *	1,872	68	

* 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 + Project
Peak Hour: PM

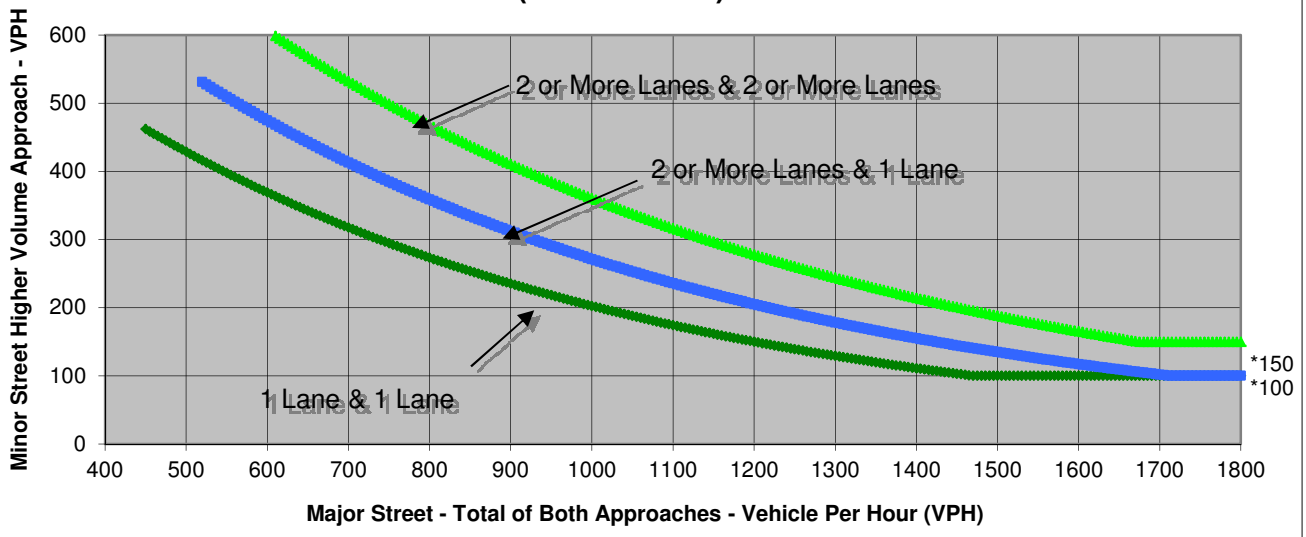
Turn Movement Volumes

	NB	SB	EB	WB
Left	128	0	0	62
Through	0	0	1,058	872
Right	20	0	85	0
Total	148	0	1,143	934

Major Street Direction

	North/South
x	East/West

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



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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) *	2,077	148	

* 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 + Project
Peak Hour: AM

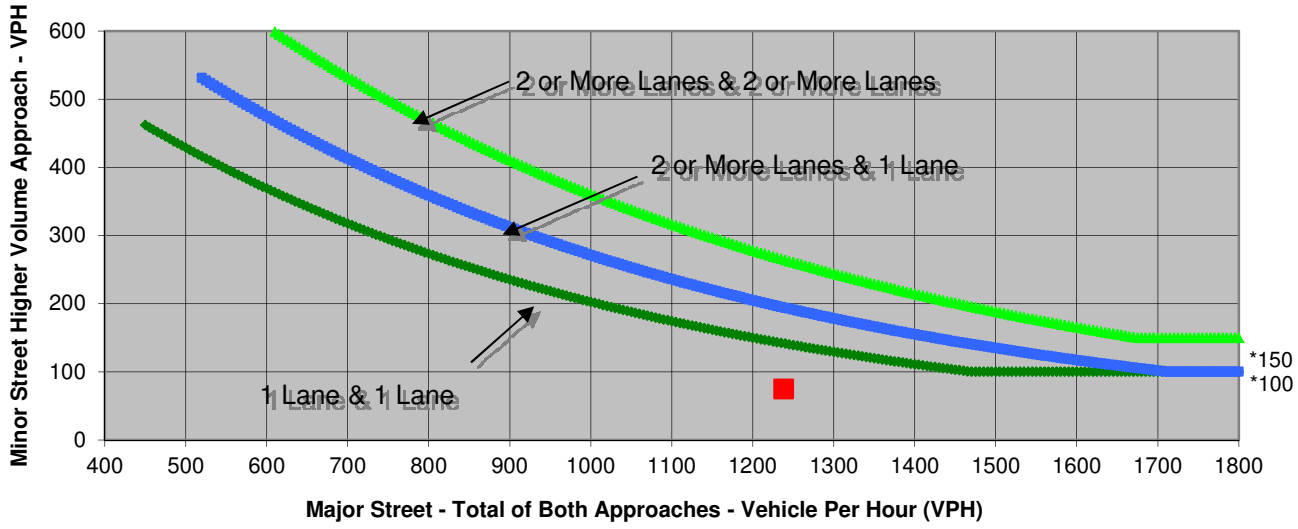
Turn Movement Volumes

	NB	SB	EB	WB
Left	29	0	1	20
Through	0	0	662	523
Right	46	2	32	0
Total	75	2	695	543

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) *	1,238	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 + Project
Peak Hour: PM

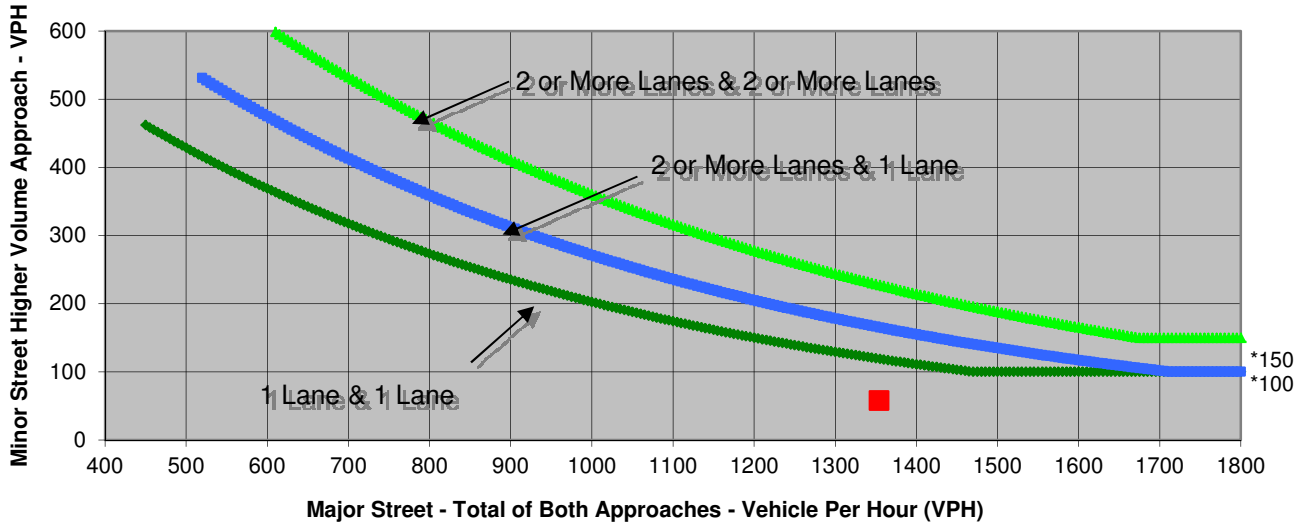
Turn Movement Volumes

	NB	SB	EB	WB
Left	33	3	1	50
Through	0	0	545	729
Right	25	0	29	0
Total	58	3	575	779

Major Street Direction

	North/South
x	East/West

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



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

	Major Street Covell Blvd	Minor Street Monarch Ln	Warrant Met
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,354	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 + Project
Peak Hour: AM

Turn Movement Volumes

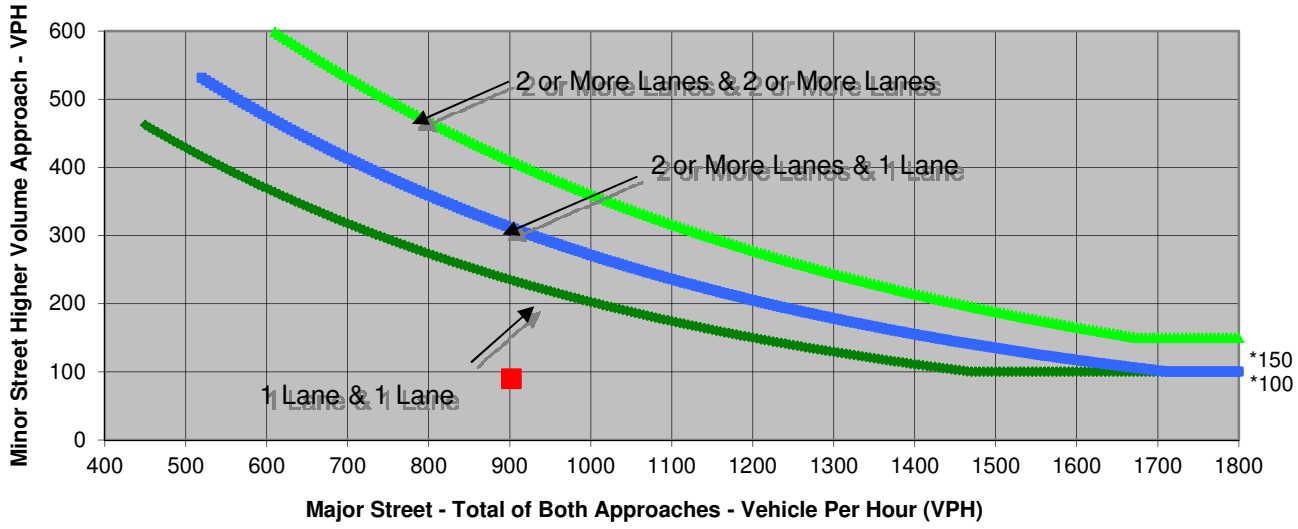
	NB	SB	EB	WB
Left	0	6	0	81
Through	300	561	0	0
Right	35	0	0	9
Total	335	567	0	90

Major Street Direction

x North/South

East/West

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



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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) *	902	90	

* 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 + Project
Peak Hour: PM

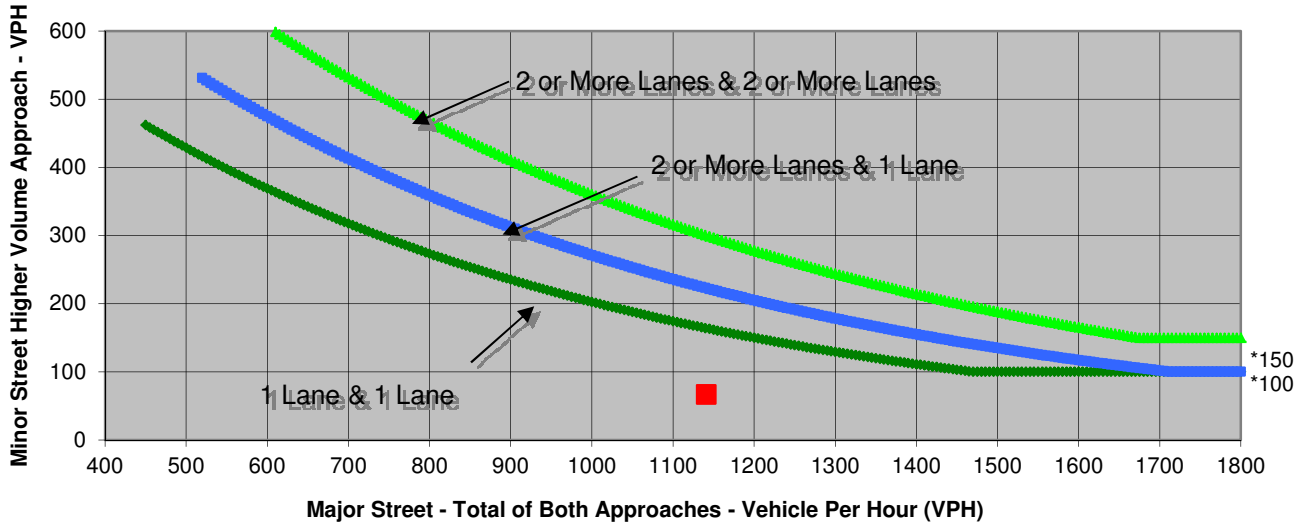
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	9	0	55
Through	571	496	0	0
Right	65	0	0	12
Total	636	505	0	67

Major Street Direction

x	North/South
	East/West

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



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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) *	1,141	67	

* 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 + Project
Peak Hour: AM

Turn Movement Volumes

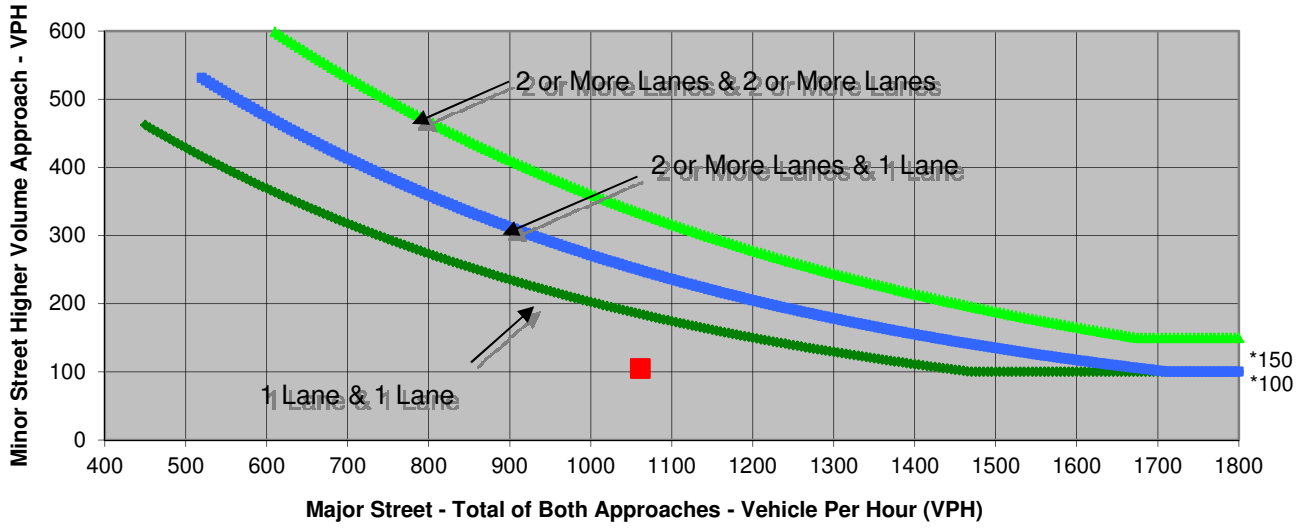
	NB	SB	EB	WB
Left	0	20	0	89
Through	319	622	0	0
Right	100	0	0	16
Total	419	642	0	105

Major Street Direction

x North/South

East/West

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



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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) *	1,061	105	

* 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 + Project
Peak Hour: PM

Turn Movement Volumes

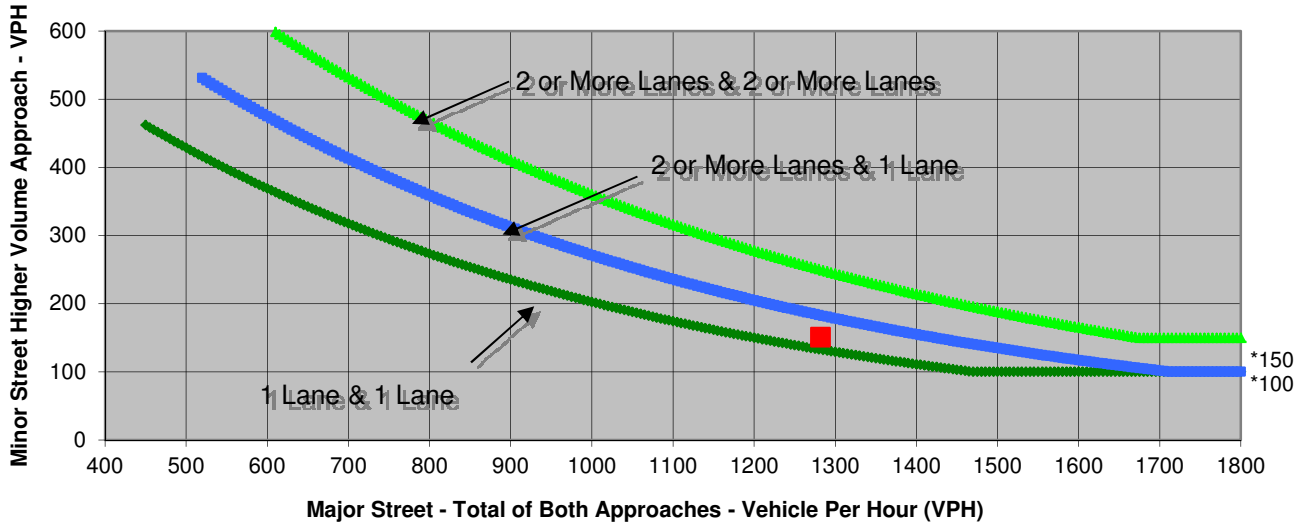
	NB	SB	EB	WB
Left	0	20	0	127
Through	612	532	0	0
Right	118	0	0	24
Total	730	552	0	151

Major Street Direction

x North/South

East/West

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



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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) *	1,282	151	

* 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 + Project
Peak Hour: AM

Turn Movement Volumes

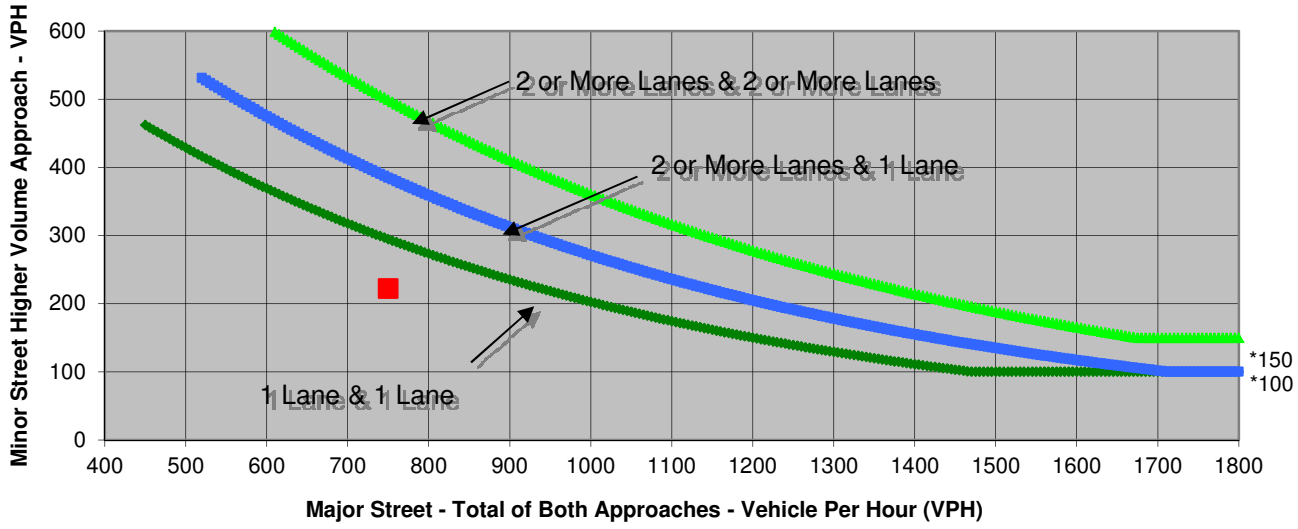
	NB	SB	EB	WB
Left	0	24	0	177
Through	260	387	0	0
Right	79	0	0	45
Total	339	411	0	222

Major Street Direction

x North/South

East/West

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



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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) *	750	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 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Moore Ave

Scenario: Existing + Project
Peak Hour: PM

Turn Movement Volumes

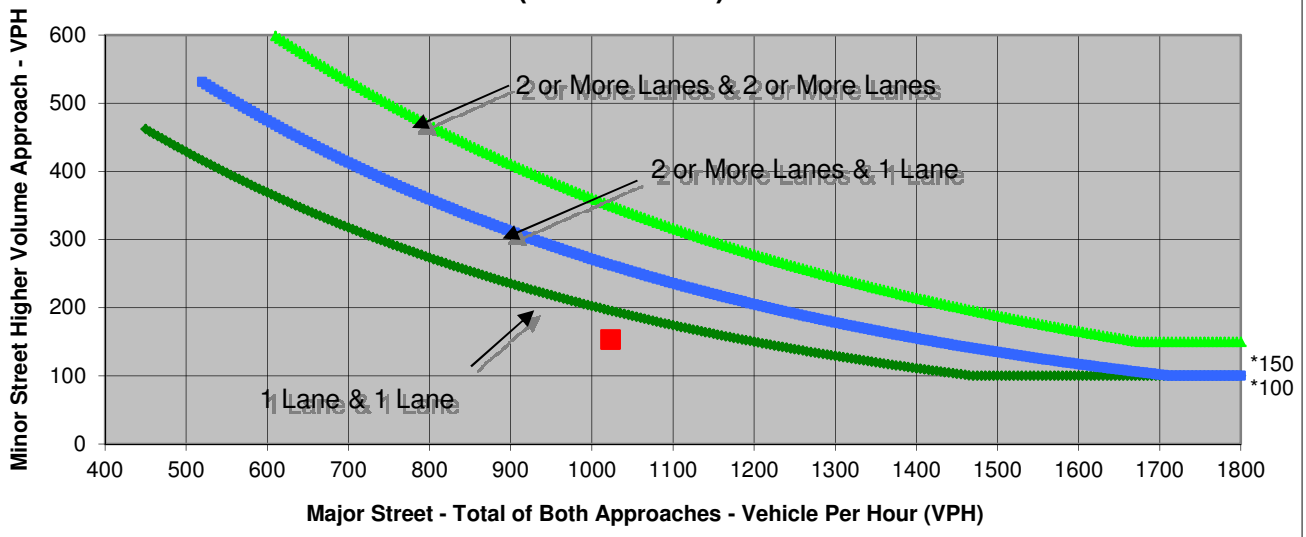
	NB	SB	EB	WB
Left	0	44	0	128
Through	457	334	0	0
Right	188	0	0	25
Total	645	378	0	153

Major Street Direction

x North/South

East/West

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



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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) *	1,023	153	

* 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 + Project
Peak Hour: AM

Turn Movement Volumes

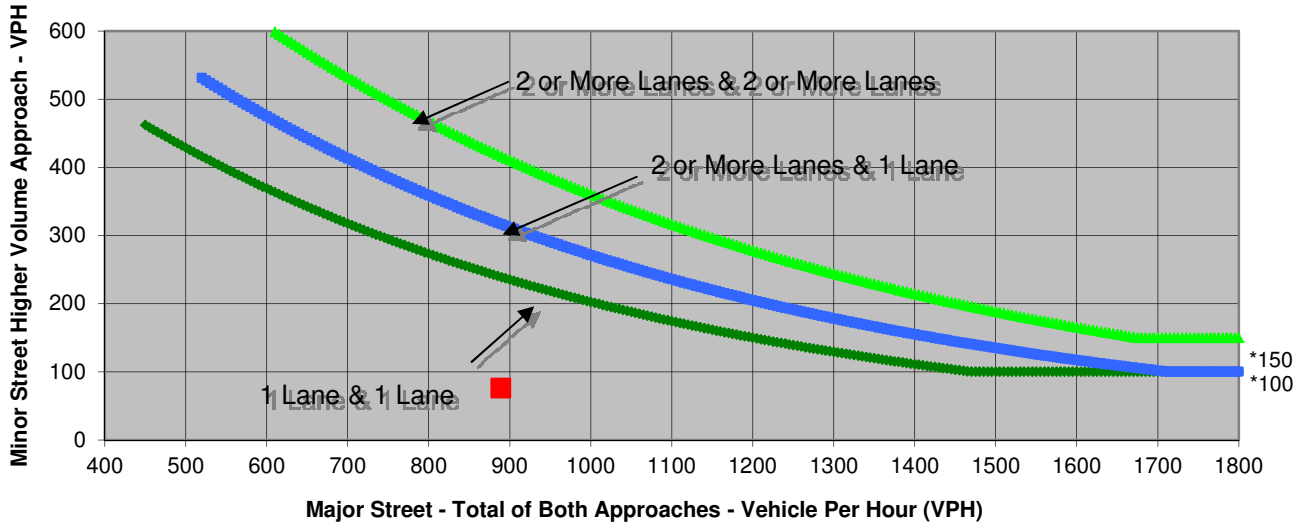
	NB	SB	EB	WB
Left	51	0	15	0
Through	347	442	0	0
Right	0	49	61	0
Total	398	491	76	0

Major Street Direction

x North/South

East/West

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



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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) *	889	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 + Project
Peak Hour: PM

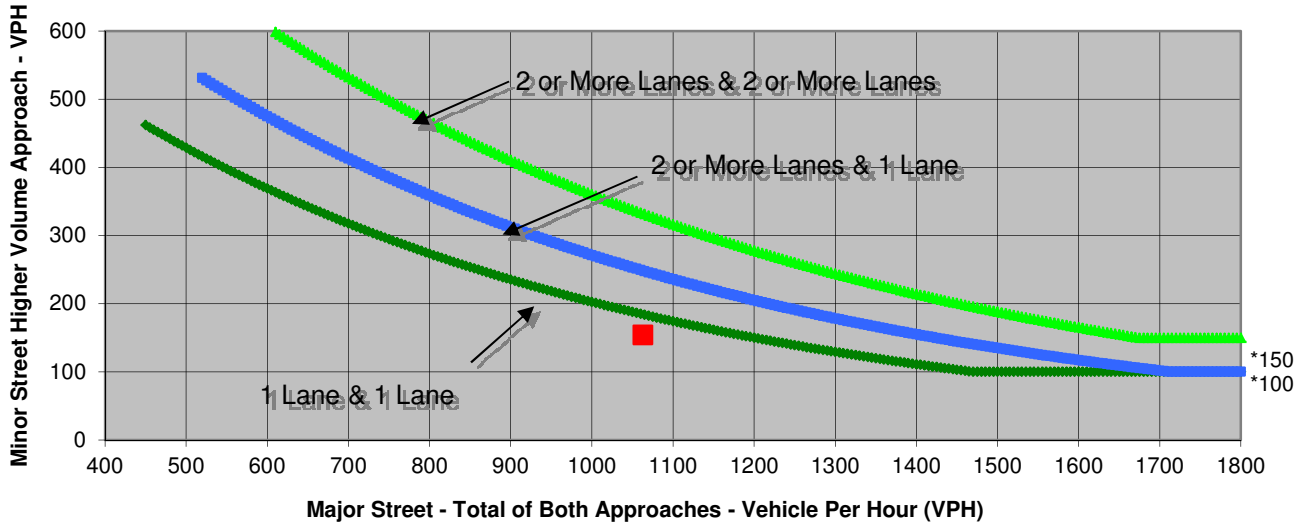
Turn Movement Volumes

	NB	SB	EB	WB
Left	72	0	53	0
Through	448	451	0	0
Right	0	92	101	0
Total	520	543	154	0

Major Street Direction

x	North/South
	East/West

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



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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) *	1,063	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 + Project
Peak Hour: AM

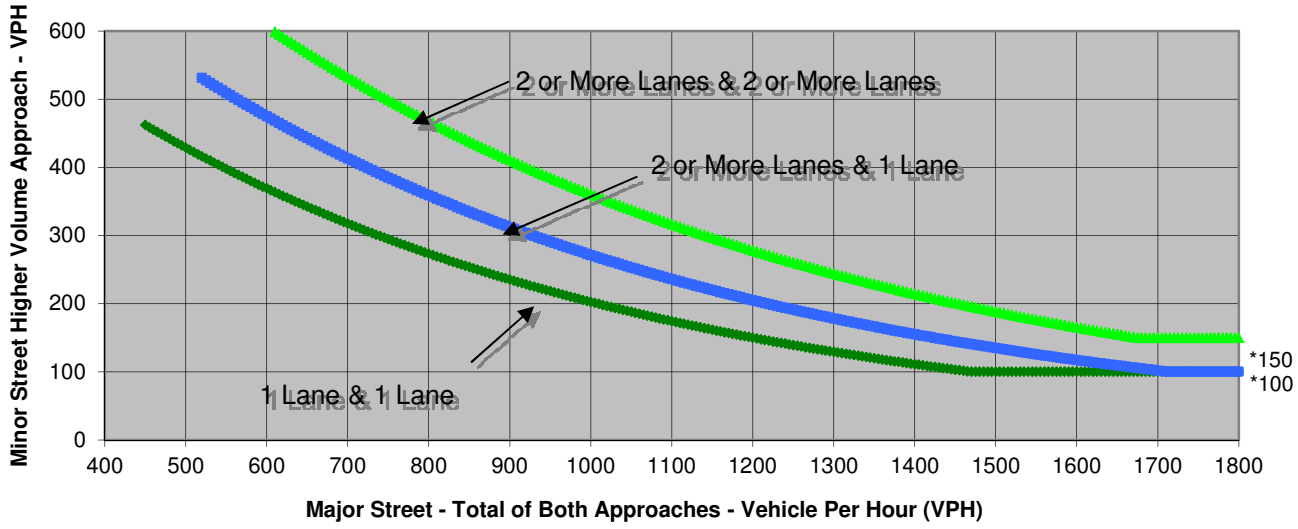
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	18	16	22
Through	60	119	3	19
Right	7	29	14	14
Total	84	166	33	55

Major Street Direction

x	North/South
	East/West

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



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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) *	250	55	

* 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 + Project
Peak Hour: PM

Turn Movement Volumes

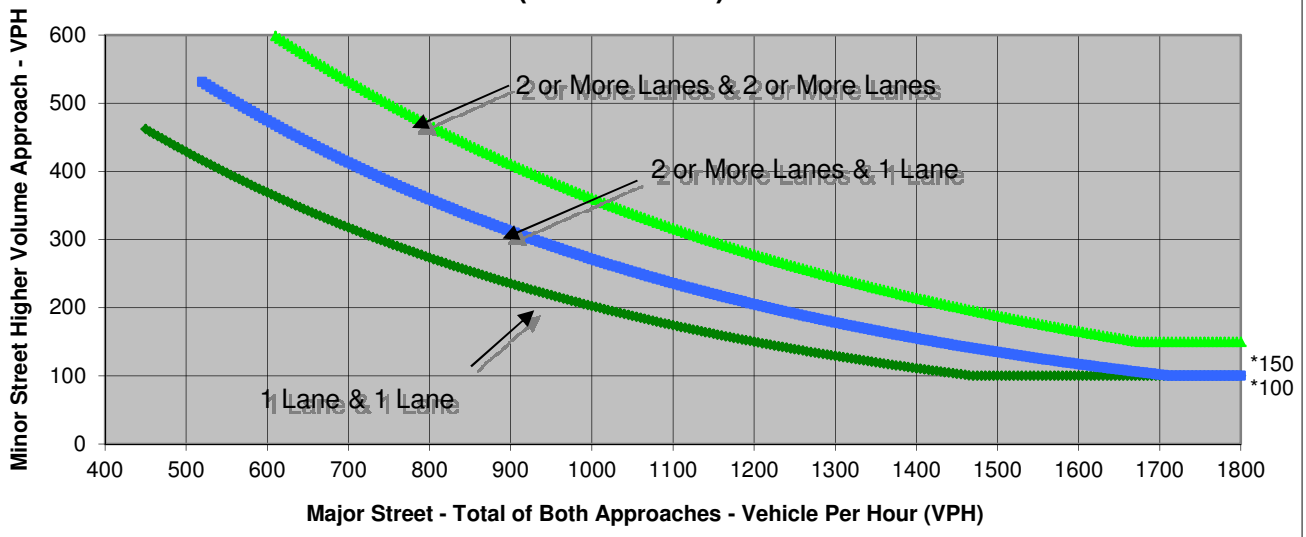
	NB	SB	EB	WB
Left	13	17	8	18
Through	145	94	10	25
Right	14	15	8	16
Total	172	126	26	59

Major Street Direction

x North/South

East/West

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



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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) *	298	59	

* 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: Cannery Park Dvwy

Scenario: Existing + Project
Peak Hour: AM

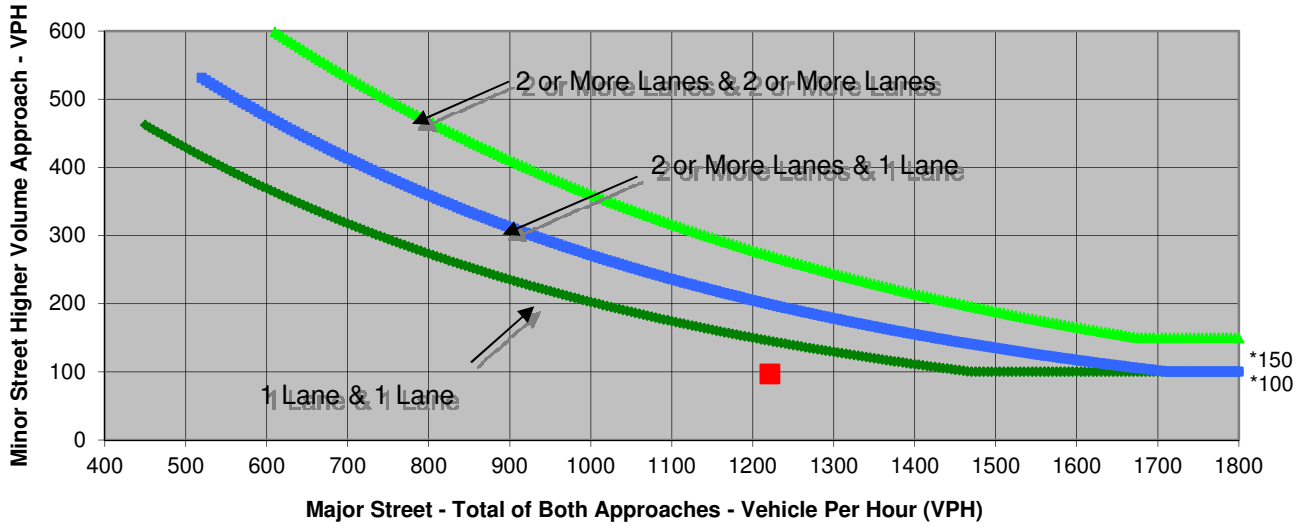
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	142
Through	0	0	0	1,079
Right	0	97	0	0
Total	0	97	0	1,221

Major Street Direction

	North/South
x	East/West

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



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

	Major Street Covell Blvd	Minor Street Cannery Park Dvwy	Warrant Met
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,221	97	

* 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: Cannery Park Dvwy

Scenario: Existing + Project
Peak Hour: PM

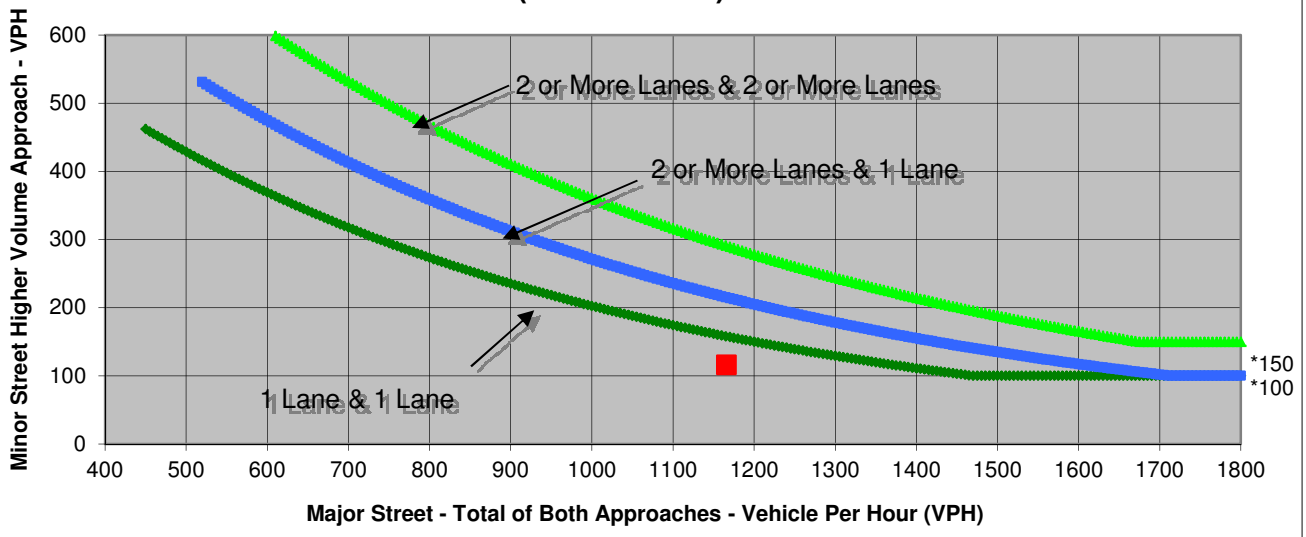
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	0	997
Right	0	116	0	169
Total	0	116	0	1,166

Major Street Direction

	North/South
x	East/West

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



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

	Major Street Covell Blvd	Minor Street Cannery Park Dvwy	Warrant Met
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,166	116	

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1058	85	62	914	0	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.95	0.95	0.84	0.84
Hourly flow rate (vph)	1163	93	65	962	0	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					0.89	
vC, conflicting volume			1263		1835	642
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1263		1690	642
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		100	94
cM capacity (veh/h)			543		65	412

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	775	481	65	481	481	24
Volume Left	0	0	65	0	0	0
Volume Right	0	93	0	0	0	24
cSH	1700	1700	543	1700	1700	412
Volume to Capacity	0.46	0.28	0.12	0.28	0.28	0.06
Queue Length 95th (ft)	0	0	10	0	0	5
Control Delay (s)	0.0	0.0	12.5	0.0	0.0	14.3
Lane LOS			B			B
Approach Delay (s)	0.0		0.8			14.3
Approach LOS						B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	359	522	196	104	476	121	237	250	52	166	236	257
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	0.80	1.00	1.00	0.96	1.00	1.00	0.92	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	1264	1770	3539	1514	1770	1863	1463	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	1264	1770	3539	1514	1770	1863	1463	1770	1863	1559
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.86	0.86	0.86	0.87	0.87	0.87
Adj. Flow (vph)	417	607	228	114	523	133	276	291	60	191	271	295
RTOR Reduction (vph)	0	0	117	0	0	47	0	0	12	0	0	236
Lane Group Flow (vph)	417	607	111	114	523	86	276	291	48	191	271	59
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)	27.4	34.4	34.4	11.4	18.4	18.4	16.4	21.2	21.2	14.6	19.4	19.4
Effective Green, g (s)	27.4	34.4	34.4	11.4	18.4	18.4	16.4	21.2	21.2	14.6	19.4	19.4
Actuated g/C Ratio	0.28	0.35	0.35	0.12	0.19	0.19	0.17	0.22	0.22	0.15	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	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)	497	1247	446	207	667	285	297	405	318	265	370	310
v/s Ratio Prot	c0.24	0.17		0.06	c0.15		c0.16	c0.16		0.11	0.15	
v/s Ratio Perm			0.09			0.06			0.03			0.04
v/c Ratio	0.84	0.49	0.25	0.55	0.78	0.30	0.93	0.72	0.15	0.72	0.73	0.19
Uniform Delay, d1	33.0	24.7	22.4	40.7	37.7	34.1	40.0	35.4	30.9	39.6	36.7	32.6
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	11.8	0.3	0.3	3.1	6.0	0.6	33.7	6.0	0.2	9.3	7.3	0.3
Delay (s)	44.8	25.0	22.7	43.8	43.7	34.7	73.7	41.4	31.1	48.8	44.0	32.8
Level of Service	D	C	C	D	D	C	E	D	C	D	D	C
Approach Delay (s)		31.2			42.2			54.7			40.9	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	97.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	95	187	72	448	451	92
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.77	0.77	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	123	243	88	546	550	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	1337	618	671			
vC1, stage 1 conf vol	615					
vC2, stage 2 conf vol	722					
vCu, unblocked vol	1313	486	547			
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 %	65	51	90			
cM capacity (veh/h)	353	501	882			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	366	88	546	662
Volume Left	123	88	0	0
Volume Right	243	0	0	112
cSH	439	882	1700	1700
Volume to Capacity	0.83	0.10	0.32	0.39
Queue Length 95th (ft)	201	8	0	0
Control Delay (s)	42.8	9.5	0.0	0.0
Lane LOS	E	A		
Approach Delay (s)	42.8	1.3		0.0
Approach LOS	E			

Intersection Summary			
Average Delay	9.9		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1058	85	62	0	128	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.95	0.95	0.84	0.84
Hourly flow rate (vph)	1163	93	65	0	152	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	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)				724		
pX, platoon unblocked						
vC, conflicting volume			1263		1354	642
vC1, stage 1 conf vol					1216	
vC2, stage 2 conf vol					138	
vCu, unblocked vol			1263		1354	642
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			88		35	94
cM capacity (veh/h)			543		233	412

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	775	481	65	0	0	176
Volume Left	0	0	65	0	0	152
Volume Right	0	93	0	0	0	24
cSH	1700	1700	543	1700	1700	247
Volume to Capacity	0.46	0.28	0.12	0.00	0.00	0.71
Queue Length 95th (ft)	0	0	10	0	0	121
Control Delay (s)	0.0	0.0	12.5	0.0	0.0	49.0
Lane LOS			B			E
Approach Delay (s)	0.0		12.5			49.0
Approach LOS						E

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1058	85	62	872	128	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3491		1768	3539	1746	
Flt Permitted	1.00		0.26	1.00	0.96	
Satd. Flow (perm)	3491		477	3539	1746	
Peak-hour factor, PHF	0.91	0.91	0.95	0.95	0.84	0.84
Adj. Flow (vph)	1163	93	65	918	152	24
RTOR Reduction (vph)	13	0	0	0	15	0
Lane Group Flow (vph)	1243	0	65	918	161	0
Confl. Peds. (#/hr)		7	7		7	7
Confl. Bikes (#/hr)		12				12
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	15.6		15.6	15.6	8.1	
Effective Green, g (s)	15.6		15.6	15.6	8.1	
Actuated g/C Ratio	0.49		0.49	0.49	0.26	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1718		235	1742	446	
v/s Ratio Prot	c0.36			0.26	c0.09	
v/s Ratio Perm			0.14			
v/c Ratio	0.72		0.28	0.53	0.36	
Uniform Delay, d1	6.3		4.7	5.5	9.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.5		0.6	0.3	0.5	
Delay (s)	7.9		5.4	5.8	10.2	
Level of Service	A		A	A	B	
Approach Delay (s)	7.9			5.8	10.2	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay	7.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	31.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	66	130	666	77	54	930	88	90	39	53	155	70
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	0.95	1.00	1.00	0.95			1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.96	1.00	0.99			1.00	0.98	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
Frt		1.00	1.00	0.85	1.00	0.99			1.00	0.85	1.00	0.90
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.97	1.00	0.95	1.00
Satd. Flow (prot)		1770	3539	1526	1770	3456			1800	1550	1770	1605
Flt Permitted		0.95	1.00	1.00	0.95	1.00			0.97	1.00	0.95	1.00
Satd. Flow (perm)		1770	3539	1526	1770	3456			1800	1550	1770	1605
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.76	0.76	0.76	0.85	0.85	0.85	0.80	0.80
Adj. Flow (vph)	80	159	812	94	71	1224	116	106	46	62	194	88
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	0	0
Lane Group Flow (vph)	0	239	812	94	71	1334	0	0	152	62	194	257
Confl. Peds. (#/hr)				30			30			30		
Confl. Bikes (#/hr)				5			1					
Turn Type	Prot	Prot		Free	Prot			Split		Free	Split	
Protected Phases	7	7	4		3	8		2	2		6	6
Permitted Phases				Free						Free		
Actuated Green, G (s)		16.0	53.4	111.2	7.5	44.9			15.3	111.2	19.0	19.0
Effective Green, g (s)		16.0	53.4	111.2	7.5	44.9			15.3	111.2	19.0	19.0
Actuated g/C Ratio		0.14	0.48	1.00	0.07	0.40			0.14	1.00	0.17	0.17
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)		255	1699	1526	119	1395			248	1550	302	274
v/s Ratio Prot		c0.14	0.23		0.04	c0.39			c0.08		0.11	c0.16
v/s Ratio Perm				0.06						0.04		
v/c Ratio		0.94	0.48	0.06	0.60	0.96			0.61	0.04	0.64	0.94
Uniform Delay, d1		47.1	19.5	0.0	50.4	32.2			45.2	0.0	42.9	45.5
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		39.2	0.2	0.1	7.8	14.8			4.4	0.0	4.6	37.6
Delay (s)		86.3	19.7	0.1	58.2	47.0			49.6	0.0	47.6	83.1
Level of Service		F	B	A	E	D			D	A	D	F
Approach Delay (s)			32.0			47.6			35.2			67.8
Approach LOS			C			D			D			E

Intersection Summary			
HCM Average Control Delay	44.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	111.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	135
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.80
Adj. Flow (vph)	169
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	30
Confl. Bikes (#/hr)	3
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	74	165	860	83	50	852	109	120	44	94	163	64
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	0.95	1.00	1.00	0.95			1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.97	1.00	0.99			1.00	0.98	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
Frt		1.00	1.00	0.85	1.00	0.98			1.00	0.85	1.00	0.90
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.96	1.00	0.95	1.00
Satd. Flow (prot)		1770	3539	1528	1770	3435			1797	1550	1770	1605
Flt Permitted		0.95	1.00	1.00	0.95	1.00			0.96	1.00	0.95	1.00
Satd. Flow (perm)		1770	3539	1528	1770	3435			1797	1550	1770	1605
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	188	977	94	55	936	120	133	49	104	181	71
RTOR Reduction (vph)	0	0	0	0	0	9	0	0	0	0	0	0
Lane Group Flow (vph)	0	272	977	94	55	1047	0	0	182	104	181	204
Confl. Peds. (#/hr)				30			30			30		
Confl. Bikes (#/hr)									1			1
Turn Type	Prot	Prot		Free	Prot			Split		Free	Split	
Protected Phases	7	7	4		3	8		2	2		6	6
Permitted Phases				Free						Free		
Actuated Green, G (s)		18.2	46.5	98.3	5.9	34.2			14.8	98.3	15.1	15.1
Effective Green, g (s)		18.2	46.5	98.3	5.9	34.2			14.8	98.3	15.1	15.1
Actuated g/C Ratio		0.19	0.47	1.00	0.06	0.35			0.15	1.00	0.15	0.15
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)		328	1674	1528	106	1195			271	1550	272	247
v/s Ratio Prot		c0.15	0.28		0.03	c0.30			c0.10		0.10	c0.13
v/s Ratio Perm				0.06						0.07		
v/c Ratio		0.83	0.58	0.06	0.52	0.88			0.67	0.07	0.67	0.83
Uniform Delay, d1		38.6	18.9	0.0	44.8	30.1			39.5	0.0	39.2	40.3
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		15.7	0.5	0.1	4.2	7.4			6.4	0.1	6.0	19.7
Delay (s)		54.3	19.4	0.1	49.1	37.5			45.9	0.1	45.2	60.0
Level of Service		D	B	A	D	D			D	A	D	E
Approach Delay (s)			25.1			38.1			29.2			53.1
Approach LOS			C			D			C			D

Intersection Summary			
HCM Average Control Delay	33.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	98.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	120
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	133
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	30
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary