Appendix C

HCS2000: Two-Lane Highways Release 4.1d

Turner Collie & Braden Inc.
Turner Collie & Braden Inc.

Phone: Fax:
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Two-Way Two-Lane Highway Segment Analysis

Analyst	Mark T. Ingram, P.E.
Agency/Co.	Turner Collie & Braden
Date Performed	7/8/2005
Analysis Time Period	Proposed Condition
Highway	Wirtz Dam Road
From/To	FM 2147 to FM 1431
Jurisdiction	Austin District
Analysis Year	2005
Description	

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.92	
Lane width	12.0	ft	% Trucks and buses	4	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	0	%
Grade: Length		mi	Access points/mi	3	/mi
Up/down		%			

Two-way hourly volume, V 360 veh/h
Directional split 60 / 40 %

Average Travel Speed

Grade adjustment factor, fG	0.71	
PCE for trucks, ET	2.5	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.942	
Two-way flow rate, (note-1) vp	585	pc/h
Highest directional split proportion (note-2)	351	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	60.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.8	mi/h
Free-flow speed, FFS	59.3	mi/h
Adjustment for no-passing zones, fnp	0.0	mi/h
Average travel speed, ATS	54.7	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	0.77	
PCE for trucks, ET	1.8	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.969	
Two-way flow rate,(note-1) vp	524	pc/h
Highest directional split proportion (note-2)	314	
Base percent time-spent-following, BPTSF	36.9	%
Adj.for directional distribution and no-passing zones, fd/np	0.2	
Percent time-spent-following, PTSF	37.1	%

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1d

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Two-Way Two-Lane Highway Segment Analysis

Analyst	Mark T. Ingram, P.E.
Agency/Co.	Turner Collie & Braden
Date Performed	7/8/2005
Analysis Time Period	Proposed Condition
Highway	Wirtz Dam Road
From/To	FM 2147 to FM 1431
Jurisdiction	Austin District
Analysis Year	2010
Description	

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.92	
Lane width	12.0	ft	% Trucks and buses	4	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	0	%
rade: Length		mi	Access points/mi	3	/mi
Up/down		%			

Two-way hourly volume, V 430 veh/h
Directional split 60 / 40 %

Average Travel Speed

Grade adjustment factor, fG	0.93	
PCE for trucks, ET	1.9	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.963	
Two-way flow rate,(note-1) vp	522	pc/h
Highest directional split proportion (note-2)	313	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	60.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.8	mi/h
Free-flow speed, FFS	59.3	mi/h
djustment for no-passing zones, fnp	0.0	mi/h
Average travel speed, ATS	55.2	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	0.94	
PCE for trucks, ET	1.5	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.980	
Two-way flow rate,(note-1) vp	507	pc/h
Highest directional split proportion (note-2)	304	
Base percent time-spent-following, BPTSF	36.0	%
Adj.for directional distribution and no-passing zones, fd/np	0.2	
Percent time-spent-following, PTSF	36.2	%

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.16	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1d

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Two-Way Two-Lane Highway Segment Analysis

Analyst	Mark T. Ingram, P.E.
Agency/Co.	Turner Collie & Braden
Date Performed	7/8/2005
Analysis Time Period	Proposed Condition
Highway	Wirtz Dam Road
From/To	FM 2147 to FM 1431
Jurisdiction	Austin District
Analysis Year	2020
Description	

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.92	
Lane width	12.0	ft	% Trucks and buses	4	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	0	%
Grade: Length		mi	Access points/mi	3	/mi
Up/down		%			

Two-way hourly volume, V 570 veh/h
Directional split 60 / 40 %

Average Travel Speed

Grade adjustment factor, fG	0.93	
PCE for trucks, ET	1.9	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.963	
Two-way flow rate,(note-1) vp	692	pc/h
Highest directional split proportion (note-2)	415	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	60.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.8	mi/h
Free-flow speed, FFS	59.3	mi/h
Adjustment for no-passing zones, fnp	0.0	mi/h
Average travel speed, ATS	53.9	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	0.94	
PCE for trucks, ET	1.5	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.980	
Two-way flow rate,(note-1) vp	672	pc/h
Highest directional split proportion (note-2)	403	
Base percent time-spent-following, BPTSF	44.6	%
Adj.for directional distribution and no-passing zones, fd/np	0.0	
Percent time-spent-following, PTSF	44.6	%

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.22	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1d

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Two-Way Two-Lane Highway Segment Analysis

Analyst	Mark T. Ingram, P.E.
Agency/Co.	Turner Collie & Braden
Date Performed	7/8/2005
Analysis Time Period	Proposed Condition
Highway	Wirtz Dam Road
From/To	FM 2147 to FM 1431
Jurisdiction	Austin District
Analysis Year	2025
Description	

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.92	
Lane width	12.0	ft	% Trucks and buses	4	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	0	%
Grade: Length		mi	Access points/mi	3	/mi
Up/down		%			

Two-way hourly volume, V	660	veh/h
Directional split	60 / 40	%

Average Travel Speed

Grade adjustment factor, fG	0.93	
PCE for trucks, ET	1.9	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.963	
Two-way flow rate,(note-1) vp	801	pc/h
Highest directional split proportion (note-2)	481	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	60.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.8	mi/h
Free-flow speed, FFS	59.3	mi/h
Adjustment for no-passing zones, fnp	0.0	mi/h
Average travel speed, ATS	53.0	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	0.94	
PCE for trucks, ET	1.5	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.980	
Two-way flow rate,(note-1) vp	778	pc/h
Highest directional split proportion (note-2)	467	
Base percent time-spent-following, BPTSF	49.5	%
Adj.for directional distribution and no-passing zones, fd/np	0.0	
Percent time-spent-following, PTSF	49.5	%

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.25	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1d

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Two-Way Two-Lane Highway Segment Analysis

Analyst	Mark T. Ingram, P.E.
Agency/Co.	Turner Collie & Braden
Date Performed	7/8/2005
Analysis Time Period	Proposed Condition
Highway	Wirtz Dam Road
From/To	FM 2147 to FM 1431
Jurisdiction	Austin District
Analysis Year	2030
Description	

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.92	
Lane width	12.0	ft	% Trucks and buses	4	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	0	%
Grade: Length		mi	Access points/mi	3	/mi
Up/down		%			

Two-way hourly volume, V 770 veh/h
Directional split 60 / 40 %

Average Travel Speed

Grade adjustment factor, fG	0.93	
PCE for trucks, ET	1.9	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.963	
Two-way flow rate,(note-1) vp	934	pc/h
Highest directional split proportion (note-2)	560	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	60.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.8	mi/h
Free-flow speed, FFS	59.3	mi/h
Adjustment for no-passing zones, fnp	0.0	mi/h
Average travel speed, ATS	52.0	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	0.94	
PCE for trucks, ET	1.5	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.980	
Two-way flow rate,(note-1) vp	908	pc/h
Highest directional split proportion (note-2)	545	
Base percent time-spent-following, BPTSF	55.0	%
Adj.for directional distribution and no-passing zones, fd/np	0.0	
Percent time-spent-following, PTSF	55.0	%

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.29	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3181		1770	3061		1770	3535		1770	3539	1583
Flt Permitted	0.63	1.00		0.73	1.00		0.37	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1183	3181		1359	3061		693	3535		1770	3539	1583
Volume (vph)	325	12	25	1	63	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	353	13	27	1	3	27	13	454	4	46	484	322
RTOR Reduction (vph)	0	17	0	0	24	0	0	1	0	0	0	233
Lane Group Flow (vph)	353	23	0	1	6	0	13	457	0	246	484	89
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	45.0		38.0	25.0		42.0	29.0		17.0	33.0	33.0
Effective Green, g (s)	62.0	45.0		38.0	25.0		42.0	29.0		17.0	33.0	33.0
Actuated g/C Ratio	0.52	0.38		0.32	0.21		0.35	0.24		0.14	0.28	0.28
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)	779	1193		475	638		359	854		251	972	435
v/s Ratio Prot	c0.13	0.01		0.00	0.01		0.00	0.13		c0.03	0.14	
v/s Ratio Perm				0.00			0.01					0.20
v/c Ratio	0.46	0.02		0.00	0.01		0.04	0.54		0.18	0.50	0.20
Uniform Delay, d1	17.6	23.6		28.0	37.7		25.7	39.6		45.4	36.5	33.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.9	0.0		0.0	0.0		0.2	2.4		1.6	1.8	1.1
Delay (s)	19.5	23.6		28.0	37.7		25.9	42.0		47.0	38.4	34.5
Level of Service	B	C		C	D		C	D		D	D	C
Approach Delay (s)		20.0			37.4			41.6			37.3	
Approach LOS		B			D			D			D	

HCM Average Control Delay	34.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	c0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3177		1770	3060		1770	3535		1770	3539	1583
Flt Permitted	0.63	1.00		0.73	1.00		0.37	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1175	3177		1358	3060		692	3535		1770	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%
Adj. Flow (vph)	364	13	28	1	3	28	13	468	4	47	498	331
RTOR Reduction (vph)	0	18	0	0	25	0	0	1	0	0	0	234
Lane Group Flow (vph)	364	24	0	1	6	0	13	471	0	47	498	97
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	45.0		36.0	24.0		43.0	31.0		16.0	35.0	35.0
Effective Green, g (s)	61.0	45.0		36.0	24.0		43.0	31.0		16.0	35.0	35.0
Actuated g/C Ratio	0.51	0.38		0.30	0.20		0.36	0.26		0.13	0.29	0.29
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	761	1191		449	612		356	913		236	1032	462
v/s Ratio Prot	c0.14	0.01		0.00	0.01		0.00	0.13		c0.03	0.14	
v/s Ratio Perm	c0.11			0.00			0.01					0.21
v/c Ratio	0.48	0.02		0.00	0.01		0.04	0.52		0.20	0.48	0.21
Uniform Delay, d1	18.4	23.6		29.4	38.5		25.1	38.1		46.3	35.0	32.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.1	0.0		0.0	0.0		0.2	2.1		1.9	1.6	1.0
Delay (s)	20.5	23.6		29.4	38.5		25.3	40.2		48.2	36.7	33.1
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		20.8			38.2			39.8			35.9	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3185		1770	3067		1770	3534		1770	3539	1583
Flt Permitted	0.62	1.00		0.72	1.00		0.33	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1154	3185		1349	3067		613	3534		1770	3539	1583
Volume (vph)	325	112	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%
Adj. Flow (vph)	420	16	32	1	4	32	16	541	5	54	576	383
RTOR Reduction (vph)	0	19	0	0	29	0	0	1	0	0	0	265
Lane Group Flow (vph)	420	29	0	1	7	0	16	545	0	54	576	118
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	47.0		32.0	22.0		42.0	32.0		15.0	37.0	37.0
Effective Green, g (s)	61.0	47.0		32.0	22.0		42.0	32.0		15.0	37.0	37.0
Actuated g/C Ratio	0.51	0.39		0.27	0.18		0.35	0.27		0.12	0.31	0.31
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)	766	1247		395	562		311	942		221	1091	488
v/s Ratio Prot	c0.16	0.02		0.00	0.01		0.00	0.15		c0.03	0.16	
v/s Ratio Perm	c0.12			0.00			0.01					0.24
v/c Ratio	0.55	0.02		0.00	0.01		0.05	0.58		0.24	0.53	0.24
Uniform Delay, d1	19.1	22.4		32.3	40.1		25.8	38.2		47.4	34.3	31.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.8	0.0		0.0	0.0		0.3	2.6		2.6	1.8	1.2
Delay (s)	21.9	22.4		32.3	40.1		26.2	40.7		50.0	36.1	32.2
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		22.0			39.9			40.3			35.4	
Approach LOS		C			D			D			D	

HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3179		1770	3059		1770	3534		1770	3539	1583
Flt Permitted	0.62	1.00		0.72	1.00		0.26	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1148	3179		1339	3059		483	3534		1770	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	138%	138%	138%	138%	138%	138%	138%	138%	138%	138%	138%	138%
Adj. Flow (vph)	488	18	38	2	4	38	18	627	6	63	668	444
RTOR Reduction (vph)	0	23	0	0	34	0	0	1	0	0	0	307
Lane Group Flow (vph)	488	33	0	2	8	0	18	632	0	63	668	137
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	47.0		32.0	22.0		42.0	32.0		15.0	37.0	37.0
Effective Green, g (s)	61.0	47.0		32.0	22.0		42.0	32.0		15.0	37.0	37.0
Actuated g/C Ratio	0.51	0.39		0.27	0.18		0.35	0.27		0.12	0.31	0.31
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)	765	1245		393	561		276	942		221	1091	488
v/s Ratio Prot		0.02		0.00	0.01		0.01	0.18		0.04	0.19	
v/s Ratio Perm	c0.14			0.00			0.02					0.28
v/c Ratio	0.64	0.03		0.01	0.01		0.07	0.67		0.29	0.61	0.28
Uniform Delay, d1	20.1	22.4		32.3	40.1		26.1	39.3		47.6	35.4	31.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.0	0.0		0.0	0.0		0.5	3.8		3.2	2.6	1.4
Delay (s)	24.2	22.5		32.3	40.2		26.6	43.1		50.9	38.0	32.9
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		24.0			39.8			42.6			36.7	
Approach LOS		C			D			D			D	

HCM Average Control Delay	35.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3183		1770	3064		1770	3534		1770	3539	1583
Flt Permitted	0.58	1.00		0.71	1.00		0.21	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1079	3183		1328	3064		391	3534		1770	3539	1583
Volume (vph)	525	12	25	1	3	25	12	418	4	242	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%
Adj. Flow (vph)	565	21	43	2	5	43	21	727	7	73	774	515
RTOR Reduction (vph)	0	23	0	0	37	0	0	1	0	0	0	348
Lane Group Flow (vph)	565	41	0	2	11	0	21	733	0	73	774	167
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	65.0	55.0		22.0	16.0		37.0	33.0		10.0	39.0	39.0
Effective Green, g (s)	65.0	55.0		22.0	16.0		37.0	33.0		10.0	39.0	39.0
Actuated g/C Ratio	0.54	0.46		0.18	0.13		0.31	0.28		0.08	0.32	0.32
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)	844	1459		266	409		167	972		148	1150	514
v/s Ratio Prot	c0.25	0.02		0.00	0.02		0.00	0.21		c0.04	0.22	
v/s Ratio Perm	c0.11			0.00			0.03					0.33
v/c Ratio	0.67	0.03		0.01	0.03		0.13	0.75		0.49	0.67	0.33
Uniform Delay, d1	18.6	17.8		40.1	45.2		29.9	39.8		52.6	35.0	30.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	0.0		0.1	0.1		1.5	5.4		11.3	3.2	1.7
Delay (s)	22.8	17.9		40.1	45.3		31.4	45.2		63.9	38.1	32.3
Level of Service	C	B		D	D		C	D		E	D	C
Approach Delay (s)		22.3			45.1			44.8			37.3	
Approach LOS		C			D			D			D	

HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3178		1770	3064		1770	3534		1770	3539	1583
Flt Permitted	0.57	1.00		0.71	1.00		0.15	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1070	3178		1314	3064		275	3534		1770	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	186%	186%	186%	186%	186%	186%	186%	186%	186%	186%	186%	186%
Adj. Flow (vph)	657	24	51	2	6	51	24	845	8	85	900	598
RTOR Reduction (vph)	0	28	0	0	44	0	0	1	0	0	0	394
Lane Group Flow (vph)	657	47	0	2	13	0	24	852	0	85	900	204
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	63.0	55.0		20.0	16.0		40.0	36.0		9.0	41.0	41.0
Effective Green, g (s)	63.0	55.0		20.0	16.0		40.0	36.0		9.0	41.0	41.0
Actuated g/C Ratio	0.52	0.46		0.17	0.13		0.33	0.30		0.08	0.34	0.34
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)	813	1457		234	409		142	1060		133	1209	541
v/s Ratio Prot	c0.29	0.02		0.00	c0.02		0.01	0.24		c0.05	0.25	
v/s Ratio Perm	c0.13			0.00			0.05					0.38
v/c Ratio	0.81	0.03		0.01	0.03		0.17	0.80		0.64	0.74	0.38
Uniform Delay, d1	21.7	17.9		41.7	45.3		28.6	38.7		53.9	34.9	29.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.5	0.0		0.1	0.1		2.6	6.5		21.2	4.2	2.0
Delay (s)	30.2	17.9		41.8	45.4		31.2	45.2		75.1	39.1	31.9
Level of Service	C	B		D	D		C	D		E	D	C
Approach Delay (s)		28.8			45.3			44.9			38.3	
Approach LOS		C			D			D			D	

HCM Average Control Delay	38.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3179		1770	3065		1770	3534		1770	3539	1583
Flt Permitted	0.57	1.00		0.70	1.00		0.11	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1061	3179		1300	3065		201	3534		1770	3539	1583
Volume (vph)	725	12	25	1	3	25	812	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	216%	216%	216%	216%	216%	216%	216%	216%	216%	216%	216%	216%
Adj. Flow (vph)	763	28	59	2	7	59	28	981	9	99	1045	695
RTOR Reduction (vph)	0	32	0	0	51	0	0	1	0	0	0	417
Lane Group Flow (vph)	763	55	0	2	15	0	28	989	0	99	1045	278
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	63.0	55.0		20.0	16.0		41.0	37.0		8.0	41.0	41.0
Effective Green, g (s)	63.0	55.0		20.0	16.0		41.0	37.0		8.0	41.0	41.0
Actuated g/C Ratio	0.52	0.46		0.17	0.13		0.34	0.31		0.07	0.34	0.34
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)	811	1457		232	409		121	1090		118	1209	541
v/s Ratio Prot	c0.34	0.03		0.00	0.02		0.01	0.28		c0.06	0.30	
v/s Ratio Perm	c0.16			0.00			0.07					0.44
v/c Ratio	0.94	0.04		0.01	0.04		0.23	0.91		0.84	0.86	0.51
Uniform Delay, d1	24.0	17.9		41.7	45.3		29.5	39.9		55.4	36.9	31.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	20.1	0.0		0.1	0.2		4.4	12.5		47.9	8.3	3.5
Delay (s)	44.1	18.0		41.8	45.5		33.9	52.3		103.2	45.2	35.0
Level of Service	D	B		D	D		C	D		F	D	D
Approach Delay (s)		41.4			45.35			51.8			44.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	45.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3195		1770	3061		1770	3535		1770	3539	1583
Flt Permitted	0.63	1.00		0.73	1.00		0.37	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1183	3195		1363	3061		693	3535		1770	3539	1583
Volume (vph)	325	12	22	1	3	25	11	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	353	13	24	1	3	27	12	454	4	46	484	322
RTOR Reduction (vph)	0	15	0	0	24	0	0	1	0	0	0	233
Lane Group Flow (vph)	353	22	0	1	6	0	12	457	0	46	484	89
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	45.0		38.0	25.0		42.0	29.0		17.0	33.0	33.0
Effective Green, g (s)	62.0	45.0		38.0	25.0		42.0	29.0		17.0	33.0	33.0
Actuated g/C Ratio	0.52	0.38		0.32	0.21		0.35	0.24		0.14	0.28	0.28
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)	773	1198		476	638		359	854		250	974	435
v/s Ratio Prot	c0.13	0.01		0.00	0.01		0.00	0.13		c0.03	0.14	
v/s Ratio Perm				0.00			0.01					0.20
v/c Ratio	0.46	0.02		0.00	0.01		0.03	0.54		0.18	0.50	0.20
Uniform Delay, d1	17.6	23.6		28.0	37.7		25.7	39.6		45.4	36.5	33.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.9	0.0		0.0	0.0		0.2	2.4		1.6	1.8	1.1
Delay (s)	19.5	23.6		28.0	37.7		25.9	42.0		47.0	38.4	34.5
Level of Service	B	C		C	D		C	D		D	D	C
Approach Delay (s)		19.9			37.4			41.6			37.3	
Approach LOS		B			D			D			D	

HCM Average Control Delay	34.6	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.51				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	50.3%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3190		1770	3060		1770	3535		1770	3539	1583
Flt Permitted	0.63	1.00		0.73	1.00		0.37	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1175	3190		1362	3060		692	3535		1770	3539	1583
Volume (vph)	325	12	23	1	3	25	11	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	103%	103%	100%	103%	103%	103%	100%	103%	103%	103%	103%	103%
Adj. Flow (vph)	364	13	25	1	3	28	12	468	4	47	498	331
RTOR Reduction (vph)	0	16	0	0	25	0	0	1	0	0	0	234
Lane Group Flow (vph)	364	22	0	1	6	0	12	471	0	47	498	97
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	45.0		36.0	24.0		43.0	31.0		16.0	35.0	35.0
Effective Green, g (s)	61.0	45.0		36.0	24.0		43.0	31.0		16.0	35.0	35.0
Actuated g/C Ratio	0.51	0.38		0.30	0.20		0.36	0.26		0.13	0.29	0.29
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	761	1196		449	612		356	913		236	1032	462
v/s Ratio Prot	c0.13	0.01		0.00	0.01		0.00	0.13		c0.03	0.14	
v/s Ratio Perm	c0.11			0.00			0.01					0.21
v/c Ratio	0.48	0.02		0.00	0.01		0.03	0.52		0.20	0.48	0.21
Uniform Delay, d1	18.4	23.6		29.4	38.5		25.1	38.1		46.3	35.0	32.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.1	0.0		0.0	0.0		0.2	2.1		1.9	1.6	1.0
Delay (s)	20.5	23.6		29.4	38.5		25.2	40.2		48.2	36.7	33.1
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		20.8			38.2			39.8			35.9	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3201		1770	3067		1770	3534		1770	3539	1583
Flt Permitted	0.62	1.00		0.73	1.00		0.33	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1154	3201		1354	3067		613	3534		1770	3539	1583
Volume (vph)	325	12	26	1	3	25	13	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	119%	119%	100%	119%	119%	119%	100%	119%	119%	119%	119%	119%
Adj. Flow (vph)	420	16	28	1	4	32	14	541	5	54	576	383
RTOR Reduction (vph)	0	17	0	0	25	0	0	1	0	0	0	265
Lane Group Flow (vph)	420	27	0	1	7	0	14	545	0	54	576	118
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	47.0		32.0	22.0		42.0	32.0		15.0	37.0	37.0
Effective Green, g (s)	61.0	47.0		32.0	22.0		42.0	32.0		15.0	37.0	37.0
Actuated g/C Ratio	0.51	0.39		0.27	0.18		0.35	0.27		0.12	0.31	0.31
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)	766	1254		396	562		311	942		221	1091	488
v/s Ratio Prot	c0.16	0.01		0.00	0.01		0.00	0.15		c0.03	c0.16	
v/s Ratio Perm	c0.12			0.00			0.01					0.24
v/c Ratio	0.55	0.02		0.00	0.01		0.05	0.58		0.24	0.53	0.24
Uniform Delay, d1	19.1	22.4		32.3	40.1		25.8	38.2		47.4	34.3	31.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.8	0.0		0.0	0.0		0.3	2.6		2.6	1.8	1.2
Delay (s)	21.9	22.4		32.3	40.1		26.1	40.7		50.0	36.1	32.2
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		22.0			39.9			40.4			35.4	
Approach LOS		C			D			D			D	

HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3192		1770	3059		1770	3534		1770	3539	1583
Flt Permitted	0.61	1.00		0.72	1.00		0.25	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1130	3192		1344	3059		469	3534		1770	3539	1583
Volume (vph)	325	12	31	1	3	25	16	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	138%	138%	100%	138%	138%	138%	100%	138%	138%	138%	138%	138%
Adj. Flow (vph)	488	18	34	2	4	38	17	627	6	63	668	444
RTOR Reduction (vph)	0	19	0	0	35	0	0	1	0	0	0	311
Lane Group Flow (vph)	488	33	0	2	7	0	17	632	0	63	668	133
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	64.0	52.0		28.0	20.0		39.0	31.0		13.0	36.0	36.0
Effective Green, g (s)	64.0	52.0		28.0	20.0		39.0	31.0		13.0	36.0	36.0
Actuated g/C Ratio	0.53	0.43		0.23	0.17		0.32	0.26		0.11	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
Lane Grp Cap (vph)	816	1383		342	510		239	913		192	1062	475
v/s Ratio Prot	c0.20	0.02		0.00	0.01		0.00	0.18		c0.04	0.19	
v/s Ratio Perm	c0.12			0.00			0.02					0.28
v/c Ratio	0.60	0.02		0.01	0.01		0.07	0.69		0.33	0.63	0.28
Uniform Delay, d1	18.1	19.5		35.3	41.8		28.2	40.2		49.5	36.2	32.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.2	0.0		0.0	0.0		0.6	4.3		4.5	2.8	1.5
Delay (s)	21.4	19.5		35.3	41.8		28.7	44.5		54.0	39.1	33.6
Level of Service	C	B		D	D		C	D		D	D	C
Approach Delay (s)		21.2			41.5			44.1			37.8	
Approach LOS		C			D			D			D	

HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c = Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3197		1770	3064		1770	3534		1770	3539	1583
Flt Permitted	0.58	1.00		0.72	1.00		0.22	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1079	3197		1335	3064		404	3534		1770	3539	1583
Volume (vph)	325	12	35	1	3	25	18	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	160%	160%	100%	160%	160%	160%	100%	160%	160%	160%	160%	160%
Adj. Flow (vph)	565	21	38	2	5	43	20	727	7	73	774	515
RTOR Reduction (vph)	0	21	0	0	37	0	0	1	0	0	0	343
Lane Group Flow (vph)	565	38	0	2	11	0	20	733	0	73	774	172
Turn type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	64.0	55.0		21.0	16.0		38.0	34.0		10.0	40.0	40.0
Effective Green, g (s)	64.0	55.0		21.0	16.0		38.0	34.0		10.0	40.0	40.0
Actuated g/C Ratio	0.53	0.46		0.18	0.13		0.32	0.28		0.08	0.33	0.33
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)	829	1465		252	409		173	1001		148	1180	528
v/s Ratio Prot	c0.25	0.02		0.00	0.02		0.00	0.21		c0.04	0.22	
v/s Ratio Perm	c0.11			0.00			0.03					0.33
v/c Ratio	0.68	0.03		0.01	0.03		0.12	0.73		0.49	0.66	0.33
Uniform Delay, d1	19.3	17.8		40.9	45.2		29.1	38.9		52.6	34.1	29.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.5	0.0		0.1	0.1		1.4	4.7		11.3	2.9	1.6
Delay (s)	23.8	17.9		40.9	45.3		30.5	43.6		63.9	37.0	31.5
Level of Service	C	B		D	D		C	D		E	D	C
Approach Delay (s)		123.3			45.2			43.3			36.4	
Approach LOS		C			D			D			D	

HCM Average Control Delay	35.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3193		1770	3064		1770	3534		1770	3539	1583
Flt Permitted	0.57	1.00		0.71	1.00		0.15	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1070	3193		1322	3064		275	3534		1770	3539	1583
Volume (vph)	325	12	41	1	3	25	20	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	186%	186%	100%	186%	186%	186%	100%	186%	186%	186%	186%	186%
Adj. Flow (vph)	657	24	45	2	6	51	22	845	8	85	900	598
RTOR Reduction (vph)	0	24	0	0	44	0	0	1	0	0	0	394
Lane Group Flow (vph)	657	45	0	2	13	0	22	852	0	85	900	204
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	63.0	55.0		20.0	16.0		40.0	36.0		9.0	41.0	41.0
Effective Green, g (s)	63.0	55.0		20.0	16.0		40.0	36.0		9.0	41.0	41.0
Actuated g/C Ratio	0.52	0.46		0.17	0.13		0.33	0.30		0.08	0.34	0.34
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)	813	1463		235	409		142	1060		133	1209	541
v/s Ratio Prot	c0.29	0.02		0.00	0.02		0.01	0.24		c0.05	0.25	
v/s Ratio Perm	c0.13			0.00			0.05					0.38
v/c Ratio	0.81	0.03		0.01	0.03		0.15	0.80		0.64	0.74	0.38
Uniform Delay, d1	21.7	17.9		41.7	45.3		28.6	38.7		53.9	34.9	29.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.5	0.0		0.1	0.1		2.3	6.5		21.2	4.2	2.0
Delay (s)	30.2	17.9		41.8	45.4		30.9	45.2		75.1	39.1	31.9
Level of Service	C	B		D	D		C	D		E	D	C
Approach Delay (s)		29.0			45.3			44.9			38.3	
Approach LOS		C			D			D			D	

HCM Average Control Delay	38.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3196		1770	3065		1770	3534		1770	3539	1583
Flt Permitted	0.57	1.00		0.70	1.00		0.11	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1061	3196		1309	3065		196	3534		1770	3539	1583
Volume (vph)	325	12	47	1	3	25	24	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	216%	216%	100%	216%	216%	216%	100%	216%	216%	216%	216%	216%
Adj. Flow (vph)	763	28	51	2	7	59	26	981	9	99	1045	695
RTOR Reduction (vph)	0	28	0	0	51	0	0	1	0	0	0	417
Lane Group Flow (vph)	763	51	0	2	15	0	26	989	0	99	1045	278
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	55.0		19.0	16.0		42.0	38.0		8.0	42.0	42.0
Effective Green, g (s)	62.0	55.0		19.0	16.0		42.0	38.0		8.0	42.0	42.0
Actuated g/C Ratio	0.52	0.46		0.16	0.13		0.35	0.32		0.07	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
Lane Grp Cap (vph)	796	1465		219	409		121	1119		118	1239	554
v/s Ratio Prot	c0.34	0.02		0.00	0.02		0.01	0.28		c0.06	0.30	
v/s Ratio Perm	c0.16			0.00			0.07					0.44
v/c Ratio	0.96	0.04		0.01	0.04		0.21	0.88		0.84	0.84	0.50
Uniform Delay, d1	25.0	17.9		42.6	45.3		28.7	38.9		55.4	36.0	30.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.3	0.0		0.1	0.2		4.0	10.3		47.9	7.1	3.2
Delay (s)	48.3	17.9		42.6	45.5		32.8	49.2		103.2	43.1	34.0
Level of Service	D	B		D	D		C	D		F	D	C
Approach Delay (s)		45.4			45.4			48.7			42.9	
Approach LOS		D			D			D			D	

HCM Average Control Delay	45.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3129		1770	3067		1770	3537		1770	3539	1583
Flt Permitted	0.62	1.00		0.74	1.00		0.35	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1152	3129		1383	3067		647	3537		1770	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	395	5	17	4	5	40	40	465	2	42	492	330
RTOR Reduction (vph)	0	10	0	0	32	0	0	0	0	0	0	237
Lane Group Flow (vph)	395	12	0	4	13	0	40	467	0	42	492	94
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	47.0		34.0	23.0		44.0	32.0		14.0	34.0	34.0
Effective Green, g (s)	62.0	47.0		34.0	23.0		44.0	32.0		14.0	34.0	34.0
Actuated g/C Ratio	0.52	0.39		0.28	0.19		0.37	0.27		0.12	0.28	0.28
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)	475	1226		427	588		350	943		207	1003	449
v/s Ratio Prot	c0.15	0.01		0.00	0.01		0.01	0.13		c0.02	0.14	
v/s Ratio Perm	c0.11			0.00			0.03					0.21
v/c Ratio	0.51	0.01		0.01	0.02		0.11	0.50		0.20	0.49	0.21
Uniform Delay, d1	18.1	22.4		30.9	39.4		24.9	37.2		48.0	35.8	32.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0		0.0	0.1		0.7	1.9		2.2	1.7	1.1
Delay (s)	20.5	22.3		30.9	39.4		25.6	39.0		50.2	37.5	33.8
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		20.6			38.7			38.0			36.7	
Approach LOS		C			D			D			D	

HCM Average Control Delay	33.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3141		1770	3076		1770	3537		1770	3539	1583
Flt Permitted	0.62	1.00		0.74	1.00		0.33	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1150	3141		1380	3076		611	3537		1770	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%
Adj. Flow (vph)	406	6	18	4	6	41	41	479	2	44	507	340
RTOR Reduction (vph)	0	11	0	0	33	0	0	0	0	0	0	247
Lane Group Flow (vph)	406	13	0	4	14	0	41	481	0	44	507	94
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	63.0	48.0		34.0	23.0		43.0	31.0		14.0	33.0	33.0
Effective Green, g (s)	63.0	48.0		34.0	23.0		43.0	31.0		14.0	33.0	33.0
Actuated g/C Ratio	0.52	0.40		0.28	0.19		0.36	0.26		0.12	0.28	0.28
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)	790	1256		427	590		335	914		207	973	435
v/s Ratio Prot	c0.15	0.01		0.00	0.02		0.01	0.14		c0.02	0.14	
v/s Ratio Perm	c0.12			0.00			0.03					0.21
v/c Ratio	0.51	0.01		0.01	0.02		0.12	0.53		0.21	0.52	0.21
Uniform Delay, d1	17.7	21.7		30.9	39.4		25.7	38.2		48.0	36.8	33.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0		0.0	0.1		0.7	2.2		2.3	2.0	1.1
Delay (s)	20.0	21.7		30.9	39.5		26.4	40.4		50.3	38.8	34.6
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		20.1			38.8			39.3			37.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c = Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3126		1770	3067		1770	3536		1770	3539	1583
Flt Permitted	0.60	1.00		0.74	1.00		0.28	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1126	3126		1376	3067		524	3536		1770	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%
Adj. Flow (vph)	470	6	21	5	6	48	48	554	3	50	586	393
RTOR Reduction (vph)	0	12	0	0	40	0	0	0	0	0	0	282
Lane Group Flow (vph)	470	15	0	5	14	0	48	557	0	50	586	111
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	64.0	51.0		30.0	21.0		41.0	31.0		13.0	34.0	34.0
Effective Green, g (s)	64.0	51.0		30.0	21.0		41.0	31.0		13.0	34.0	34.0
Actuated g/C Ratio	0.53	0.42		0.25	0.18		0.34	0.26		0.11	0.28	0.28
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)	810	1329		374	537		283	913		192	1003	449
v/s Ratio Prot	c0.19	0.01		0.00	0.02		0.01	0.16		c0.03	0.17	
v/s Ratio Perm	c0.12			0.00			0.04					0.25
v/c Ratio	0.58	0.01		0.01	0.03		0.17	0.61		0.26	0.58	0.25
Uniform Delay, d1	17.9	19.9		33.8	41.0		27.2	39.2		49.1	36.9	33.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.0	0.0		0.1	0.1		1.3	3.0		3.3	2.5	1.3
Delay (s)	20.9	19.9		33.9	41.1		28.5	42.2		52.4	39.4	34.4
Level of Service	C	B		C	D		C	D		D	D	C
Approach Delay (s)		20.9			40.5			41.1			38.2	
Approach LOS		C			D			D			D	

HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3141		1770	3075		1770	3537		1770	3539	1583
Flt Permitted	0.58	1.00		0.74	1.00		0.23	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1087	3141		1369	3075		425	3537		1770	3539	1583
Volume (vph)	363	5	16	4	15	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	138%	138%	138%	138%	138%	138%	138%	138%	138%	138%	138%	138%
Adj. Flow (vph)	544	8	24	6	8	56	56	642	3	58	680	456
RTOR Reduction (vph)	0	13	0	0	48	0	0	10	0	0	0	319
Lane Group Flow (vph)	544	19	0	6	16	0	56	645	0	58	680	137
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	64.0	54.0		24.0	18.0		41.0	33.0		11.0	36.0	36.0
Effective Green, g (s)	64.0	54.0		24.0	18.0		41.0	33.0		11.0	36.0	36.0
Actuated g/C Ratio	0.53	0.45		0.20	0.15		0.34	0.28		0.09	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
Lane Grp Cap (vph)	819	1413		294	461		235	973		162	1062	475
v/s Ratio Prot	c0.23	0.01		0.00	0.02		0.02	0.18		c0.03	0.19	
v/s Ratio Perm	c0.12			0.00			0.07					0.29
v/c Ratio	0.66	0.01		0.02	0.04		0.24	0.66		0.36	0.64	0.29
Uniform Delay, d1	19.0	18.3		38.5	43.6		27.7	38.6		51.2	36.4	32.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	0.0		0.1	0.1		2.4	3.6		6.1	3.0	1.5
Delay (s)	23.2	18.3		38.7	43.7		30.1	42.1		57.3	39.4	33.7
Level of Service	C	B		D	D		C	D		E	D	C
Approach Delay (s)		22.9			43.3			41.2			38.1	
Approach LOS		C			D			D			D	

HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3137		1770	3074		1770	3537		1770	3539	1583
Flt Permitted	0.57	1.00		0.73	1.00		0.18	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1054	3137		1363	3074		338	3537		1770	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%
Adj. Flow (vph)	631	9	28	7	9	64	64	744	3	68	788	529
RTOR Reduction (vph)	0	15	0	0	55	0	0	0	0	0	0	361
Lane Group Flow (vph)	631	22	0	7	18	0	64	747	0	68	788	168
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	65.0	57.0		20.0	16.0		39.0	34.0		9.0	38.0	38.0
Effective Green, g (s)	65.0	57.0		20.0	16.0		39.0	34.0		9.0	38.0	38.0
Actuated g/C Ratio	0.54	0.48		0.17	0.13		0.32	0.28		0.08	0.32	0.32
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)	839	1490		241	410		170	1002		133	1121	501
v/s Ratio Prot	c0.28	0.01		0.00	0.02		0.02	0.21		c0.04	0.22	
v/s Ratio Perm	c0.13			0.00			0.11					0.33
v/c Ratio	0.75	0.01		0.03	0.04		0.38	0.75		0.51	0.70	0.33
Uniform Delay, d1	19.7	16.7		41.8	45.3		29.6	39.1		53.4	36.0	31.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.2	0.0		0.2	0.2		6.3	5.0		13.3	3.7	1.8
Delay (s)	25.9	16.7		42.1	45.5		35.9	44.1		66.7	39.7	33.1
Level of Service	C	B		D	D		D	D		E	D	C
Approach Delay (s)		25.4			45.2			43.5			38.5	
Approach LOS		C			D			D			D	

HCM Average Control Delay	37.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3135		1770	3071		1770	3537		1770	3539	1583
Flt Permitted	0.36	1.00		0.73	1.00		0.12	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1042	3135		1356	3071		219	3537		1770	3539	1583
Volume (vph)	863	95	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	186%	186%	186%	186%	186%	186%	186%	186%	186%	186%	186%	186%
Adj. Flow (vph)	734	10	32	8	10	75	75	865	4	79	916	615
RTOR Reduction (vph)	0	17	0	0	65	0	0	0	0	0	0	420
Lane Group Flow (vph)	734	25	0	8	20	0	75	869	0	79	916	195
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	66.0	58.0		20.0	16.0		38.0	34.0		8.0	38.0	38.0
Effective Green, g (s)	66.0	58.0		20.0	16.0		38.0	34.0		8.0	38.0	38.0
Actuated g/C Ratio	0.55	0.48		0.17	0.13		0.32	0.28		0.07	0.32	0.32
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)	852	1515		240	409		121	1002		118	1121	501
v/s Ratio Prot	c0.33	0.01		0.00	0.03		0.02	0.25		c0.04	0.26	
v/s Ratio Perm	c0.14			0.00			0.18					0.39
v/c Ratio	0.86	0.02		0.03	0.05		0.62	0.87		0.67	0.82	0.39
Uniform Delay, d1	20.9	16.1		41.9	45.4		31.5	40.9		54.7	37.8	31.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	11.1	0.0		0.3	0.2		21.5	10.0		26.3	6.6	2.3
Delay (s)	32.1	16.2		42.1	45.6		53.1	50.9		81.0	44.4	34.2
Level of Service	C	B		D	D		D	D		F	D	C
Approach Delay (s)		31.2			45.3			51.1			42.3	
Approach LOS		C			D			D			D	

HCM Average Control Delay	42.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3136		1770	3073		1770	3537		1770	3539	1583
Flt Permitted	0.55	1.00		0.72	1.00		0.11	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1028	3136		1346	3073		207	3537		1770	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	216%	216%	216%	216%	216%	216%	216%	216%	216%	216%	216%	216%
Adj. Flow (vph)	852	12	38	9	12	87	87	1005	5	92	1064	714
RTOR Reduction (vph)	0	20	0	0	75	0	0	0	0	0	0	421
Lane Group Flow (vph)	852	30	0	9	24	0	87	1010	0	92	1064	293
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	66.0	58.0		20.0	16.0		40.0	36.0		6.0	38.0	38.0
Effective Green, g (s)	66.0	58.0		20.0	16.0		40.0	36.0		6.0	38.0	38.0
Actuated g/C Ratio	0.55	0.48		0.17	0.13		0.33	0.30		0.05	0.32	0.32
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)	850	1516		238	410		121	1061		89	1121	501
v/s Ratio Prot	c0.38	0.02		0.00	0.03		0.02	0.29		c0.05	0.30	
v/s Ratio Perm	c0.17			0.01			0.22					0.45
v/c Ratio	1.00	0.02		0.04	0.06		0.72	0.95		1.03	0.95	0.58
Uniform Delay, d1	24.1	16.2		41.9	45.4		33.0	41.2		57.0	40.1	34.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	31.4	0.0		0.3	0.3		30.6	18.2		104.9	17.1	4.9
Delay (s)	55.5	16.2		42.2	45.7		63.7	59.4		161.9	57.2	39.3
Level of Service	E	B		D	D		E	E		F	E	D
Approach Delay (s)		53.8			45.4			59.7			55.5	
Approach LOS		D			D			E			E	

HCM Average Control Delay	55.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3141		1770	3067		1770	3537		1770	3539	1583
Flt Permitted	0.62	1.00		0.74	1.00		0.35	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1152	3141		1385	3067		647	3537		1770	3539	1583
Volume (vph)	363	5	14	4	5	37	34	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	395	5	15	4	5	40	37	465	2	42	492	330
RTOR Reduction (vph)	0	9	0	0	32	0	0	0	0	0	0	237
Lane Group Flow (vph)	395	11	0	4	13	0	37	467	0	42	492	94
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	47.0		34.0	23.0		44.0	32.0		14.0	34.0	34.0
Effective Green, g (s)	62.0	47.0		34.0	23.0		44.0	32.0		14.0	34.0	34.0
Actuated g/C Ratio	0.52	0.39		0.28	0.19		0.37	0.27		0.12	0.28	0.28
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)	775	1230		428	588		350	943		207	1003	449
v/s Ratio Prot	c0.15	0.01		0.00	0.01		0.01	0.13		c0.02	0.14	
v/s Ratio Perm	c0.11			0.00			0.03					0.21
v/c Ratio	0.51	0.01		0.01	0.02		0.11	0.50		0.20	0.49	0.21
Uniform Delay, d1	18.1	22.3		30.9	39.4		24.9	37.2		48.0	35.8	32.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0		0.0	0.0		0.6	1.9		2.2	1.7	1.1
Delay (s)	20.5	22.3		30.9	39.4		25.5	39.0		50.2	37.5	33.8
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		20.6			38.7			38.0			36.7	
Approach LOS		C			D			D			D	

HCM Average Control Delay	43.6	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.53				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	52.6%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3160		1770	3076		1770	3537		1770	3539	1583
Flt Permitted	0.62	1.00		0.74	1.00		0.33	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1150	3160		1384	3076		611	3537		1770	3539	1583
Volume (vph)	363	5	14	4	5	37	35	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	103%	103%	100%	103%	103%	103%	100%	103%	103%	103%	103%	103%
Adj. Flow (vph)	406	6	15	4	6	41	38	479	2	44	507	340
RTOR Reduction (vph)	0	9	0	0	33	0	0	0	0	0	0	247
Lane Group Flow (vph)	406	12	0	4	14	0	38	481	0	44	507	94
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	63.0	48.0		34.0	23.0		43.0	31.0		14.0	33.0	33.0
Effective Green, g (s)	63.0	48.0		34.0	23.0		43.0	31.0		14.0	33.0	33.0
Actuated g/C Ratio	0.52	0.40		0.28	0.19		0.36	0.26		0.12	0.28	0.28
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)	790	1264		428	590		335	914		207	973	435
v/s Ratio Prot	c0.15	0.01		0.00	0.02		0.01	0.14		c0.02	0.14	
v/s Ratio Perm	c0.12			0.00			0.03					0.21
v/c Ratio	0.51	0.01		0.01	0.02		0.11	0.53		0.21	0.52	0.21
Uniform Delay, d1	17.7	21.7		30.9	39.4		25.6	38.2		48.0	36.8	33.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0		0.0	0.1		0.7	2.2		2.3	2.0	1.1
Delay (s)	20.0	21.7		30.9	39.5		26.3	40.4		50.3	38.8	34.6
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		20.1			38.8			39.3			37.8	
Approach LOS		C			D			D			D	

HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3141		1770	3067		1770	3536		1770	3539	1583
Flt Permitted	0.60	1.00		0.74	1.00		0.28	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1126	3141		1380	3067		524	3536		1770	3539	1583
Volume (vph)	363	5	17	4	5	37	40	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	119%	119%	100%	119%	119%	119%	100%	119%	119%	119%	119%	119%
Adj. Flow (vph)	470	6	18	5	6	48	43	554	3	50	586	393
RTOR Reduction (vph)	0	10	0	0	40	0	0	0	0	0	0	282
Lane Group Flow (vph)	470	14	0	5	14	0	43	557	0	50	586	111
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	64.0	51.0		30.0	21.0		41.0	31.0		13.0	34.0	34.0
Effective Green, g (s)	64.0	51.0		30.0	21.0		41.0	31.0		13.0	34.0	34.0
Actuated g/C Ratio	0.53	0.42		0.25	0.18		0.34	0.26		0.11	0.28	0.28
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)	810	1335		374	537		283	913		192	1003	449
v/s Ratio Prot	c0.19	0.01		0.00	0.02		0.01	0.16		c0.03	0.17	
v/s Ratio Perm	c0.12			0.00			0.04					0.25
v/c Ratio	0.58	0.01		0.01	0.03		0.15	0.61		0.26	0.58	0.25
Uniform Delay, d1	17.9	19.9		33.8	41.0		27.2	39.2		49.1	36.9	33.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.0	0.0		0.1	0.1		1.1	3.0		3.3	2.5	1.3
Delay (s)	20.9	19.9		33.9	41.1		28.3	42.2		52.4	39.4	34.5
Level of Service	C	B		C	D		C	D		D	D	C
Approach Delay (s)		20.9			40.5			41.2			38.2	
Approach LOS		C			D			D			D	

HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3155		1770	3075		1770	3537		1770	3539	1583
Flt Permitted	0.58	1.00		0.74	1.00		0.24	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1087	3155		1373	3075		453	3537		1770	3539	1583
Volume (vph)	363	5	19	4	5	37	45	428	2	139	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	138%	138%	100%	138%	138%	138%	100%	138%	138%	138%	138%	138%
Adj. Flow (vph)	544	8	21	6	8	56	49	642	3	58	680	456
RTOR Reduction (vph)	0	12	0	0	48	0	0	0	0	0	0	315
Lane Group Flow (vph)	544	17	0	6	16	0	49	645	0	58	680	141
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	64.0	54.0		24.0	18.0		40.0	33.0		11.0	37.0	37.0
Effective Green, g (s)	64.0	54.0		24.0	18.0		40.0	33.0		11.0	37.0	37.0
Actuated g/C Ratio	0.53	0.45		0.20	0.15		0.33	0.28		0.09	0.31	0.31
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)	819	1420		294	461		228	973		162	1091	488
v/s Ratio Prot	c0.23	0.01		0.00	0.02		0.01	0.18		c0.03	0.19	
v/s Ratio Perm	c0.12			0.00			0.06					0.29
v/c Ratio	0.66	0.01		0.02	0.04		0.21	0.66		0.36	0.62	0.29
Uniform Delay, d1	19.0	18.3		38.5	43.6		28.1	38.6		51.2	35.5	31.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	0.0		0.1	0.1		2.1	3.6		6.1	2.7	1.5
Delay (s)	23.2	18.3		38.7	43.7		30.3	42.1		57.3	38.2	33.0
Level of Service	C	B		D	D		C	D		E	D	C
Approach Delay (s)		23.0			43.3			41.3			37.1	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3149		1770	3074		1770	3537		1770	3539	1583
Flt Permitted	0.57	1.00		0.73	1.00		0.18	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1054	3149		1367	3074		338	3537		1770	3539	1583
Volume (vph)	363	5	23	4	5	37	154	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	160%	160%	100%	160%	160%	160%	100%	160%	160%	160%	160%	160%
Adj. Flow (vph)	631	9	25	7	9	64	59	744	3	68	788	529
RTOR Reduction (vph)	0	13	0	0	55	0	0	0	0	0	0	361
Lane Group Flow (vph)	631	21	0	7	18	0	59	747	0	68	788	168
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	65.0	57.0		20.0	16.0		39.0	34.0		9.0	38.0	38.0
Effective Green, g (s)	65.0	57.0		20.0	16.0		39.0	34.0		9.0	38.0	38.0
Actuated g/C Ratio	0.54	0.48		0.17	0.13		0.32	0.28		0.08	0.32	0.32
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)	839	1496		241	410		170	1002		133	1121	501
v/s Ratio Prot	c0.28	0.01		0.00	0.02		0.01	0.21		c0.04	0.22	
v/s Ratio Perm	c0.13			0.00			0.10					0.33
v/c Ratio	0.75	0.01		0.03	0.04		0.35	0.75		0.51	0.70	0.33
Uniform Delay, d1	19.7	16.6		41.8	45.3		29.5	39.1		53.4	36.0	31.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.2	0.0		0.2	0.2		5.5	5.0		13.3	3.7	1.8
Delay (s)	25.9	16.7		42.1	45.5		35.1	44.1		66.7	39.7	33.1
Level of Service	C	B		D	D		D	D		E	D	C
Approach Delay (s)		25.4			45.2			43.4			38.5	
Approach LOS		C			D			D			D	

HCM Average Control Delay	37.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3148		1770	3071		1770	3537		1770	3539	1583
Flt Permitted	0.56	1.00		0.73	1.00		0.12	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1042	3148		1362	3071		219	3537		1770	3539	1583
Volume (vph)	363	5	26	4	5	37	63	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	186%	186%	100%	186%	186%	186%	100%	186%	186%	186%	186%	186%
Adj. Flow (vph)	734	10	28	8	10	75	68	865	4	79	916	615
RTOR Reduction (vph)	0	14	0	0	65	0	0	0	0	0	0	420
Lane Group Flow (vph)	734	24	0	8	20	0	68	869	0	79	916	195
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	66.0	58.0		20.0	16.0		38.0	34.0		8.0	38.0	38.0
Effective Green, g (s)	66.0	58.0		20.0	16.0		38.0	34.0		8.0	38.0	38.0
Actuated g/C Ratio	0.55	0.48		0.17	0.13		0.32	0.28		0.07	0.32	0.32
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)	852	1522		241	409		121	1002		118	1121	501
v/s Ratio Prot	c0.33	0.01		0.00	0.03		0.02	0.25		c0.04	0.26	
v/s Ratio Perm	c0.14			0.00			0.16					0.39
v/c Ratio	0.86	0.02		0.03	0.05		0.56	0.87		0.67	0.82	0.39
Uniform Delay, d1	20.9	16.1		41.9	45.4		31.4	40.9		54.7	37.8	31.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	11.1	0.0		0.3	0.2		17.5	10.0		26.3	6.6	2.3
Delay (s)	32.1	16.2		42.1	45.6		48.9	50.9		81.0	44.4	34.2
Level of Service	C	B		D	D		D	D		F	D	C
Approach Delay (s)		31.3			45.3			50.8			42.3	
Approach LOS		C			D			D			D	

HCM Average Control Delay	42.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3147		1770	3073		1770	3537		1770	3539	1583
Flt Permitted	0.55	1.00		0.73	1.00		0.11	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1028	3147		1351	3073		207	3537		1770	3539	1583
Volume (vph)	363	5	31	4	5	37	172	428	2	239	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	216%	216%	100%	216%	216%	216%	100%	216%	216%	216%	216%	216%
Adj. Flow (vph)	852	12	34	9	12	87	78	1005	5	92	1064	714
RTOR Reduction (vph)	0	18	0	0	75	0	0	0	0	0	0	421
Lane Group Flow (vph)	852	28	0	9	24	0	78	1010	0	92	1064	293
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	66.0	58.0		20.0	16.0		40.0	36.0		6.0	38.0	38.0
Effective Green, g (s)	66.0	58.0		20.0	16.0		40.0	36.0		6.0	38.0	38.0
Actuated g/C Ratio	0.55	0.48		0.17	0.13		0.33	0.30		0.05	0.32	0.32
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)	850	1521		239	410		121	1061		89	1121	501
v/s Ratio Prot	c0.38	0.01		0.00	0.03		0.02	0.29		c0.05	0.30	
v/s Ratio Perm	c0.17			0.01			0.19					0.45
v/c Ratio	1.00	0.02		0.04	0.06		0.64	0.95		1.03	0.95	0.58
Uniform Delay, d1	24.1	16.2		41.9	45.4		32.1	41.2		57.0	40.1	34.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	31.4	0.0		0.3	0.3		23.5	18.2		104.9	17.1	4.9
Delay (s)	55.5	16.2		42.2	45.7		55.7	59.4		161.9	57.2	39.3
Level of Service	E	B		D	D		E	E		F	E	D
Approach Delay (s)		53.5			45.4			59.1			55.1	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	55.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3110		1770	3128		1770	3537		1770	3539	1583
Flt Permitted	0.61	1.00		0.74	1.00		0.28	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1140	3110		1377	3128		512	3537		1770	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	404	5	21	9	11	38	41	613	2	37	591	423
RTOR Reduction (vph)	0	13	0	0	31	0	0	0	0	0	0	296
Lane Group Flow (vph)	404	13	0	9	18	0	41	615	0	37	591	127
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	47.0		32.0	22.0		46.0	35.0		12.0	36.0	36.0
Effective Green, g (s)	61.0	47.0		32.0	22.0		46.0	35.0		12.0	36.0	36.0
Actuated g/C Ratio	0.51	0.39		0.27	0.18		0.38	0.29		0.10	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
Lane Grp Cap (vph)	763	1218		400	573		312	1032		177	1062	475
v/s Ratio Prot	c0.15	0.01		0.00	0.02		0.01	0.17		c0.02	0.17	
v/s Ratio Perm	c0.11			0.00			0.04					0.27
v/c Ratio	0.53	0.01		0.02	0.03		0.13	0.60		0.21	0.56	0.27
Uniform Delay, d1	18.9	22.3		32.4	40.2		24.0	36.4		49.6	35.3	32.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.6	0.0		0.1	0.1		0.9	2.5		2.7	2.1	1.4
Delay (s)	21.5	22.3		32.5	40.3		24.9	39.0		52.3	37.4	33.3
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		21.6			39.1			38.1			36.3	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3126		1770	3125		1770	3538		1770	3539	1583
Flt Permitted	0.61	1.00		0.74	1.00		0.26	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1139	3126		1376	3125		489	3538		1770	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%
Adj. Flow (vph)	416	6	21	9	11	39	43	631	2	38	609	436
RTOR Reduction (vph)	0	13	0	0	32	0	0	0	0	0	0	305
Lane Group Flow (vph)	416	14	0	9	18	0	43	633	0	38	609	131
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	47.0		32.0	22.0		46.0	35.0		12.0	36.0	36.0
Effective Green, g (s)	61.0	47.0		32.0	22.0		46.0	35.0		12.0	36.0	36.0
Actuated g/C Ratio	0.51	0.39		0.27	0.18		0.38	0.29		0.10	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
Lane Grp Cap (vph)	763	1224		400	573		305	1032		177	1062	475
v/s Ratio Prot	c0.16	0.01		0.00	0.02		0.01	0.18		c0.02	0.17	
v/s Ratio Perm	c0.12			0.00			0.04					0.28
v/c Ratio	0.55	0.01		0.02	0.03		0.14	0.61		0.21	0.57	0.28
Uniform Delay, d1	19.1	22.3		32.4	40.3		24.2	36.7		49.7	35.5	32.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.8	0.0		0.1	0.1		1.0	2.7		2.8	2.3	1.4
Delay (s)	21.8	22.3		32.5	40.4		25.1	39.4		52.4	37.6	33.5
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		21.9			39.2			38.5			36.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3111		1770	3127		1770	3537		1770	3539	1583
Flt Permitted	0.59	1.00		0.74	1.00		0.22	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1104	3111		1371	3127		412	3537		1770	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%
Adj. Flow (vph)	481	6	25	10	13	45	49	730	3	44	704	503
RTOR Reduction (vph)	0	14	0	0	38	0	0	0	0	0	0	344
Lane Group Flow (vph)	481	17	0	10	20	0	49	733	0	44	704	159
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	51.0		26.0	19.0		44.0	36.0		10.0	38.0	38.0
Effective Green, g (s)	62.0	51.0		26.0	19.0		44.0	36.0		10.0	38.0	38.0
Actuated g/C Ratio	0.52	0.42		0.22	0.16		0.37	0.30		0.08	0.32	0.32
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)	787	1322		320	495		242	1061		148	1121	501
v/s Ratio Prot	c0.20	0.01		0.00	0.02		0.01	0.21		c0.02	0.20	
v/s Ratio Perm	c0.12			0.00			0.06					0.32
v/c Ratio	0.61	0.01		0.03	0.04		0.20	0.69		0.30	0.63	0.32
Uniform Delay, d1	19.4	19.9		37.0	42.8		25.8	37.1		51.7	35.0	31.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.5	0.0		0.2	0.2		1.9	3.7		5.1	2.7	1.7
Delay (s)	22.9	20.0		37.2	42.9		27.7	40.8		56.8	37.6	32.8
Level of Service	C	B		D	D		C	D		E	D	C
Approach Delay (s)		22.7			42.1			40.0			36.4	
Approach LOS		C			D			D			D	

Intersection Summary

HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c = Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3126		1770	3127		1770	3537		1770	3539	1583
Flt Permitted	0.57	1.00		0.73	1.00		0.18	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1060	3126		1364	3127		341	3537		1770	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	138%	138%	138%	138%	138%	138%	138%	138%	138%	138%	138%	138%
Adj. Flow (vph)	558	8	28	12	15	52	57	846	3	51	816	584
RTOR Reduction (vph)	0	16	0	0	45	0	0	0	0	0	0	384
Lane Group Flow (vph)	558	20	0	12	22	0	57	849	0	51	816	200
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	53.0		21.0	16.0		43.0	38.0		8.0	41.0	41.0
Effective Green, g (s)	62.0	53.0		21.0	16.0		43.0	38.0		8.0	41.0	41.0
Actuated g/C Ratio	0.52	0.44		0.18	0.13		0.36	0.32		0.07	0.34	0.34
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)	796	1381		256	417		182	1120		118	1209	541
v/s Ratio Prot	c0.25	0.01		0.00	0.02		0.01	0.24		c0.03	0.23	
v/s Ratio Perm	c0.12			0.01			0.10					0.37
v/c Ratio	0.70	0.01		0.05	0.05		0.31	0.76		0.43	0.67	0.37
Uniform Delay, d1	20.6	18.8		41.1	45.4		27.0	36.9		53.8	33.8	29.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.1	0.0		0.3	0.2		4.4	4.8		11.1	3.0	1.9
Delay (s)	25.7	18.8		41.5	45.6		31.4	41.7		64.9	36.8	31.7
Level of Service	C	B		D	D		C	D		E	D	C
Approach Delay (s)		25.3			45.0			41.0			35.7	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3122		1770	3124		1770	3538		1770	3539	1583
Flt Permitted	0.56	1.00		0.73	1.00		0.12	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1049	3122		1356	3124		228	3538		1770	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%
Adj. Flow (vph)	647	9	33	14	17	61	66	981	3	59	946	677
RTOR Reduction (vph)	0	18	0	0	53	0	0	0	0	0	0	440
Lane Group Flow (vph)	647	24	0	14	25	0	66	984	0	59	946	237
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	54.0		20.0	16.0		44.0	40.0		6.0	42.0	42.0
Effective Green, g (s)	62.0	54.0		20.0	16.0		44.0	40.0		6.0	42.0	42.0
Actuated g/C Ratio	0.52	0.45		0.17	0.13		0.37	0.33		0.05	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
Lane Grp Cap (vph)	794	1405		240	417		135	1179		89	1239	554
v/s Ratio Prot	c0.29	0.01		0.00	0.02		0.02	0.28		c0.03	0.27	
v/s Ratio Perm	c0.14			0.01			0.16					0.43
v/c Ratio	0.81	0.02		0.06	0.06		0.49	0.83		0.66	0.76	0.43
Uniform Delay, d1	22.2	18.3		42.0	45.4		27.7	36.9		56.0	34.6	29.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.0	0.0		0.5	0.3		12.1	7.0		32.7	4.5	2.4
Delay (s)	31.2	18.3		42.5	45.7		39.8	44.0		88.7	39.1	32.2
Level of Service	C	B		D	D		D	D		F	D	C
Approach Delay (s)		30.4			45.2			43.7			38.1	
Approach LOS		C			D			D			D	

HCM Average Summary			
HCM Average Control Delay	38.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3119		1770	3125		1770	3537		1770	3539	1583
Flt Permitted	0.56	1.00		0.72	1.00		0.10	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1036	3119		1349	3125		177	3537		1770	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	186%	186%	186%	186%	186%	186%	186%	186%	186%	186%	186%	186%
Adj. Flow (vph)	752	10	38	16	20	71	77	1140	4	69	1100	786
RTOR Reduction (vph)	0	21	0	0	62	0	0	0	0	0	0	448
Lane Group Flow (vph)	752	27	0	16	29	0	77	1144	0	69	1100	338
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	53.0		20.0	16.0		46.0	42.0		5.0	43.0	43.0
Effective Green, g (s)	61.0	53.0		20.0	16.0		46.0	42.0		5.0	43.0	43.0
Actuated g/C Ratio	0.51	0.44		0.17	0.13		0.38	0.35		0.04	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
Lane Grp Cap (vph)	777	1378		239	417		121	1238		74	1268	567
v/s Ratio Prot	c0.33	0.02		0.00	0.03		0.02	0.32		c0.04	0.31	
v/s Ratio Perm	c0.16			0.01			0.22					0.50
v/c Ratio	0.97	0.02		0.07	0.07		0.64	0.92		0.93	0.87	0.60
Uniform Delay, d1	25.7	18.9		42.0	45.5		28.5	37.5		57.3	35.8	31.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	25.3	0.0		0.5	0.3		22.8	12.9		87.0	8.2	4.6
Delay (s)	51.0	18.9		42.6	45.8		51.3	50.3		144.3	44.0	36.0
Level of Service	D	B		D	D		D	D		F	D	D
Approach Delay (s)		49.1			45.3			50.4			44.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	47.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3120		1770	3125		1770	3537		1770	3539	1583
Flt Permitted	0.55	1.00		0.72	1.00		0.10	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1022	3120		1337	3125		182	3537		1770	3539	1583
Volume (vph)	872	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	216%	216%	216%	216%	216%	216%	216%	216%	216%	216%	216%	216%
Adj. Flow (vph)	873	12	45	19	23	82	89	1324	5	80	1277	913
RTOR Reduction (vph)	0	25	0	0	71	0	0	0	0	0	0	449
Lane Group Flow (vph)	873	32	0	19	34	0	89	1329	0	80	1277	465
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	54.0		20.0	16.0		45.0	41.0		5.0	42.0	42.0
Effective Green, g (s)	62.0	54.0		20.0	16.0		45.0	41.0		5.0	42.0	42.0
Actuated g/C Ratio	0.52	0.45		0.17	0.13		0.38	0.34		0.04	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
Lane Grp Cap (vph)	790	1404		237	417		121	1208		74	1239	554
v/s Ratio Prot	c0.39	0.02		0.00	0.03		0.02	0.38		c0.05	0.36	
v/s Ratio Perm	c0.18			0.01			0.25					0.58
v/c Ratio	1.11	0.02		0.08	0.08		0.74	1.10		1.08	1.03	0.84
Uniform Delay, d1	26.1	18.3		42.1	45.6		59.0	39.5		57.5	39.0	35.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	64.8	0.0		0.7	0.4		32.5	57.8		128.5	33.8	14.1
Delay (s)	90.9	18.4		42.8	45.9		91.5	97.3		186.0	72.8	50.0
Level of Service	F	B		D	D		F	F		F	E	D
Approach Delay (s)		86.5			45.5			97.0			67.6	
Approach LOS		F			D			F			E	

Intersection Summary			
HCM Average Control Delay	79.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		
c - Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3124		1770	3128		1770	3537		1770	3539	1583
Flt Permitted	0.61	1.00		0.74	1.00		0.28	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1140	3124		1381	3128		512	3537		1770	3539	1583
Volume (vph)	372	5	17	8	10	35	35	564	2	34	1544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	404	5	18	9	11	38	38	613	2	37	591	423
RTOR Reduction (vph)	0	11	0	0	31	0	0	0	0	0	0	296
Lane Group Flow (vph)	404	12	0	9	18	0	38	615	0	37	591	127
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	47.0		32.0	22.0		46.0	35.0		12.0	36.0	36.0
Effective Green, g (s)	61.0	47.0		32.0	22.0		46.0	35.0		12.0	36.0	36.0
Actuated g/C Ratio	0.51	0.39		0.27	0.18		0.38	0.29		0.10	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
Lane Grp Cap (vph)	763	1224		401	573		312	1032		177	1062	475
v/s Ratio Prot	c0.15	0.01		0.00	0.02		0.01	0.17		c0.02	0.17	
v/s Ratio Perm	c0.11			0.00			0.04					0.27
v/c Ratio	0.53	0.01		0.02	0.03		0.12	0.60		0.21	0.56	0.27
Uniform Delay, d1	18.9	22.3		32.4	40.2		24.0	36.4		49.6	35.3	32.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.6	0.0		0.1	0.1		0.8	2.5		2.7	2.1	1.4
Delay (s)	21.5	22.3		32.5	40.3		24.8	39.0		52.3	37.4	33.3
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		21.6			39.1			38.1			36.3	
Approach LOS		C			D			D			D	

Intersection Summary

HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3131		1770	3125		1770	3538		1770	3539	1583
Flt Permitted	0.61	1.00		0.74	1.00		0.26	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1139	3131		1377	3125		489	3538		1770	3539	1583
Volume (vph)	372	5	18	8	10	35	36	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	103%	103%	100%	103%	103%	103%	100%	103%	103%	103%	103%	103%
Adj. Flow (vph)	416	6	20	9	11	39	39	631	2	38	609	436
RTOR Reduction (vph)	0	12	0	0	32	0	0	0	0	0	0	305
Lane Group Flow (vph)	416	14	0	9	18	0	39	633	0	38	609	131
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	47.0		32.0	22.0		46.0	35.0		12.0	36.0	36.0
Effective Green, g (s)	61.0	47.0		32.0	22.0		46.0	35.0		12.0	36.0	36.0
Actuated g/C Ratio	0.51	0.39		0.27	0.18		0.38	0.29		0.10	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
Lane Grp Cap (vph)	763	1226		400	573		305	1032		177	1062	475
v/s Ratio Prot	c0.16	0.01		0.00	0.02		0.01	0.18		c0.02	0.17	
v/s Ratio Perm	c0.12			0.00			0.04					0.28
v/c Ratio	0.55	0.01		0.02	0.03		0.13	0.61		0.21	0.57	0.28
Uniform Delay, d1	19.1	22.3		32.4	40.3		24.1	36.7		49.7	35.5	32.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.8	0.0		0.1	0.1		0.9	2.7		2.8	2.3	1.4
Delay (s)	21.8	22.3		32.5	40.4		25.0	39.4		52.4	37.8	33.5
Level of Service	C	C		C	D		C	D		D	D	C
Approach Delay (s)		21.9			39.2			38.6			36.6	
Approach LOS		C			D			D			D	

Intersection Summary

HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3122		1770	3127		1770	3537		1770	3539	1583
Flt Permitted	0.59	1.00		0.74	1.00		0.22	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1104	3122		1375	3127		412	3537		1770	3539	1583
Volume (vph)	372	15	20	8	10	35	41	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	119%	119%	100%	119%	119%	119%	100%	119%	119%	119%	119%	119%
Adj. Flow (vph)	481	6	22	10	13	45	45	730	3	44	704	503
RTOR Reduction (vph)	0	13	0	0	38	0	0	0	0	0	0	344
Lane Group Flow (vph)	481	15	0	10	20	0	45	733	0	44	704	159
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	51.0		26.0	19.0		44.0	36.0		10.0	38.0	38.0
Effective Green, g (s)	62.0	51.0		26.0	19.0		44.0	36.0		10.0	38.0	38.0
Actuated g/C Ratio	0.52	0.42		0.22	0.16		0.37	0.30		0.08	0.32	0.32
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)	787	1327		321	495		242	1061		148	1121	501
v/s Ratio Prot	c0.20	0.01		0.00	0.02		0.01	0.21		c0.02	0.20	
v/s Ratio Perm	c0.12			0.00			0.06					0.32
v/c Ratio	0.61	0.01		0.03	0.04		0.19	0.69		0.30	0.63	0.32
Uniform Delay, d1	19.4	19.9		37.0	42.8		25.7	37.1		51.7	35.0	31.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.5	0.0		0.2	0.2		1.7	3.7		5.1	2.7	1.7
Delay (s)	22.9	20.0		37.2	42.9		27.4	40.8		56.8	37.6	32.8
Level of Service	C	B		D	D		C	D		E	D	C
Approach Delay (s)		22.7			42.1			40.0			36.4	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3137		1770	3127		1770	3537		1770	3539	1583
Flt Permitted	0.64	1.00		0.73	1.00		0.19	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1201	3137		1368	3127		354	3537		1770	3539	1583
Volume (vph)	372	5	23	8	10	35	47	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	138%	138%	100%	138%	138%	138%	100%	138%	138%	138%	138%	138%
Adj. Flow (vph)	558	8	25	12	15	52	51	846	3	51	816	584
RTOR Reduction (vph)	0	14	0	0	35	0	0	0	0	0	0	380
Lane Group Flow (vph)	558	19	0	12	32	0	51	849	0	51	816	204
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	53.0		43.0	39.0		44.0	39.0		8.0	42.0	42.0
Effective Green, g (s)	61.0	53.0		43.0	39.0		44.0	39.0		8.0	42.0	42.0
Actuated g/C Ratio	0.51	0.44		0.36	0.32		0.37	0.32		0.07	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
Lane Grp Cap (vph)	696	1386		504	1016		189	1150		118	1239	554
v/s Ratio Prot	c0.12	0.01		0.00	0.02		0.01	0.24		c0.03	0.23	
v/s Ratio Perm	c0.29			0.01			0.09					0.37
v/c Ratio	0.80	0.01		0.02	0.03		0.27	0.74		0.43	0.66	0.37
Uniform Delay, d1	22.9	18.8		24.9	27.6		26.2	36.0		53.8	32.9	29.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.5	0.0		0.1	0.1		3.5	4.3		11.1	2.8	1.9
Delay (s)	32.3	18.8		25.0	27.7		29.6	40.2		64.9	35.7	31.0
Level of Service	C	B		C	C		C	D		E	D	C
Approach Delay (s)		31.6			27.3			39.6			34.8	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3137		1770	3124		1770	3538		1770	3539	1583
Flt Permitted	0.56	1.00		0.73	1.00		0.12	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1049	3137		1363	3124		228	3538		1770	3539	1583
Volume (vph)	372	5	26	8	10	35	55	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	160%	160%	100%	160%	160%	160%	100%	160%	160%	160%	160%	160%
Adj. Flow (vph)	647	9	28	14	17	61	60	981	3	59	946	677
RTOR Reduction (vph)	0	15	0	0	53	0	0	0	0	0	0	440
Lane Group Flow (vph)	647	22	0	14	25	0	60	984	0	59	946	237
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	54.0		20.0	16.0		44.0	40.0		6.0	42.0	42.0
Effective Green, g (s)	62.0	54.0		20.0	16.0		44.0	40.0		6.0	42.0	42.0
Actuated g/C Ratio	0.52	0.45		0.17	0.13		0.37	0.33		0.05	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
Lane Grp Cap (vph)	794	1412		241	417		135	1179		89	1239	554
v/s Ratio Prot	c0.29	0.01		0.00	0.02		0.01	0.28		c0.03	0.27	
v/s Ratio Perm	c0.14			0.01			0.15					0.43
v/c Ratio	0.81	0.02		0.06	0.06		0.44	0.83		0.66	0.76	0.43
Uniform Delay, d1	22.2	18.3		42.0	45.4		27.6	36.9		56.0	34.6	29.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.0	0.0		0.5	0.3		10.2	7.0		32.7	4.5	2.4
Delay (s)	31.2	18.3		42.5	45.7		37.8	44.0		88.7	39.1	32.2
Level of Service	C	B		D	D		D	D		F	D	C
Approach Delay (s)		30.5			45.2			43.6			38.1	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	38.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3129		1770	3125		1770	3537		1770	3539	1583
Flt Permitted	0.56	1.00		0.73	1.00		0.10	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1036	3129		1354	3125		177	3537		1770	3539	1583
Volume (vph)	372	5	31	8	10	35	64	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	186%	186%	100%	186%	186%	186%	100%	186%	186%	186%	186%	186%
Adj. Flow (vph)	752	10	34	16	20	71	70	1140	4	69	1100	786
RTOR Reduction (vph)	0	19	0	0	62	0	0	0	0	0	0	448
Lane Group Flow (vph)	752	25	0	16	29	0	70	1144	0	69	1100	338
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	61.0	53.0		20.0	16.0		46.0	42.0		5.0	43.0	43.0
Effective Green, g (s)	61.0	53.0		20.0	16.0		46.0	42.0		5.0	43.0	43.0
Actuated g/C Ratio	0.51	0.44		0.17	0.13		0.38	0.35		0.04	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
Lane Grp Cap (vph)	777	1382		240	417		121	1238		74	1268	567
v/s Ratio Prot	c0.33	0.01		0.00	0.03		0.02	0.32		c0.04	0.31	
v/s Ratio Perm	c0.16			0.01			0.20					0.50
v/c Ratio	0.97	0.02		0.07	0.07		0.58	0.92		0.93	0.87	0.60
Uniform Delay, d1	25.7	18.9		42.0	45.5		28.3	37.5		57.3	35.8	31.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	25.3	0.0		0.5	0.3		18.6	12.9		87.0	8.2	4.6
Delay (s)	51.0	18.9		42.6	45.8		46.9	50.3		144.3	44.0	36.0
Level of Service	D	B		D	D		D	D		F	D	D
Approach Delay (s)		49.3			45.3			50.1			44.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	47.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3133		1770	3125		1770	3537		1770	3539	1583
Flt Permitted	0.55	1.00		0.72	1.00		0.10	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1022	3133		1345	3125		182	3537		1770	3539	1583
Volume (vph)	872	5	36	8	10	35	74	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	216%	216%	100%	216%	216%	216%	100%	216%	216%	216%	216%	216%
Adj. Flow (vph)	873	12	39	19	23	82	80	1324	5	80	1277	913
RTOR Reduction (vph)	0	21	0	0	71	0	0	0	0	0	0	449
Lane Group Flow (vph)	873	30	0	19	34	0	80	1329	0	80	1277	465
Turn Type	pm+pt			pm+pt			pm+pt			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2					6
Actuated Green, G (s)	62.0	54.0		20.0	16.0		45.0	41.0		5.0	42.0	42.0
Effective Green, g (s)	62.0	54.0		20.0	16.0		45.0	41.0		5.0	42.0	42.0
Actuated g/C Ratio	0.52	0.45		0.17	0.13		0.38	0.34		0.04	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
Lane Grp Cap (vph)	790	1410		238	417		121	1208		74	1239	554
v/s Ratio Prot	c0.39	0.02		0.00	0.03		0.02	0.38		c0.05	0.36	
v/s Ratio Perm	c0.18			0.01			0.23					0.58
v/c Ratio	1.11	0.02		0.08	0.08		0.66	1.10		1.08	1.03	0.84
Uniform Delay, d1	26.1	18.3		42.1	45.6		58.7	39.5		57.5	39.0	35.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	64.8	0.0		0.7	0.4		24.9	57.8		128.5	33.8	14.1
Delay (s)	90.9	18.4		42.8	45.9		83.7	97.3		186.0	72.8	50.0
Level of Service	F	B		D	D		F	F		F	E	D
Approach Delay (s)		86.9			45.5			96.6			67.6	
Approach LOS		F			D			F			E	

HCM Average Control Delay	79.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1611		1770	3535		1770	3539	1583
Flt Permitted		0.71	1.00	0.27	1.00		0.48	1.00		0.43	1.00	1.00
Satd. Flow (perm)		1326	1583	511	1611		887	3535		804	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	353	13	27	1	3	27	13	454	4	46	484	322
RTOR Reduction (vph)	0	0	19	0	19	0	0	0	0	0	0	131
Lane Group Flow (vph)	0	366	8	1	11	0	13	458	0	46	484	191
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		35.5	35.5	35.5	35.5		68.1	66.8		76.5	71.2	71.2
Effective Green, g (s)		35.5	35.5	35.5	35.5		68.1	66.8		76.5	71.2	71.2
Actuated g/C Ratio		0.30	0.30	0.30	0.30		0.57	0.56		0.64	0.59	0.59
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		392	468	151	477		513	1968		558	2100	939
v/s Ratio Prot					0.02		0.00	0.13		c0.00	0.14	
v/s Ratio Perm		c0.28	0.02	0.00			0.01			0.05		0.20
v/c Ratio		0.93	0.02	0.01	0.02		0.03	0.23		0.08	0.23	0.20
Uniform Delay, d1		41.1	29.9	29.8	30.0		11.3	13.5		8.4	11.5	11.3
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		29.1	0.0	0.0	0.0		0.0	0.3		0.1	0.3	0.5
Delay (s)		70.2	29.9	29.8	30.0		11.3	13.8		8.5	11.8	11.8
Level of Service		E	C	C	C		B	B		A	B	B
Approach Delay (s)		67.4			30.0			13.8			11.6	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1610		1770	3535		1770	3539	1583
Flt Permitted		0.71	1.00	0.27	1.00		0.46	1.00		0.43	1.00	1.00
Satd. Flow (perm)		1324	1583	506	1610		854	3535		794	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%
Adj. Flow (vph)	364	13	28	1	3	28	13	468	4	47	498	331
RTOR Reduction (vph)	0	0	19	0	19	0	0	0	0	0	0	141
Lane Group Flow (vph)	0	377	9	1	12	0	13	472	0	47	498	190
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		36.6	36.6	36.6	36.6		68.2	65.6		74.6	68.8	68.8
Effective Green, g (s)		36.6	36.6	36.6	36.6		68.2	65.6		74.6	68.8	68.8
Actuated g/C Ratio		0.30	0.30	0.30	0.30		0.57	0.55		0.62	0.57	0.57
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		404	483	154	491		505	1932		541	2029	908
v/s Ratio Prot					0.02		0.00	0.13		c0.00	0.14	
v/s Ratio Perm		c0.28	0.02	0.00			0.01			0.05		0.21
v/c Ratio		0.93	0.02	0.01	0.02		0.03	0.24		0.09	0.25	0.21
Uniform Delay, d1		40.5	29.1	29.0	29.2		11.3	14.2		9.1	12.7	12.4
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		28.4	0.0	0.0	0.0		0.0	0.3		0.1	0.3	0.5
Delay (s)		68.9	29.2	29.1	29.2		11.3	14.5		9.2	13.0	12.9
Level of Service		E	C	C	C		B	B		A	B	B
Approach Delay (s)		66.2			29.2			14.4			12.8	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	26.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1614		1770	3534		1770	3539	1583
Flt Permitted		0.71	1.00	0.26	1.00		0.40	1.00		0.36	1.00	1.00
Satd. Flow (perm)		1316	1583	476	1614		744	3534		678	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%
Adj. Flow (vph)	427	16	33	1	4	33	16	550	5	55	585	389
RTOR Reduction (vph)	0	0	21	0	21	0	0	1	0	0	0	186
Lane Group Flow (vph)	0	443	12	1	16	0	16	554	0	55	585	203
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		42.8	42.8	42.8	42.8		61.7	59.0		68.7	62.5	62.5
Effective Green, g (s)		42.8	42.8	42.8	42.8		61.7	59.0		68.7	62.5	62.5
Actuated g/C Ratio		0.36	0.36	0.36	0.36		0.51	0.49		0.57	0.52	0.52
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		469	565	170	576		406	1738		445	1843	824
v/s Ratio Prot					0.02		0.00	0.16		c0.01	0.17	
v/s Ratio Perm		c0.34	0.02	0.00			0.02			0.06		0.25
v/c Ratio		0.94	0.02	0.01	0.03		0.04	0.32		0.12	0.32	0.25
Uniform Delay, d1		37.4	25.0	24.9	25.1		14.4	18.4		11.9	16.5	15.8
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		27.9	0.0	0.0	0.0		0.0	0.5		0.1	0.5	0.7
Delay (s)		65.4	25.0	24.9	25.1		14.4	18.9		12.0	17.0	16.5
Level of Service		E	C	C	C		B	B		B	B	B
Approach Delay (s)		62.6			25.1			18.7			16.5	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1615		1770	3534		1770	3539	1583
Flt Permitted		0.70	1.00	0.24	1.00		0.32	1.00		0.29	1.00	1.00
Satd. Flow (perm)		1307	1583	452	1615		605	3534		533	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%
Adj. Flow (vph)	502	19	39	2	5	39	19	645	6	65	687	457
RTOR Reduction (vph)	0	0	23	0	23	0	0	1	0	0	0	248
Lane Group Flow (vph)	0	521	16	2	21	0	19	650	0	65	687	209
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		50.3	50.3	50.3	50.3		53.9	51.0		61.5	54.8	54.8
Effective Green, g (s)		50.3	50.3	50.3	50.3		53.9	51.0		61.5	54.8	54.8
Actuated g/C Ratio		0.42	0.42	0.42	0.42		0.45	0.42		0.51	0.46	0.46
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		548	664	189	677		300	1502		342	1616	723
v/s Ratio Prot					0.03		0.00	0.18		c0.01	0.19	
v/s Ratio Perm		c0.40	0.02	0.00			0.03			0.09		0.29
v/c Ratio		0.95	0.02	0.01	0.03		0.06	0.43		0.19	0.43	0.29
Uniform Delay, d1		33.7	20.5	20.3	20.5		18.7	24.3		16.0	22.0	20.4
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		26.5	0.0	0.0	0.0		0.1	0.9		0.3	0.8	1.0
Delay (s)		60.2	20.5	20.4	20.5		18.8	25.2		16.2	22.8	21.4
Level of Service		E	C	C	C		B	C		B	C	C
Approach Delay (s)		57.4			20.5			25.0			21.9	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1611		1770	3534		1770	3539	1583
Flt Permitted		0.70	1.00	0.23	1.00		0.21	1.00		0.20	1.00	1.00
Satd. Flow (perm)		1298	1583	428	1611		398	3534		378	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%
Adj. Flow (vph)	590	22	45	2	5	45	22	759	7	76	808	537
RTOR Reduction (vph)	0	0	23	0	23	0	0	1	0	0	0	332
Lane Group Flow (vph)	0	612	22	2	27	0	22	765	0	76	808	205
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		58.7	58.7	58.7	58.7		47.2	43.8		51.4	45.9	45.9
Effective Green, g (s)		58.7	58.7	58.7	58.7		47.2	43.8		51.4	45.9	45.9
Actuated g/C Ratio		0.49	0.49	0.49	0.49		0.39	0.36		0.43	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
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		635	774	209	788		195	1290		226	1354	605
v/s Ratio Prot					0.03		0.00	0.22		c0.02	0.23	
v/s Ratio Perm		c0.47	0.03	0.00			0.04			0.13		0.34
v/c Ratio		0.96	0.03	0.01	0.03		0.11	0.59		0.34	0.60	0.34
Uniform Delay, d1		29.6	15.9	15.7	15.9		23.6	30.9		22.4	29.6	26.3
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		26.7	0.0	0.0	0.0		0.3	2.0		0.9	1.9	1.5
Delay (s)		56.4	15.9	15.7	15.9		23.8	32.9		23.3	31.6	27.8
Level of Service		E	B	B	B		C	C		C	C	C
Approach Delay (s)		53.6			15.9			32.6			29.7	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.7%	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												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1612		1770	3534		1770	3539	1583
Flt Permitted		0.69	1.00	0.22	1.00		0.11	1.00		0.11	1.00	1.00
Satd. Flow (perm)		1286	1583	404	1612		211	3534		199	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%
Adj. Flow (vph)	692	26	53	2	6	53	26	891	9	89	948	631
RTOR Reduction (vph)	0	0	23	0	23	0	0	1	0	0	0	400
Lane Group Flow (vph)	0	718	30	2	36	0	26	899	0	89	948	231
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		68.1	68.1	68.1	68.1		37.7	35.3		42.1	37.5	37.5
Effective Green, g (s)		68.1	68.1	68.1	68.1		37.7	35.3		42.1	37.5	37.5
Actuated g/C Ratio		0.57	0.57	0.57	0.57		0.31	0.29		0.35	0.31	0.31
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		730	898	229	915		97	1040		130	1106	495
v/s Ratio Prot					0.04		0.01	0.25		c0.03	0.27	
v/s Ratio Perm		c0.56	0.03	0.00			0.08			0.21		0.40
v/c Ratio		0.98	0.03	0.01	0.04		0.27	0.86		0.68	0.86	0.47
Uniform Delay, d1		25.4	11.4	11.3	11.5		31.4	40.1		30.4	38.7	33.2
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		29.0	0.0	0.0	0.0		1.5	9.6		13.9	8.6	3.1
Delay (s)		54.4	11.5	11.3	11.5		32.9	49.7		44.3	47.3	36.3
Level of Service		D	B	B	B		C	D		D	D	D
Approach Delay (s)		51.5			11.5			49.2			43.0	
Approach LOS		D			B			D			D	

Intersection Summary			
HCM Average Control Delay	46.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1615		1770	3534		1770	3539	1583
Flt Permitted		0.68	1.00	0.15	1.00		0.12	1.00		0.11	1.00	1.00
Satd. Flow (perm)		1272	1583	279	1615		219	3534		209	3539	1583
Volume (vph)	1325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%
Adj. Flow (vph)	812	30	62	2	8	62	30	1045	10	105	1112	740
RTOR Reduction (vph)	0	0	24	0	26	0	0	1	0	0	0	409
Lane Group Flow (vph)	0	842	38	2	44	0	30	1054	0	105	1112	331
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		70.0	70.0	70.0	70.0		36.4	34.0		39.6	35.6	35.6
Effective Green, g (s)		70.0	70.0	70.0	70.0		36.4	34.0		39.6	35.6	35.6
Actuated g/C Ratio		0.58	0.58	0.58	0.58		0.30	0.28		0.33	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
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		742	923	163	942		97	1001		121	1050	470
v/s Ratio Prot					0.04		0.01	0.30		c0.03	0.31	
v/s Ratio Perm		c0.66	0.04	0.01			0.09			0.26		0.47
v/c Ratio		1.13	0.04	0.01	0.05		0.31	1.05		0.87	1.06	0.70
Uniform Delay, d1		25.0	10.7	10.5	10.7		58.6	43.0		59.6	42.2	37.5
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		76.8	0.0	0.0	0.0		1.8	43.5		43.7	44.8	8.5
Delay (s)		101.8	10.7	10.5	10.7		60.4	86.5		103.3	87.0	46.1
Level of Service		F	B	B	B		E	F		F	F	D
Approach Delay (s)		95.5			10.7			85.8			72.4	
Approach LOS		F			B			F			E	

Intersection Summary			
HCM Average Control Delay	80.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1611		1770	3535		1770	3539	1583
Flt Permitted		0.71	1.00	0.29	1.00		0.48	1.00		0.44	1.00	1.00
Satd. Flow (perm)		1327	1583	540	1611		887	3535		814	3539	1583
Volume (vph)	293	12	25	1	3	25	12	418	4	42	445	255
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	318	13	27	1	3	27	13	454	4	46	484	277
RTOR Reduction (vph)	0	0	20	0	20	0	0	0	0	0	0	106
Lane Group Flow (vph)	0	331	7	1	10	0	13	458	0	46	484	171
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		32.5	32.5	32.5	32.5		71.2	69.9		79.5	74.2	74.2
Effective Green, g (s)		32.5	32.5	32.5	32.5		71.2	69.9		79.5	74.2	74.2
Actuated g/C Ratio		0.27	0.27	0.27	0.27		0.59	0.58		0.66	0.62	0.62
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		359	429	146	436		536	2059		584	2188	979
v/s Ratio Prot					0.02		0.00	0.13		c0.00	0.14	
v/s Ratio Perm		c0.25	0.02	0.00			0.01			0.05		0.17
v/c Ratio		0.92	0.02	0.01	0.02		0.02	0.22		0.08	0.22	0.17
Uniform Delay, d1		42.5	32.0	32.0	32.1		10.0	12.0		7.3	10.1	9.8
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		28.5	0.0	0.0	0.0		0.0	0.2		0.1	0.2	0.4
Delay (s)		71.0	32.1	32.0	32.1		10.0	12.3		7.3	10.4	10.2
Level of Service		E	C	C	C		B	B		A	B	B
Approach Delay (s)		68.1			32.1			12.2			10.0	
Approach LOS		E			C			B			B	

HCM Average Control Delay	23.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1610		1770	3535		1770	3539	1583
Flt Permitted		0.71	1.00	0.29	1.00		0.47	1.00		0.43	1.00	1.00
Satd. Flow (perm)		1325	1583	532	1610		875	3535		796	3539	1583
Volume (vph)	302	12	25	1	3	25	12	418	4	42	445	263
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	100%
Adj. Flow (vph)	328	13	28	1	3	28	13	468	4	47	498	286
RTOR Reduction (vph)	0	0	20	0	20	0	0	0	0	0	0	111
Lane Group Flow (vph)	0	341	8	1	11	0	13	472	0	47	498	175
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		33.4	33.4	33.4	33.4		70.2	68.9		78.6	73.3	73.3
Effective Green, g (s)		33.4	33.4	33.4	33.4		70.2	68.9		78.6	73.3	73.3
Actuated g/C Ratio		0.28	0.28	0.28	0.28		0.59	0.57		0.65	0.61	0.61
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		369	441	148	448		522	2030		568	2162	967
v/s Ratio Prot					0.02		0.00	0.13		c0.00	0.14	
v/s Ratio Perm		c0.26	0.02	0.00			0.01			0.05		0.18
v/c Ratio		0.92	0.02	0.01	0.02		0.02	0.23		0.08	0.23	0.18
Uniform Delay, d1		42.1	31.4	31.3	31.5		10.4	12.6		7.6	10.6	10.2
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		28.3	0.0	0.0	0.0		0.0	0.3		0.1	0.2	0.4
Delay (s)		70.4	31.4	31.3	31.5		10.4	12.8		7.7	10.8	10.6
Level of Service		E	C	C	C		B	B		A	B	B
Approach Delay (s)		67.4			31.5			12.8			10.6	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1614		1770	3534		1770	3539	1583
Flt Permitted		0.71	1.00	0.27	1.00		0.41	1.00		0.37	1.00	1.00
Satd. Flow (perm)		1318	1583	495	1614		757	3534		697	3539	1583
Volume (vph)	354	12	25	1	3	25	12	418	4	42	445	308
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%	100%
Adj. Flow (vph)	385	16	33	1	4	33	16	550	5	55	585	335
RTOR Reduction (vph)	0	0	22	0	22	0	0	0	0	0	0	150
Lane Group Flow (vph)	0	401	11	1	15	0	16	555	0	55	585	185
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		38.9	38.9	38.9	38.9		65.7	63.0		72.5	66.4	66.4
Effective Green, g (s)		38.9	38.9	38.9	38.9		65.7	63.0		72.5	66.4	66.4
Actuated g/C Ratio		0.32	0.32	0.32	0.32		0.55	0.52		0.60	0.55	0.55
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		427	513	160	523		437	1855		476	1958	876
v/s Ratio Prot					0.02		0.00	0.16		c0.01	0.17	
v/s Ratio Perm		c0.30	0.02	0.00			0.02			0.06		0.21
v/c Ratio		0.94	0.02	0.01	0.03		0.04	0.30		0.12	0.30	0.21
Uniform Delay, d1		39.4	27.6	27.5	27.7		12.5	16.1		10.2	14.3	13.6
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		28.4	0.0	0.0	0.0		0.0	0.4		0.1	0.4	0.6
Delay (s)		67.8	27.6	27.5	27.7		12.5	16.5		10.3	14.7	14.1
Level of Service		E	C	C	C		B	B		B	B	B
Approach Delay (s)		64.7			27.7			16.4			14.3	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1615		1770	3534		1770	3539	1583
Flt Permitted		0.70	1.00	0.25	1.00		0.34	1.00		0.30	1.00	1.00
Satd. Flow (perm)		1308	1583	471	1615		631	3534		562	3539	1583
Volume (vph)	416	12	25	1	3	25	12	418	4	42	445	362
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%	100%
Adj. Flow (vph)	452	19	39	2	5	39	19	645	6	65	687	393
RTOR Reduction (vph)	0	0	24	0	24	0	0	1	0	0	0	198
Lane Group Flow (vph)	0	471	15	2	20	0	19	650	0	65	687	195
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		45.8	45.8	45.8	45.8		58.3	55.5		66.1	59.4	59.4
Effective Green, g (s)		45.8	45.8	45.8	45.8		58.3	55.5		66.1	59.4	59.4
Actuated g/C Ratio		0.38	0.38	0.38	0.38		0.49	0.46		0.55	0.50	0.50
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		499	604	180	616		333	1634		377	1752	784
v/s Ratio Prot					0.03		0.00	0.18		c0.01	0.19	
v/s Ratio Perm		c0.36	0.02	0.00			0.03			0.09		0.25
v/c Ratio		0.94	0.02	0.01	0.03		0.06	0.40		0.17	0.39	0.25
Uniform Delay, d1		35.9	23.2	23.0	23.2		16.3	21.2		13.6	19.0	17.4
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		26.7	0.0	0.0	0.0		0.1	0.7		0.2	0.7	0.8
Delay (s)		62.5	23.2	23.1	23.2		16.3	22.0		13.8	19.6	18.2
Level of Service		E	C	C	C		B	C		B	B	B
Approach Delay (s)		59.5			23.2			21.8			18.8	
Approach LOS		E			C			C			B	

Intersection Summary			
HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
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												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1611		1770	3534		1770	3539	1583
Flt Permitted		0.70	1.00	0.24	1.00		0.24	1.00		0.22	1.00	1.00
Satd. Flow (perm)		1300	1583	446	1611		449	3534		419	3539	1583
Volume (vph)	489	12	25	1	3	25	12	418	4	42	1445	494
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	100%
Adj. Flow (vph)	532	22	45	2	5	45	22	759	7	76	808	537
RTOR Reduction (vph)	0	0	25	0	25	0	0	1	0	0	0	309
Lane Group Flow (vph)	0	554	20	2	25	0	22	765	0	76	808	228
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		53.6	53.6	53.6	53.6		51.8	48.4		57.0	51.0	51.0
Effective Green, g (s)		53.6	53.6	53.6	53.6		51.8	48.4		57.0	51.0	51.0
Actuated g/C Ratio		0.45	0.45	0.45	0.45		0.43	0.40		0.48	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
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		581	707	199	720		231	1425		267	1504	673
v/s Ratio Prot					0.03		0.00	0.22		c0.01	0.23	
v/s Ratio Perm		c0.43	0.03	0.00			0.04			0.12		0.34
v/c Ratio		0.95	0.03	0.01	0.03		0.10	0.54		0.28	0.54	0.34
Uniform Delay, d1		32.0	18.6	18.5	18.7		20.6	27.3		19.0	25.7	23.2
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		26.0	0.0	0.0	0.0		0.2	1.5		0.6	1.4	1.4
Delay (s)		58.0	18.6	18.5	18.7		20.7	28.7		19.6	27.1	24.5
Level of Service		E	B	B	B		C	C		B	C	C
Approach Delay (s)		55.1			18.7			28.5			25.7	
Approach LOS		E			B			C			C	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.7%	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												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1612		1770	3534		1770	3539	1583
Flt Permitted		0.69	1.00	0.23	1.00		0.13	1.00		0.11	1.00	1.00
Satd. Flow (perm)		1288	1583	426	1612		248	3534		199	3539	1583
Volume (vph)	574	12	25	1	3	25	12	418	4	42	445	499
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%	100%
Adj. Flow (vph)	624	26	53	2	6	53	26	891	9	89	948	542
RTOR Reduction (vph)	0	0	25	0	25	0	0	1	0	0	0	329
Lane Group Flow (vph)	0	650	28	2	34	0	26	899	0	89	948	213
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		62.7	62.7	62.7	62.7		41.7	39.3		48.9	42.9	42.9
Effective Green, g (s)		62.7	62.7	62.7	62.7		41.7	39.3		48.9	42.9	42.9
Actuated g/C Ratio		0.52	0.52	0.52	0.52		0.35	0.33		0.41	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
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		673	827	223	842		117	1157		160	1265	566
v/s Ratio Prot					0.04		0.00	0.25		c0.03	0.27	
v/s Ratio Perm		c0.50	0.03	0.00			0.07			0.20		0.34
v/c Ratio		0.97	0.03	0.01	0.04		0.22	0.78		0.56	0.75	0.38
Uniform Delay, d1		27.6	13.9	13.7	14.0		28.0	36.4		26.1	33.8	28.6
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		26.2	0.0	0.0	0.0		1.0	5.2		4.1	4.1	1.9
Delay (s)		53.8	13.9	13.8	14.0		29.0	41.6		30.3	37.9	30.5
Level of Service		D	B	B	B		C	D		C	D	C
Approach Delay (s)		50.8			14.0			41.2			35.0	
Approach LOS		D			B			D			C	

Intersection Summary			
HCM Average Control Delay	39.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1583	1770	1615		1770	3534		1770	3539	1583
Flt Permitted		0.68	1.00	0.19	1.00		0.11	1.00		0.11	1.00	1.00
Satd. Flow (perm)		1273	1583	348	1615		207	3534		198	3539	1583
Volume (vph)	674	12	25	1	3	25	12	418	4	42	445	586
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%	100%
Adj. Flow (vph)	733	30	62	2	8	62	30	1045	10	105	1112	637
RTOR Reduction (vph)	0	0	27	0	27	0	0	1	0	0	0	352
Lane Group Flow (vph)	0	763	35	2	43	0	30	1054	0	105	1112	285
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		68.0	68.0	68.0	68.0		38.4	36.0		41.6	37.6	37.6
Effective Green, g (s)		68.0	68.0	68.0	68.0		38.4	36.0		41.6	37.6	37.6
Actuated g/C Ratio		0.57	0.57	0.57	0.57		0.32	0.30		0.35	0.31	0.31
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		721	897	197	915		98	1060		121	1109	496
v/s Ratio Prot					0.04		0.01	0.30		c0.03	0.31	
v/s Ratio Perm		c0.60	0.04	0.01			0.09			0.27		0.40
v/c Ratio		1.06	0.04	0.01	0.05		0.31	0.99		0.87	1.00	0.57
Uniform Delay, d1		26.0	11.5	11.3	11.6		33.1	41.9		37.1	41.2	34.5
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		50.0	0.0	0.0	0.0		1.8	26.4		43.7	27.7	4.8
Delay (s)		76.0	11.5	11.4	11.6		34.9	68.3		80.7	68.9	39.3
Level of Service		E	B	B	B		C	E		F	E	D
Approach Delay (s)		71.2			11.6			67.4			59.4	
Approach LOS		E			B			E			E	

HCM Average Control Delay	63.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1614		1770	3537		1770	3539	1583
Flt Permitted		0.70	1.00	0.27	1.00		0.44	1.00		0.44	1.00	1.00
Satd. Flow (perm)		1296	1583	507	1614		823	3537		813	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	395	5	17	4	5	40	40	465	2	42	492	330
RTOR Reduction (vph)	0	0	11	0	27	0	0	0	0	0	0	153
Lane Group Flow (vph)	0	400	6	4	18	0	40	467	0	42	492	177
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		39.4	39.4	39.4	39.4		67.3	62.9		69.9	64.2	64.2
Effective Green, g (s)		39.4	39.4	39.4	39.4		67.3	62.9		69.9	64.2	64.2
Actuated g/C Ratio		0.33	0.33	0.33	0.33		0.56	0.52		0.58	0.54	0.54
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		426	520	166	530		496	1854		519	1893	847
v/s Ratio Prot					0.03		0.00	0.13		c0.00	0.14	
v/s Ratio Perm		c0.31	0.01	0.01			0.04			0.04		0.21
v/c Ratio		0.94	0.01	0.02	0.03		0.08	0.25		0.08	0.26	0.21
Uniform Delay, d1		39.1	27.2	27.3	27.4		11.9	15.7		10.9	15.1	14.6
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		28.4	0.0	0.1	0.0		0.1	0.3		0.1	0.3	0.6
Delay (s)		67.5	27.2	27.3	27.4		12.0	16.0		11.0	15.4	15.2
Level of Service		E	C	C	C		B	B		B	B	B
Approach Delay (s)		65.9			27.4			15.7			15.1	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1619		1770	3537		1770	3539	1583
Flt Permitted		0.69	1.00	0.27	1.00		0.42	1.00		0.43	1.00	1.00
Satd. Flow (perm)		1294	1583	502	1619		782	3537		808	3539	1583
Volume (vph)	363	5	16	4	5	37	37	426	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%
Adj. Flow (vph)	406	6	18	4	6	41	41	479	2	44	507	340
RTOR Reduction (vph)	0	0	12	0	27	0	0	0	0	0	0	165
Lane Group Flow (vph)	0	412	6	4	20	0	41	481	0	44	507	175
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		40.6	40.6	40.6	40.6		67.3	61.6		67.5	61.7	61.7
Effective Green, g (s)		40.6	40.6	40.6	40.6		67.3	61.6		67.5	61.7	61.7
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.56	0.51		0.56	0.51	0.51
Clearance time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		438	536	170	548		486	1816		501	1820	814
v/s Ratio Prot					0.03		0.00	0.14		c0.00	0.14	
v/s Ratio Perm		c0.32	0.01	0.01			0.04			0.06		0.21
v/c Ratio		0.94	0.01	0.02	0.04		0.08	0.26		0.09	0.28	0.21
Uniform Delay, d1		38.5	26.4	26.5	26.6		12.0	16.4		11.9	16.5	15.9
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		28.5	0.0	0.1	0.0		0.1	0.4		0.1	0.4	0.6
Delay (s)		67.0	26.4	26.5	26.6		12.1	16.8		12.0	16.9	16.5
Level of Service		E	C	C	C		B	B		B	B	B
Approach Delay (s)		65.3			26.6			16.4			16.5	
Approach LOS		E			C			B			B	

HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1618		1770	3536		1770	3539	1583
Flt Permitted		0.69	1.00	0.26	1.00		0.35	1.00		0.36	1.00	1.00
Satd. Flow (perm)		1282	1583	479	1618		650	3536		679	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	439	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%
Adj. Flow (vph)	477	7	21	5	7	49	49	563	3	51	596	400
RTOR Reduction (vph)	0	0	13	0	29	0	0	0	0	0	0	220
Lane Group Flow (vph)	0	484	8	5	27	0	49	566	0	51	596	180
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		47.8	47.8	47.8	47.8		60.1	53.9		60.3	54.0	54.0
Effective Green, g (s)		47.8	47.8	47.8	47.8		60.1	53.9		60.3	54.0	54.0
Actuated g/C Ratio		0.40	0.40	0.40	0.40		0.50	0.45		0.50	0.45	0.45
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		511	631	191	645		383	1588		398	1593	712
v/s Ratio Prot					0.03		0.01	0.16		c0.01	0.17	
v/s Ratio Perm		c0.38	0.01	0.01			0.06			0.06		0.25
v/c Ratio		0.95	0.01	0.03	0.04		0.13	0.36		0.13	0.37	0.25
Uniform Delay, d1		34.9	21.8	21.9	22.1		15.8	21.7		15.7	21.8	20.5
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		26.8	0.0	0.1	0.0		0.2	0.6		0.1	0.7	0.9
Delay (s)		61.7	21.8	22.0	22.1		16.0	22.3		15.8	22.5	21.3
Level of Service		E	C	C	C		B	C		B	C	C
Approach Delay (s)		60.0			22.1			21.8			21.7	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1618		1770	3537		1770	3539	1583
Flt Permitted		0.68	1.00	0.25	1.00		0.26	1.00		0.28	1.00	1.00
Satd. Flow (perm)		1269	1583	459	1618		488	3537		521	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%
Adj. Flow (vph)	560	8	25	6	8	57	57	661	3	60	699	469
RTOR Reduction (vph)	0	0	13	0	30	0	0	0	0	0	0	288
Lane Group Flow (vph)	0	568	12	6	35	0	57	664	0	60	699	181
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		56.1	56.1	56.1	56.1		51.8	46.2		52.0	46.3	46.3
Effective Green, g (s)		56.1	56.1	56.1	56.1		51.8	46.2		52.0	46.3	46.3
Actuated g/C Ratio		0.47	0.47	0.47	0.47		0.43	0.38		0.43	0.39	0.39
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		593	740	215	756		270	1362		285	1365	611
v/s Ratio Prot					0.04		0.01	0.19		c0.01	0.20	
v/s Ratio Perm		c0.45	0.02	0.01			0.08			0.08		0.30
v/c Ratio		0.96	0.02	0.03	0.05		0.21	0.49		0.21	0.51	0.30
Uniform Delay, d1		30.8	17.1	17.2	17.4		21.0	27.9		20.8	28.2	25.6
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		26.5	0.0	0.1	0.0		0.4	1.3		0.4	1.4	1.2
Delay (s)		57.3	17.1	17.3	17.4		21.4	29.2		21.2	29.6	26.8
Level of Service		E	B	B	B		C	C		C	C	C
Approach Delay (s)		55.6			17.4			28.6			28.1	
Approach LOS		E			B			C			C	

Intersection Summary			
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	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												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1616		1770	3536		1770	3539	1583
Flt Permitted		0.67	1.00	0.24	1.00		0.14	1.00		0.17	1.00	1.00
Satd. Flow (perm)		1255	1583	440	1616		268	3536		308	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%
Adj. Flow (vph)	659	9	29	7	9	67	67	777	4	71	822	552
RTOR Reduction (vph)	0	0	13	0	30	0	0	0	0	0	0	378
Lane Group Flow (vph)	0	668	16	7	46	0	67	781	0	71	822	174
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		65.8	65.8	65.8	65.8		42.2	37.9		42.2	37.9	37.9
Effective Green, g (s)		65.8	65.8	65.8	65.8		42.2	37.9		42.2	37.9	37.9
Actuated g/C Ratio		0.55	0.55	0.55	0.55		0.35	0.32		0.35	0.32	0.32
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		688	868	241	886		148	1117		161	1118	500
v/s Ratio Prot					0.05		c0.02	0.22		0.02	0.23	
v/s Ratio Perm		c0.53	0.02	0.02			0.14			0.14		0.35
v/c Ratio		0.97	0.02	0.03	0.05		0.45	0.70		0.44	0.74	0.35
Uniform Delay, d1		26.2	12.4	12.4	12.6		28.5	36.0		28.2	36.6	31.6
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		27.1	0.0	0.0	0.0		2.2	3.6		1.9	4.3	1.9
Delay (s)		53.3	12.4	12.5	12.6		30.7	39.7		30.1	40.9	33.5
Level of Service		D	B	B	B		C	D		C	D	C
Approach Delay (s)		51.6			12.6			39.0			37.5	
Approach LOS		D			B			D			D	

Intersection Summary			
HCM Average Control Delay	40.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1617		1770	3537		1770	3539	1583
Flt Permitted		0.66	1.00	0.20	1.00		0.12	1.00		0.12	1.00	1.00
Satd. Flow (perm)		1236	1583	372	1617		233	3537		233	3539	1583
Volume (vph)	363	45	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%
Adj. Flow (vph)	773	11	34	9	11	79	79	912	4	83	965	648
RTOR Reduction (vph)	0	10	14	9	32	0	0	0	0	0	0	421
Lane Group Flow (vph)	0	784	20	9	58	0	79	916	0	83	965	227
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		72.0	72.0	72.0	72.0		36.0	32.0		36.0	32.0	32.0
Effective Green, g (s)		72.0	72.0	72.0	72.0		36.0	32.0		36.0	32.0	32.0
Actuated g/C Ratio		0.60	0.60	0.60	0.60		0.30	0.27		0.30	0.27	0.27
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		742	950	223	970		121	943		121	944	422
v/s Ratio Prot					0.06		0.02	0.26		c0.02	0.27	
v/s Ratio Perm		c0.63	0.02	0.02			0.17			0.18		0.41
v/c Ratio		1.06	0.02	0.04	0.06		0.65	0.97		0.69	1.02	0.54
Uniform Delay, d1		24.0	9.7	9.8	10.0		34.7	43.5		35.0	44.0	37.7
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		49.0	0.0	0.1	0.0		12.0	23.2		14.9	35.0	4.9
Delay (s)		73.0	9.7	9.9	10.0		46.7	66.7		49.9	79.0	42.5
Level of Service		E	A	A	A		D	E		D	E	D
Approach Delay (s)		70.4			10.0			65.1			63.7	
Approach LOS		E			A			E			E	

Intersection Summary			
HCM Average Control Delay (s)	64.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1616		1770	3537		1770	3539	1583
Flt Permitted		0.65	1.00	0.11	1.00		0.12	1.00		0.12	1.00	1.00
Satd. Flow (perm)		1218	1583	203	1616		226	3537		226	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%
Adj. Flow (vph)	908	12	40	10	12	92	92	1070	5	98	1132	760
RTOR Reduction (vph)	0	0	14	0	38	0	0	0	0	0	0	421
Lane Group Flow (vph)	0	920	26	10	66	0	92	1075	0	98	1132	340
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		71.0	71.0	71.0	71.0		37.0	33.0		37.0	33.0	33.0
Effective Green, g (s)		71.0	71.0	71.0	71.0		37.0	33.0		37.0	33.0	33.0
Actuated g/C Ratio		0.59	0.59	0.59	0.59		0.31	0.28		0.31	0.28	0.28
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		721	937	120	956		121	973		121	973	435
v/s Ratio Prot					0.06		0.03	0.30		c0.03	0.32	
v/s Ratio Perm		c0.76	0.03	0.05			0.21			0.22		0.48
v/c Ratio		1.28	0.03	0.08	0.07		0.76	1.10		0.81	1.16	0.78
Uniform Delay, d1		24.5	10.2	10.5	10.4		59.1	43.5		59.4	43.5	40.2
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		134.8	0.0	0.3	0.0		24.1	62.0		31.5	84.9	13.0
Delay (s)		159.3	10.2	10.8	10.5		83.2	105.5		90.9	128.4	53.2
Level of Service		F	B	B	B		F	F		F	F	D
Approach Delay (s)		153.1			10.5			103.7			97.8	
Approach LOS		F			B			F			F	

HCM Average Control Delay	109.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1614		1770	3537		1770	3539	1583
Flt Permitted		0.70	1.00	0.28	1.00		0.44	1.00		0.45	1.00	1.00
Satd. Flow (perm)		1296	1583	531	1614		818	3537		845	3539	1583
Volume (vph)	327	5	16	4	5	37	37	428	2	39	453	262
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	355	5	17	4	5	40	40	465	2	42	492	285
RTOR Reduction (vph)	0	0	12	0	28	0	0	0	0	0	0	124
Lane Group Flow (vph)	0	360	5	4	17	0	40	467	0	42	492	161
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		35.7	35.7	35.7	35.7		72.3	67.9		72.3	67.9	67.9
Effective Green, g (s)		35.7	35.7	35.7	35.7		72.3	67.9		72.3	67.9	67.9
Actuated g/C Ratio		0.30	0.30	0.30	0.30		0.60	0.57		0.60	0.57	0.57
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		386	471	158	480		528	2001		543	2002	896
v/s Ratio Prot					0.03		0.00	0.13		c0.00	0.14	
v/s Ratio Perm		c0.28	0.01	0.01			0.04			0.04		0.18
v/c Ratio		0.93	0.01	0.03	0.04		0.08	0.23		0.08	0.25	0.18
Uniform Delay, d1		41.0	29.7	29.8	29.9		9.8	13.0		9.8	13.1	12.6
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		29.2	0.0	0.1	0.0		0.1	0.3		0.1	0.3	0.4
Delay (s)		70.2	29.7	29.9	30.0		9.9	13.3		9.9	13.4	13.0
Level of Service		E	C	C	C		A	B		A	B	B
Approach Delay (s)		68.4			29.9			13.0			13.1	
Approach LOS		E			C			B			B	

HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1619		1770	3537		1770	3539	1583
Flt Permitted		0.69	1.00	0.28	1.00		0.44	1.00		0.43	1.00	1.00
Satd. Flow (perm)		1295	1583	525	1619		814	3537		806	3539	1583
Volume (vph)	337	5	16	4	5	37	37	428	2	39	453	270
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	100%
Adj. Flow (vph)	366	6	18	4	6	41	41	479	2	44	507	293
RTOR Reduction (vph)	0	0	12	0	28	0	0	0	0	0	0	130
Lane Group Flow (vph)	0	372	6	4	19	0	41	481	0	44	507	163
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		36.9	36.9	36.9	36.9		69.8	65.4		72.4	66.7	66.7
Effective Green, g (s)		36.9	36.9	36.9	36.9		69.8	65.4		72.4	66.7	66.7
Actuated g/C Ratio		0.31	0.31	0.31	0.31		0.58	0.55		0.60	0.56	0.56
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		398	487	161	498		509	1928		532	1967	880
v/s Ratio Prot					0.03		0.00	0.14		c0.00	0.14	
v/s Ratio Perm		c0.29	0.01	0.01			0.04			0.05		0.19
v/c Ratio		0.93	0.01	0.02	0.04		0.08	0.25		0.08	0.26	0.19
Uniform Delay, d1		40.4	28.9	29.0	29.1		10.8	14.4		9.9	13.8	13.2
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		29.0	0.0	0.1	0.0		0.1	0.3		0.1	0.3	0.5
Delay (s)		69.3	28.9	29.1	29.1		10.9	14.7		9.9	14.1	13.7
Level of Service		E	C	C	C		B	B		A	B	B
Approach Delay (s)		67.5			29.1			14.4			13.7	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1618		1770	3536		1770	3539	1583
Flt Permitted		0.69	1.00	0.27	1.00		0.36	1.00		0.38	1.00	1.00
Satd. Flow (perm)		1282	1583	499	1618		673	3536		704	3539	1583
Volume (vph)	396	15	16	4	5	37	37	428	2	39	453	317
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%	100%
Adj. Flow (vph)	430	7	21	5	7	49	49	563	3	51	596	345
RTOR Reduction (vph)	0	0	13	0	31	0	0	0	0	0	0	177
Lane Group Flow (vph)	0	437	8	5	25	0	49	566	0	51	596	168
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		43.4	43.4	43.4	43.4		64.6	58.5		64.6	58.5	58.5
Effective Green, g (s)		43.4	43.4	43.4	43.4		64.6	58.5		64.6	58.5	58.5
Actuated g/C Ratio		0.36	0.36	0.36	0.36		0.54	0.49		0.54	0.49	0.49
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		464	573	180	585		418	1724		433	1725	772
v/s Ratio Prot					0.03		0.01	0.16		c0.01	0.17	
v/s Ratio Perm		c0.34	0.01	0.01			0.06			0.06		0.22
v/c Ratio		0.94	0.01	0.03	0.04		0.12	0.33		0.12	0.35	0.22
Uniform Delay, d1		37.1	24.6	24.7	24.8		13.5	18.8		13.5	19.0	17.6
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		27.6	0.0	0.1	0.0		0.1	0.5		0.1	0.5	0.6
Delay (s)		64.7	24.6	24.8	24.9		13.6	19.3		13.6	19.5	18.3
Level of Service		E	C	C	C		B	B		B	B	B
Approach Delay (s)		62.9			24.8			18.8			18.8	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1618		1770	3537		1770	3539	1583
Flt Permitted		0.68	1.00	0.26	1.00		0.28	1.00		0.30	1.00	1.00
Satd. Flow (perm)		1270	1583	478	1618		528	3537		559	3539	1583
Volume (vph)	464	5	16	4	5	37	37	428	2	39	453	372
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%	100%
Adj. Flow (vph)	504	8	25	6	8	57	57	661	3	60	699	404
RTOR Reduction (vph)	0	0	14	0	33	0	0	0	0	0	0	232
Lane Group Flow (vph)	0	512	11	6	32	0	57	664	0	60	699	172
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		51.0	51.0	51.0	51.0		56.9	51.1		57.1	51.2	51.2
Effective Green, g (s)		51.0	51.0	51.0	51.0		56.9	51.1		57.1	51.2	51.2
Actuated g/C Ratio		0.42	0.42	0.42	0.42		0.47	0.43		0.48	0.43	0.43
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		540	673	203	688		310	1506		326	1510	675
v/s Ratio Prot					0.04		0.01	0.19		c0.01	0.20	
v/s Ratio Perm		c0.40	0.02	0.01			0.08			0.08		0.26
v/c Ratio		0.95	0.02	0.03	0.05		0.18	0.44		0.18	0.46	0.26
Uniform Delay, d1		33.2	20.0	20.1	20.2		18.0	24.4		17.8	24.6	22.1
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		26.0	0.0	0.1	0.0		0.3	0.9		0.3	1.0	0.9
Delay (s)		59.3	20.0	20.1	20.3		18.3	25.3		18.1	25.6	23.0
Level of Service		E	B	C	C		B	C		B	C	C
Approach Delay (s)		57.4			20.3			24.7			24.3	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1616		1770	3536		1770	3539	1583
Flt Permitted		0.67	1.00	0.25	1.00		0.18	1.00		0.20	1.00	1.00
Satd. Flow (perm)		1255	1583	459	1616		339	3536		377	3539	1583
Volume (vph)	546	5	16	4	5	37	37	428	2	39	453	508
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	100%
Adj. Flow (vph)	593	9	29	7	9	67	67	777	4	71	822	552
RTOR Reduction (vph)	0	0	15	0	34	0	0	0	0	0	0	353
Lane Group Flow (vph)	0	602	15	7	43	0	67	781	0	71	822	199
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		60.0	60.0	60.0	60.0		48.0	43.3		48.0	43.3	43.3
Effective Green, g(s)		60.0	60.0	60.0	60.0		48.0	43.3		48.0	43.3	43.3
Actuated g/C Ratio		0.50	0.50	0.50	0.50		0.40	0.36		0.40	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
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		628	792	230	808		192	1276		205	1277	571
v/s Ratio Prot					0.05		c0.01	0.22		0.01	0.23	
v/s Ratio Perm		c0.48	0.02	0.02			0.13			0.12		0.35
v/c Ratio		0.96	0.02	0.03	0.05		0.35	0.61		0.35	0.64	0.35
Uniform Delay, d1		28.8	15.1	15.2	15.4		24.4	31.5		24.1	31.9	28.0
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		25.7	0.0	0.1	0.0		1.1	2.2		1.0	2.5	1.7
Delay (s)		54.5	15.1	15.3	15.4		25.5	33.7		25.2	34.4	29.7
Level of Service		D	B	B	B		C	C		C	C	C
Approach Delay (s)		52.7			15.4			33.0			32.2	
Approach LOS		D			B			C			C	

HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.7%	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												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1617		1770	3537		1770	3539	1583
Flt Permitted		0.66	1.00	0.23	1.00		0.12	1.00		0.12	1.00	1.00
Satd. Flow (perm)		1237	1583	432	1617		218	3537		218	3539	1583
Volume (vph)	640	5	16	4	5	37	37	428	2	39	453	513
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%	100%
Adj. Flow (vph)	696	11	34	9	11	79	79	912	4	83	965	558
RTOR Reduction (vph)	0	0	14	0	33	0	0	0	0	0	0	362
Lane Group Flow (vph)	0	707	20	9	57	0	79	916	0	83	965	196
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		69.3	69.3	69.3	69.3		38.7	34.2		38.7	34.2	34.2
Effective Green, g (s)		69.3	69.3	69.3	69.3		38.7	34.2		38.7	34.2	34.2
Actuated g/C Ratio		0.58	0.58	0.58	0.58		0.32	0.29		0.32	0.29	0.29
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		714	914	249	934		129	1008		129	1009	451
v/s Ratio Prot					0.06		0.02	0.26		c0.02	0.27	
v/s Ratio Perm		c0.57	0.02	0.02			0.18			0.18		0.35
v/c Ratio		0.99	0.02	0.04	0.06		0.61	0.91		0.64	0.96	0.44
Uniform Delay, d1		25.0	10.8	10.9	11.1		32.7	41.4		32.3	42.2	35.0
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		31.1	0.0	0.1	0.0		8.3	13.4		10.5	19.6	3.0
Delay (s)		56.1	10.9	11.0	11.1		41.0	54.8		42.8	61.7	38.1
Level of Service		E	B	B	B		D	D		D	E	D
Approach Delay (s)		54.1			11.1			53.7			52.5	
Approach LOS		D			B			D			D	

Intersection Summary			
HCM Average Control Delay	52.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1616		1770	3537		1770	3539	1583
Flt Permitted		0.65	1.00	0.16	1.00		0.12	1.00		0.12	1.00	1.00
Satd. Flow (perm)		1219	1583	295	1616		219	3537		219	3539	1583
Volume (vph)	752	5	16	4	15	37	37	428	2	39	453	602
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%	100%
Adj. Flow (vph)	817	12	40	10	12	92	92	1070	5	98	1132	654
RTOR Reduction (vph)	0	0	16	0	38	0	0	0	0	0	0	362
Lane Group Flow (vph)	0	829	24	10	66	0	92	1075	0	98	1132	292
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		70.0	70.0	70.0	70.0		38.0	34.0		38.0	34.0	34.0
Effective Green, g (s)		70.0	70.0	70.0	70.0		38.0	34.0		38.0	34.0	34.0
Actuated g/C Ratio		0.58	0.58	0.58	0.58		0.32	0.28		0.32	0.28	0.28
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		711	926	172	943		121	1002		121	1003	449
v/s Ratio Prot					0.06		0.03	0.30		c0.03	0.32	
v/s Ratio Perm		c0.68	0.03	0.03			0.22			0.23		0.41
v/c Ratio		1.17	0.03	0.06	0.07		0.76	1.07		0.81	1.13	0.65
Uniform Delay, d1		25.0	10.6	10.8	10.9		59.1	43.0		59.4	43.0	37.8
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		89.5	0.0	0.1	0.0		24.1	50.1		31.5	70.8	7.1
Delay (s)		114.5	10.6	10.9	10.9		83.2	93.1		90.9	113.8	44.9
Level of Service		F	B	B	B		F	F		F	F	D
Approach Delay (s)		109.7			10.9			92.3			88.7	
Approach LOS		F			B			F			F	

Intersection Summary			
HCM Average Control Delay	92.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1646		1770	3537		1770	3539	1583
Flt Permitted		0.69	1.00	0.27	1.00		0.36	1.00		0.37	1.00	1.00
Satd. Flow (perm)		1290	1583	507	1646		679	3537		690	3539	1583
Volume (vph)	372	6	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	404	7	21	9	11	38	41	613	2	37	591	423
RTOR Reduction (vph)	0	0	14	0	25	0	0	0	0	0	0	205
Lane Group Flow (vph)	0	409	7	9	24	0	41	615	0	37	591	218
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		40.5	40.5	40.5	40.5		68.8	63.1		66.2	61.8	61.8
Effective Green, g (s)		40.5	40.5	40.5	40.5		68.8	63.1		66.2	61.8	61.8
Actuated g/C Ratio		0.34	0.34	0.34	0.34		0.57	0.53		0.55	0.52	0.52
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		435	534	171	556		441	1860		420	1823	815
v/s Ratio Prot					0.03		c0.00	0.17		0.00	0.17	
v/s Ratio Perm		c0.32	0.01	0.02			0.05			0.05		0.27
v/c Ratio		0.94	0.01	0.05	0.04		0.09	0.33		0.09	0.32	0.27
Uniform Delay, d1		38.6	26.5	26.8	26.7		11.6	16.3		12.5	16.9	16.4
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		28.5	0.0	0.1	0.0		0.1	0.5		0.1	0.5	0.8
Delay (s)		67.1	26.5	26.9	26.8		11.7	16.8		12.6	17.4	17.2
Level of Service		E	C	C	C		B	B		B	B	B
Approach Delay (s)		65.1			26.8			16.5			17.1	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	26.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1645		1770	3538		1770	3539	1583
Flt Permitted		0.69	1.00	0.27	1.00		0.35	1.00		0.36	1.00	1.00
Satd. Flow (perm)		1290	1583	502	1645		655	3538		666	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth factor (vph)	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%
Adj. Flow (vph)	416	6	21	9	11	39	43	631	2	38	609	436
RTOR Reduction (vph)	0	0	14	0	25	0	0	0	0	0	0	217
Lane Group Flow (vph)	0	422	7	9	25	0	43	633	0	38	609	219
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		41.8	41.8	41.8	41.8		67.5	61.7		64.9	60.4	60.4
Effective Green, g (s)		41.8	41.8	41.8	41.8		67.5	61.7		64.9	60.4	60.4
Actuated g/C Ratio		0.35	0.35	0.35	0.35		0.56	0.51		0.54	0.50	0.50
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		449	551	175	573		422	1819		402	1781	797
v/s Ratio Prot					0.03		c0.00	0.18		0.00	0.17	
v/s Ratio Perm		c0.33	0.01	0.02			0.05			0.05		0.28
v/c Ratio		0.94	0.01	0.05	0.04		0.10	0.35		0.09	0.34	0.28
Uniform Delay, d1		37.9	25.6	25.9	25.9		12.2	17.2		13.2	17.9	17.2
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		27.6	0.0	0.1	0.0		0.1	0.5		0.1	0.5	0.9
Delay (s)		65.4	25.6	26.1	25.9		12.3	17.8		13.3	18.4	18.0
Level of Service		E	C	C	C		B	B		B	B	B
Approach Delay (s)		63.6			25.9			17.4			18.1	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1645		1770	3537		1770	3539	1583
Flt Permitted		0.69	1.00	0.25	1.00		0.28	1.00		0.27	1.00	1.00
Satd. Flow (perm)		1277	1583	475	1645		524	3537		499	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%
Adj. Flow (vph)	489	7	25	11	13	46	50	742	3	45	715	512
RTOR Reduction (vph)	0	0	15	0	27	0	0	0	0	0	0	285
Lane Group Flow (vph)	0	496	10	11	32	0	50	745	0	45	715	227
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		48.9	48.9	48.9	48.9		59.2	53.2		59.0	53.1	53.1
Effective Green, g (s)		48.9	48.9	48.9	48.9		59.2	53.2		59.0	53.1	53.1
Actuated g/C Ratio		0.41	0.41	0.41	0.41		0.49	0.44		0.49	0.44	0.44
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		520	645	194	670		321	1568		308	1566	700
v/s Ratio Prot					0.04		c0.01	0.21		0.01	0.20	
v/s Ratio Perm		c0.39	0.02	0.02			0.07			0.06		0.32
v/c Ratio		0.95	0.02	0.06	0.05		0.16	0.48		0.15	0.46	0.32
Uniform Delay, d1		34.5	21.2	21.6	21.5		16.7	23.6		16.8	23.4	21.8
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		28.0	0.0	0.1	0.0		0.2	1.0		0.2	1.0	1.2
Delay (s)		62.5	21.2	21.7	21.5		16.9	24.6		17.1	24.3	23.0
Level of Service		E	C	C	C		B	C		B	C	C
Approach Delay (s)		60.5			21.5			24.1			23.5	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
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												
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	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1644		1770	3537		1770	3539	1583
Flt Permitted		0.68	1.00	0.25	1.00		0.19	1.00		0.17	1.00	1.00
Satd. Flow (perm)		1264	1583	459	1644		349	3537		323	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%
Adj. Flow (vph)	574	8	29	12	15	54	59	871	3	52	840	600
RTOR Reduction (vph)	0	0	15	0	28	0	0	0	0	0	0	371
Lane Group Flow (vph)	0	582	14	12	41	0	59	874	0	52	840	229
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		57.7	57.7	57.7	57.7		50.4	45.9		50.2	45.8	45.8
Effective Green, g (s)		57.7	57.7	57.7	57.7		50.4	45.9		50.2	45.8	45.8
Actuated g/C Ratio		0.48	0.48	0.48	0.48		0.42	0.38		0.42	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
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		608	761	221	790		200	1353		188	1351	604
v/s Ratio Prot					0.04		c0.01	0.25		0.01	0.24	
v/s Ratio Perm		c0.46	0.02	0.03			0.11			0.11		0.38
v/c Ratio		0.96	0.02	0.05	0.05		0.30	0.65		0.28	0.62	0.38
Uniform Delay, d1		30.0	16.3	16.6	16.6		22.8	30.4		23.0	30.1	26.8
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		26.0	0.0	0.1	0.0		0.8	2.4		0.8	2.2	1.8
Delay (s)		55.9	16.3	16.7	16.6		23.6	32.8		23.8	32.2	28.6
Level of Service		E	B	B	B		C	C		C	C	C
Approach Delay (s)		54.0			16.6			32.2			30.5	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM Average Control Delay	35.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	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	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1645		1770	3537		1770	3539	1583
Flt Permitted		0.67	1.00	0.23	1.00		0.10	1.00		0.10	1.00	1.00
Satd. Flow (perm)		1246	1583	429	1645		195	3537		195	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%
Adj. Flow (vph)	675	9	34	15	18	64	69	1024	4	62	987	706
RTOR Reduction (vph)	0	0	15	0	28	0	0	0	0	0	0	437
Lane Group Flow (vph)	0	684	19	15	54	0	69	1028	0	62	987	269
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		66.6	66.6	66.6	66.6		41.4	38.2		41.4	38.2	38.2
Effective Green, g (s)		66.6	66.6	66.6	66.6		41.4	38.2		41.4	38.2	38.2
Actuated g/C Ratio		0.55	0.55	0.55	0.55		0.34	0.32		0.34	0.32	0.32
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		692	879	238	913		109	1126		109	1127	504
v/s Ratio Prot					0.05		c0.02	0.29		0.02	0.28	
v/s Ratio Perm		c0.55	0.02	0.03			0.20			0.18		0.45
v/c Ratio		0.99	0.02	0.06	0.06		0.63	0.91		0.57	0.88	0.53
Uniform Delay, d1		26.3	12.0	12.3	12.3		30.7	39.3		31.0	38.7	33.6
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		31.0	0.0	0.1	0.0		11.4	12.7		6.7	9.6	4.0
Delay (s)		57.3	12.0	12.4	12.3		42.1	52.0		37.6	48.3	37.6
Level of Service		E	B	B	B		D	D		D	D	D
Approach Delay (s)		55.1			12.3			51.3			43.6	
Approach LOS		E			B			D			D	

Intersection Summary			
HCM Average Control Delay	47.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1644		1770	3537		1770	3539	1583
Flt Permitted		0.66	1.00	0.16	1.00		0.11	1.00		0.11	1.00	1.00
Satd. Flow (perm)		1229	1583	298	1644		202	3537		207	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%
Adj. Flow (vph)	793	11	40	17	21	75	81	1202	4	72	1159	829
RTOR Reduction (vph)	0	0	16	0	33	0	0	0	0	0	0	449
Lane Group Flow (vph)	0	804	24	17	64	0	81	1206	0	72	1159	380
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		68.0	68.0	68.0	68.0		40.8	36.8		39.2	36.0	36.0
Effective Green, g (s)		68.0	68.0	68.0	68.0		40.8	36.8		39.2	36.0	36.0
Actuated g/C Ratio		0.57	0.57	0.57	0.57		0.34	0.31		0.33	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
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		696	897	169	932		121	1085		109	1062	475
v/s Ratio Prot					0.06		c0.02	0.34		0.02	0.33	
v/s Ratio Perm		c0.65	0.03	0.06			0.20			0.20		0.52
v/c Ratio		1.16	0.03	0.10	0.07		0.67	1.11		0.66	1.09	0.80
Uniform Delay, d1		26.0	11.4	11.9	11.7		58.8	41.6		59.3	42.0	38.7
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		85.5	0.0	0.3	0.0		13.2	63.3		14.0	56.0	13.3
Delay (s)		111.5	11.4	12.2	11.8		71.9	104.9		73.3	98.0	52.0
Level of Service		F	B	B	B		E	F		E	F	D
Approach Delay (s)		106.8			11.8			102.8			78.6	
Approach LOS		F			B			F			F	

HCM Average Control Delay	89.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1645		1770	3537		1770	3539	1583
Flt Permitted		0.65	1.00	0.06	1.00		0.11	1.00		0.11	1.00	1.00
Satd. Flow (perm)		1207	1583	113	1645		200	3537		207	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%
Adj. Flow (vph)	930	12	48	20	25	88	95	1410	5	85	1360	972
RTOR Reduction (vph)	0	0	17	0	40	0	0	0	0	0	0	448
Lane Group Flow (vph)	0	942	31	20	73	0	95	1415	0	85	1360	524
Turn Type	pm+pt		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		66.0	66.0	66.0	66.0		43.2	37.2		40.8	36.0	36.0
Effective Green, g (s)		66.0	66.0	66.0	66.0		43.2	37.2		40.8	36.0	36.0
Actuated g/C Ratio		0.55	0.55	0.55	0.55		0.36	0.31		0.34	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
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		664	871	62	905		151	1096		133	1062	475
v/s Ratio Prot					0.07		c0.03	0.40		0.03	0.38	
v/s Ratio Perm		c0.78	0.03	0.18			0.20			0.19		0.61
v/c Ratio		1.42	0.04	0.32	0.08		0.63	1.29		0.64	1.28	1.10
Uniform Delay, d1		27.0	12.4	14.8	12.7		57.2	41.4		58.1	42.0	42.0
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		197.2	0.0	3.0	0.0		8.0	137.9		9.7	133.6	72.4
Delay (s)		224.2	12.4	17.8	12.8		65.2	179.3		67.8	175.6	114.4
Level of Service		F	B	B	B		E	F		E	F	F
Approach Delay (s)		213.9			13.5			172.1			147.2	
Approach LOS		F			B			F			F	

Intersection Summary			
HCM Average Control Delay	164.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1646		1770	3537		1770	3539	1583
Flt Permitted		0.69	1.00	0.29	1.00		0.37	1.00		0.38	1.00	1.00
Satd. Flow (perm)		1291	1583	532	1646		695	3537		705	3539	1583
Volume (vph)	335	5	19	8	10	35	38	564	2	34	544	335
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	364	5	21	9	11	38	41	613	2	37	591	364
RTOR Reduction (vph)	0	0	15	0	26	0	0	0	0	0	0	165
Lane Group Flow (vph)	0	369	6	9	23	0	41	615	0	37	591	199
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		36.9	36.9	36.9	36.9		72.4	66.8		69.8	65.5	65.5
Effective Green, g (s)		36.9	36.9	36.9	36.9		72.4	66.8		69.8	65.5	65.5
Actuated g/C Ratio		0.31	0.31	0.31	0.31		0.60	0.56		0.58	0.55	0.55
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		397	487	164	506		469	1969		448	1932	864
v/s Ratio Prot					0.03		c0.00	0.17		0.00	0.17	
v/s Ratio Perm		c0.29	0.01	0.02			0.05			0.05		0.23
v/c Ratio		0.93	0.01	0.05	0.04		0.09	0.31		0.08	0.31	0.23
Uniform Delay, d1		40.3	28.9	29.3	29.2		10.0	14.3		10.9	14.9	14.2
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		27.8	0.0	0.1	0.0		0.1	0.4		0.1	0.4	0.6
Delay (s)		68.1	28.9	29.4	29.2		10.1	14.7		11.0	15.3	14.8
Level of Service		E	C	C	C		B	B		B	B	B
Approach Delay (s)		66.0			29.2			14.4			14.9	
Approach LOS		E			C			B			B	

HCM Average Control Delay	24.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1645		1770	3538		1770	3539	1583
Flt Permitted		0.69	1.00	0.28	1.00		0.36	1.00		0.37	1.00	1.00
Satd. Flow (perm)		1290	1583	525	1645		673	3538		683	3539	1583
Volume (vph)	345	5	19	8	10	35	38	564	2	34	544	345
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	100%
Adj. Flow (vph)	375	6	21	9	11	39	43	631	2	38	609	375
RTOR Reduction (vph)	0	0	14	0	27	0	0	0	0	0	0	174
Lane Group Flow (vph)	0	381	7	9	23	0	43	633	0	38	609	201
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		38.0	38.0	38.0	38.0		71.3	65.6		68.7	64.3	64.3
Effective Green, g (s)		38.0	38.0	38.0	38.0		71.3	65.6		68.7	64.3	64.3
Actuated g/C Ratio		0.32	0.32	0.32	0.32		0.59	0.55		0.57	0.54	0.54
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		409	501	166	521		452	1934		431	1896	848
v/s Ratio Prot					0.03		c0.00	0.18		0.00	0.17	
v/s Ratio Perm		c0.30	0.01	0.02			0.05			0.05		0.24
v/c Ratio		0.93	0.01	0.05	0.04		0.10	0.33		0.09	0.32	0.24
Uniform Delay, d1		39.7	28.1	28.5	28.4		10.5	15.0		11.4	15.6	14.8
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		27.9	0.0	0.1	0.0		0.1	0.5		0.1	0.4	0.7
Delay (s)		67.6	28.1	28.6	28.5		10.6	15.5		11.5	16.1	15.5
Level of Service		E	C	C	C		B	B		B	B	B
Approach Delay (s)		65.6			28.5			15.2			15.7	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1645		1770	3537		1770	3539	1583
Flt Permitted		0.69	1.00	0.27	1.00		0.30	1.00		0.28	1.00	1.00
Satd. Flow (perm)		1278	1583	499	1645		551	3537		527	3539	1583
Volume (vph)	405	5	19	8	10	35	38	564	2	34	544	406
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	121%	121%	121%	121%	121%	121%	121%	121%	121%	121%	100%
Adj. Flow (vph)	440	7	25	11	13	46	50	742	3	45	715	441
RTOR Reduction (vph)	0	0	16	0	29	0	0	0	0	0	0	230
Lane Group Flow (vph)	0	447	9	11	30	0	50	745	0	45	715	211
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		44.6	44.6	44.6	44.6		63.5	57.4		63.3	57.3	57.3
Effective Green, g (s)		44.6	44.6	44.6	44.6		63.5	57.4		63.3	57.3	57.3
Actuated g/C Ratio		0.37	0.37	0.37	0.37		0.53	0.48		0.53	0.48	0.48
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		475	588	185	611		354	1692		340	1690	756
v/s Ratio Prot					0.04		c0.01	0.21		0.01	0.20	
v/s Ratio Perm		c0.35	0.02	0.02			0.07			0.06		0.28
v/c Ratio		0.94	0.02	0.06	0.05		0.14	0.44		0.13	0.42	0.28
Uniform Delay, d1		36.4	23.8	24.2	24.1		14.4	20.7		14.5	20.5	18.9
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		27.1	0.0	0.1	0.0		0.2	0.8		0.2	0.8	0.9
Delay (s)		63.5	23.8	24.4	24.2		14.6	21.5		14.7	21.3	19.8
Level of Service		E	C	C	C		B	C		B	C	B
Approach Delay (s)		61.4			24.2			21.1			20.5	
Approach LOS		E			C			C			C	

HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1644		1770	3537		1770	3539	1583
Flt Permitted		0.68	1.00	0.25	1.00		0.21	1.00		0.20	1.00	1.00
Satd. Flow (perm)		1264	1583	472	1644		392	3537		369	3539	1583
Volume (vph)	476	5	19	8	10	35	38	564	2	34	544	475
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	142%	142%	142%	142%	142%	142%	142%	142%	142%	142%	100%
Adj. Flow (vph)	517	8	29	12	15	54	59	871	3	52	840	516
RTOR Reduction (vph)	0	0	16	0	31	0	0	0	0	0	0	300
Lane Group Flow (vph)	0	525	13	12	38	0	59	874	0	52	840	216
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		52.1	52.1	52.1	52.1		56.1	50.5		55.7	50.3	50.3
Effective Green, g (s)		52.1	52.1	52.1	52.1		56.1	50.5		55.7	50.3	50.3
Actuated g/C Ratio		0.43	0.43	0.43	0.43		0.47	0.42		0.46	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
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		549	687	205	714		248	1488		234	1483	664
v/s Ratio Prot					0.04		c0.01	0.25		0.01	0.24	
v/s Ratio Perm		c0.42	0.02	0.03			0.10			0.09		0.33
v/c Ratio		0.96	0.02	0.06	0.05		0.24	0.59		0.22	0.57	0.33
Uniform Delay, d1		32.8	19.4	19.7	19.7		19.2	26.7		19.5	26.5	23.4
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		27.5	0.0	0.1	0.0		0.5	1.7		0.5	1.6	1.3
Delay (s)		60.4	19.4	19.8	19.7		19.7	28.4		20.0	28.1	24.7
Level of Service		E	B	B	B		B	C		B	C	C
Approach Delay (s)		58.2			19.7			27.9			26.6	
Approach LOS		E			B			C			C	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1645		1770	3537		1770	3539	1583
Flt Permitted		0.67	1.00	0.24	1.00		0.10	1.00		0.09	1.00	1.00
Satd. Flow (perm)		1247	1583	454	1645		195	3537		174	3539	1583
Volume (vph)	559	5	19	8	10	35	88	564	2	34	544	559
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	100%
Adj. Flow (vph)	608	9	34	15	18	64	69	1024	4	62	987	608
RTOR Reduction (vph)	0	0	17	0	31	0	0	0	0	0	0	364
Lane Group Flow (vph)	0	617	17	15	51	0	69	1028	0	62	987	244
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		61.3	61.3	61.3	61.3		46.8	42.9		46.6	42.8	42.8
Effective Green, g (s)		61.3	61.3	61.3	61.3		46.8	42.9		46.6	42.8	42.8
Actuated g/C Ratio		0.51	0.51	0.51	0.51		0.39	0.36		0.39	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
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		637	809	232	840		127	1264		118	1262	565
v/s Ratio Prot					0.05		c0.02	0.29		0.02	0.28	
v/s Ratio Perm		c0.49	0.02	0.03			0.19			0.19		0.38
v/c Ratio		0.97	0.02	0.06	0.06		0.54	0.81		0.53	0.78	0.43
Uniform Delay, d1		28.4	14.5	14.8	14.8		26.8	34.9		27.2	34.4	29.4
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		27.6	0.0	0.1	0.0		4.7	5.8		4.2	4.9	2.4
Delay (s)		56.0	14.5	15.0	14.8		31.5	40.7		31.4	39.3	31.7
Level of Service		E	B	B	B		C	D		C	D	C
Approach Delay (s)		53.9			14.9			40.1			36.2	
Approach LOS		D			B			D			D	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770	1644		1770	3537		1770	3539	1583
Flt Permitted		0.66	1.00	0.20	1.00		0.10	1.00		0.11	1.00	1.00
Satd. Flow (perm)		1229	1583	369	1644		192	3537		196	3539	1583
Volume (vph)	657	5	19	8	10	35	38	564	2	34	544	656
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	196%	196%	196%	196%	196%	196%	196%	196%	196%	196%	100%
Adj. Flow (vph)	714	11	40	17	21	75	81	1202	4	72	1159	713
RTOR Reduction (vph)	0	0	18	0	34	0	0	0	0	0	0	385
Lane Group Flow (vph)	0	725	22	17	62	0	81	1206	0	72	1159	328
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		66.0	66.0	66.0	66.0		42.8	38.8		41.2	38.0	38.0
Effective Green, g (s)		66.0	66.0	66.0	66.0		42.8	38.8		41.2	38.0	38.0
Actuated g/C Ratio		0.55	0.55	0.55	0.55		0.36	0.32		0.34	0.32	0.32
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		676	871	203	904		121	1144		109	1121	501
v/s Ratio Prot					0.06		c0.02	0.34		0.02	0.33	
v/s Ratio Perm		c0.59	0.03	0.05			0.22			0.21		0.45
v/c Ratio		1.07	0.03	0.08	0.07		0.67	1.05		0.66	1.03	0.65
Uniform Delay, d1		27.0	12.3	12.7	12.6		58.8	40.6		59.3	41.0	35.3
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		55.7	0.0	0.2	0.0		13.2	42.1		14.0	36.0	6.5
Delay (s)		82.7	12.3	12.9	12.7		71.9	82.7		73.3	77.0	41.8
Level of Service		F	B	B	B		E	F		E	E	D
Approach Delay (s)		79.0			12.7			82.0			64.0	
Approach LOS		E			B			F			E	

Intersection Summary			
HCM Average Control Delay	71.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1688	1583	1770	1645		1770	3537		1770	3539	1583
Flt Permitted	0.67	0.64	1.00	0.26	1.00		0.07	1.00		0.07	1.00	1.00
Satd. Flow (perm)	1183	1125	1583	487	1645		129	3537		131	3539	1583
Volume (vph)	771	5	19	8	10	35	38	564	2	34	544	770
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	100%	230%	230%	230%	230%	230%	230%	230%	230%	230%	230%	100%
Adj. Flow (vph)	838	12	48	20	25	88	95	1410	5	85	1360	837
RTOR Reduction (vph)	0	0	30	0	55	0	0	0	0	0	0	363
Lane Group Flow (vph)	419	431	18	20	58	0	95	1415	0	85	1360	474
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	44.7	44.7	44.7	44.7	44.7		64.0	57.6		62.6	56.9	56.9
Effective Green, g (s)	44.7	44.7	44.7	44.7	44.7		64.0	57.6		62.6	56.9	56.9
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.37		0.53	0.48		0.52	0.47	0.47
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)	441	419	590	181	613		156	1698		146	1678	751
v/s Ratio Prot					0.07		c0.03	0.40		0.03	0.38	
v/s Ratio Perm	0.35	c0.38	0.03	0.04			0.29			0.28		0.53
v/c Ratio	0.95	1.03	0.03	0.11	0.09		0.61	0.83		0.58	0.81	0.63
Uniform Delay, d1	36.6	37.6	23.9	24.6	24.5		21.9	27.0		22.5	26.9	23.7
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	30.4	51.5	0.0	0.3	0.1		6.6	5.0		5.8	4.4	4.0
Delay (s)	67.0	89.2	23.9	24.9	24.6		28.5	32.0		28.3	31.3	27.7
Level of Service	E	F	C	C	C		C	C		C	C	C
Approach Delay (s)		75.3			24.6			31.8			29.9	
Approach LOS		E			C			C			C	

HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1666		1770	1611		1770	3534		1770	3539	1583
Flt Permitted	0.95	0.96		0.95	1.00		0.29	1.00		0.28	1.00	1.00
Satd. Flow (perm)	1681	1666		1770	1611		542	3534		520	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%
Adj. Flow (vph)	590	22	45	2	5	45	22	759	7	76	808	537
RTOR Reduction (vph)	0	5	0	0	43	0	0	0	0	0	0	242
Lane Group Flow (vph)	336	316	0	2	7	0	22	766	0	76	808	295
Turn Type	Split			Split			pm+pt			pm+pt		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		6
Actuated Green, G (s)	28.5	28.5		5.6	5.6		67.3	63.3		72.5	65.9	65.9
Effective Green, g (s)	28.5	28.5		5.6	5.6		67.3	63.3		72.5	65.9	65.9
Actuated g/C Ratio	0.24	0.24		0.05	0.05		0.56	0.53		0.60	0.55	0.55
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	399	396		83	75		345	1864		383	1944	869
v/s Ratio Prot	c0.20	0.19		0.00	c0.03		0.00	0.22		c0.01	0.23	
v/s Ratio Perm							0.03			0.11		0.34
v/c Ratio	0.84	0.80		0.02	0.09		0.06	0.41		0.20	0.42	0.34
Uniform Delay, d1	43.6	43.0		54.6	54.8		12.2	17.1		10.9	15.8	15.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	14.8	10.7		0.1	0.6		0.1	0.7		0.3	0.7	1.1
Delay (s)	58.4	53.7		54.7	55.3		12.2	17.8		11.1	16.5	16.0
Level of Service	E	D		D	E		B	B		B	B	B
Approach Delay (s)		56.1			55.3			17.6			16.0	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1673		1770	1616		1770	3536		1770	3539	1583
Flt Permitted	0.95	0.96		0.95	1.00		0.26	1.00		0.28	1.00	1.00
Satd. Flow (perm)	1681	1673		1770	1616		487	3536		518	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%
Adj. Flow (vph)	659	9	29	7	9	67	67	777	4	71	822	552
RTOR Reduction (vph)	0	3	0	0	64	0	0	0	0	0	0	270
Lane Group Flow (vph)	360	334	0	7	12	0	67	781	0	71	822	282
Turn Type	Split			Split			pm+pt			pm+pt		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		6
Actuated Green, G (s)	30.1	30.1		6.0	6.0		67.8	61.3		68.0	61.4	61.4
Effective Green, g (s)	30.1	30.1		6.0	6.0		67.8	61.3		68.0	61.4	61.4
Actuated g/C Ratio	0.25	0.25		0.05	0.05		0.56	0.51		0.57	0.51	0.51
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	422	420		89	81		345	1806		362	1811	810
v/s Ratio Prot	c0.21	0.20		0.00	c0.05		0.01	0.22		c0.01	0.23	
v/s Ratio Perm							0.10			0.10		0.35
v/c Ratio	0.85	0.80		0.08	0.15		0.19	0.43		0.20	0.45	0.35
Uniform Delay, d1	42.8	42.1		54.4	54.6		12.8	18.4		12.6	18.6	17.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.3	10.0		0.4	0.9		0.3	0.8		0.3	0.8	1.2
Delay (s)	58.1	52.1		54.7	55.4		13.0	19.2		12.9	19.5	18.6
Level of Service	E	D		D	E		B	B		B	B	B
Approach Delay (s)		55.2			55.4			18.7			18.8	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM Average Control Delay	28.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95	0.95		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1670		1770	1645		1770	3537		1770	3539	1583
Flt Permitted	0.95	0.96		0.95	1.00		0.19	1.00		0.18	1.00	1.00
Satd. Flow (perm)	1681	1670		1770	1645		362	3537		337	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%	167%
Adj. Flow (vph)	675	9	34	15	18	64	69	1024	4	62	987	706
RTOR Reduction (vph)	0	4	0	0	61	0	0	0	0	0	0	349
Lane Group Flow (vph)	371	343	0	15	21	0	69	1028	0	62	987	357
Turn Type	Split			Split			pm+pt			pm+pt		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		6
Actuated Green, G (s)	30.4	30.4		6.5	6.5		67.2	60.8		67.0	60.7	60.7
Effective Green, g (s)	30.4	30.4		6.5	6.5		67.2	60.8		67.0	60.7	60.7
Actuated g/C Ratio	0.25	0.25		0.05	0.05		0.56	0.51		0.56	0.51	0.51
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	426	423		96	89		278	1792		263	1790	801
v/s Ratio Prot	c0.22	0.21		0.01	c0.05		c0.01	0.29		0.01	0.28	
v/s Ratio Perm							0.13			0.12		0.45
v/c Ratio	0.87	0.81		0.16	0.24		0.25	0.57		0.24	0.55	0.45
Uniform Delay, d1	42.9	42.1		54.1	54.4		14.0	20.6		14.3	20.3	18.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	17.4	11.3		0.8	1.4		0.5	1.3		0.5	1.2	1.8
Delay (s)	60.3	53.4		54.9	55.8		14.5	21.9		14.7	21.5	20.7
Level of Service	E	D		D	E		B	C		B	C	C
Approach Delay (s)		56.9			55.7			21.5			21.0	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3197		1770	3064		1770	3534		1770	3539	1583
Flt Permitted	0.95	0.96		0.95	1.00		0.33	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	3197		1770	3064		619	3534		1770	3539	1583
Volume (vph)	325	12	25	1	3	25	12	418	4	42	445	296
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%
Adj. Flow (vph)	565	21	43	2	5	43	21	727	7	73	774	515
RTOR Reduction (vph)	0	9	0	0	41	0	0	1	0	0	0	240
Lane Group Flow (vph)	283	337	0	2	7	0	21	733	0	73	774	275
Turn Type	Split			Split			pm+pt			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2					6
Actuated Green, G (s)	20.1	20.1		3.3	3.3		44.6	42.4		7.3	47.5	47.5
Effective Green, g (s)	20.1	20.1		3.3	3.3		44.6	42.4		7.3	47.5	47.5
Actuated g/C Ratio	0.23	0.23		0.04	0.04		0.50	0.48		0.08	0.53	0.53
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	363	721		66	113		338	1682		145	1887	844
v/s Ratio Prot	c0.18	0.11		0.00	c0.02		0.00	0.21		c0.04	0.22	
v/s Ratio Perm							0.03					0.33
v/c Ratio	0.78	0.47		0.03	0.06		0.06	0.44		0.50	0.41	0.33
Uniform Delay, d1	32.4	29.9		41.4	41.4		11.3	15.4		39.2	12.4	11.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.2	0.5		0.2	0.2		0.1	0.8		2.7	0.7	1.0
Delay (s)	42.6	30.3		41.5	41.6		11.4	16.3		41.9	13.1	12.8
Level of Service	D	C		D	D		B	B		D	B	B
Approach Delay (s)		35.8			41.6			16.1			14.5	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	89.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3206		1770	3074		1770	3537		1770	3539	1583
Flt Permitted	0.95	0.96		0.95	1.00		0.28	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	3206		1770	3074		516	3537		1770	3539	1583
Volume (vph)	363	5	16	4	5	37	37	428	2	39	453	304
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%
Adj. Flow (vph)	631	9	28	7	9	64	64	744	3	68	788	529
RTOR Reduction (vph)	0	5	0	0	61	0	0	0	0	0	0	280
Lane Group Flow (vph)	316	347	0	7	12	0	64	747	0	68	788	249
Turn Type	Split			Split			pm+pt			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2					6
Actuated Green, G (s)	23.2	23.2		4.7	4.7		48.1	42.4		7.4	44.1	44.1
Effective Green, g (s)	23.2	23.2		4.7	4.7		48.1	42.4		7.4	44.1	44.1
Actuated g/C Ratio	0.25	0.25		0.05	0.05		0.51	0.45		0.08	0.47	0.47
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	399	794		89	154		341	1601		140	1666	745
v/s Ratio Prot	c0.20	0.11		0.00	c0.02		0.01	0.21		c0.04	0.22	
v/s Ratio Perm							0.08					0.33
v/c Ratio	0.79	0.44		0.08	0.08		0.19	0.47		0.49	0.47	0.33
Uniform Delay, d1	33.0	29.7		42.4	42.4		12.0	17.8		41.3	16.9	15.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.3	0.4		0.4	0.2		0.3	1.0		2.6	1.0	1.2
Delay (s)	43.3	30.1		42.8	42.7		12.3	18.8		44.0	17.9	16.8
Level of Service	D	C		D	D		B	B		D	B	B
Approach Delay (s)		36.4			42.7			18.3			18.7	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	93.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3203		1770	3124		1770	3538		1770	3539	1583
Flt Permitted	0.95	0.96		0.95	1.00		0.22	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	3203		1770	3124		402	3538		1770	3539	1583
Volume (vph)	372	5	19	8	10	35	38	564	2	34	544	389
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor (vph)	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%	160%
Adj. Flow (vph)	647	9	33	14	17	61	66	981	3	59	946	677
RTOR Reduction (vph)	0	6	0	0	58	0	0	0	0	0	0	345
Lane Group Flow (vph)	324	359	0	14	20	0	66	984	0	59	946	332
Turn Type	Split			Split			pm+pt			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2					6
Actuated Green, G (s)	24.0	24.0		5.0	5.0		50.4	45.9		6.3	47.7	47.7
Effective Green, g (s)	24.0	24.0		5.0	5.0		50.4	45.9		6.3	47.7	47.7
Actuated g/C Ratio	0.25	0.25		0.05	0.05		0.52	0.47		0.06	0.49	0.49
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	398	791		91	161		272	1671		115	1737	777
v/s Ratio Prot	c0.20	0.11		0.01	c0.02		0.01	0.28		c0.03	0.27	
v/s Ratio Perm							0.11					0.43
v/c Ratio	0.81	0.45		0.15	0.13		0.24	0.59		0.51	0.54	0.43
Uniform Delay, d1	34.5	31.0		44.1	44.0		12.7	18.8		44.0	17.2	16.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	12.0	0.4		0.8	0.4		0.5	1.5		3.8	1.2	1.7
Delay (s)	46.5	31.5		44.9	44.4		13.2	20.3		47.8	18.4	17.7
Level of Service	D	C		D	D		B	C		D	B	B
Approach Delay (s)		38.6			44.4			19.8			19.2	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	97.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group