Traffic Impact Assessment (TIA) Appendices

For

MIXED USE, COMMERCIAL & RESIDENTIAL DEVELOPMENT

View Royal, British Columbia

Prepared for

Jeffery Sengara

July 3, 2020

ADDOZ ENGINEERING INC

Clients are Our First Priority

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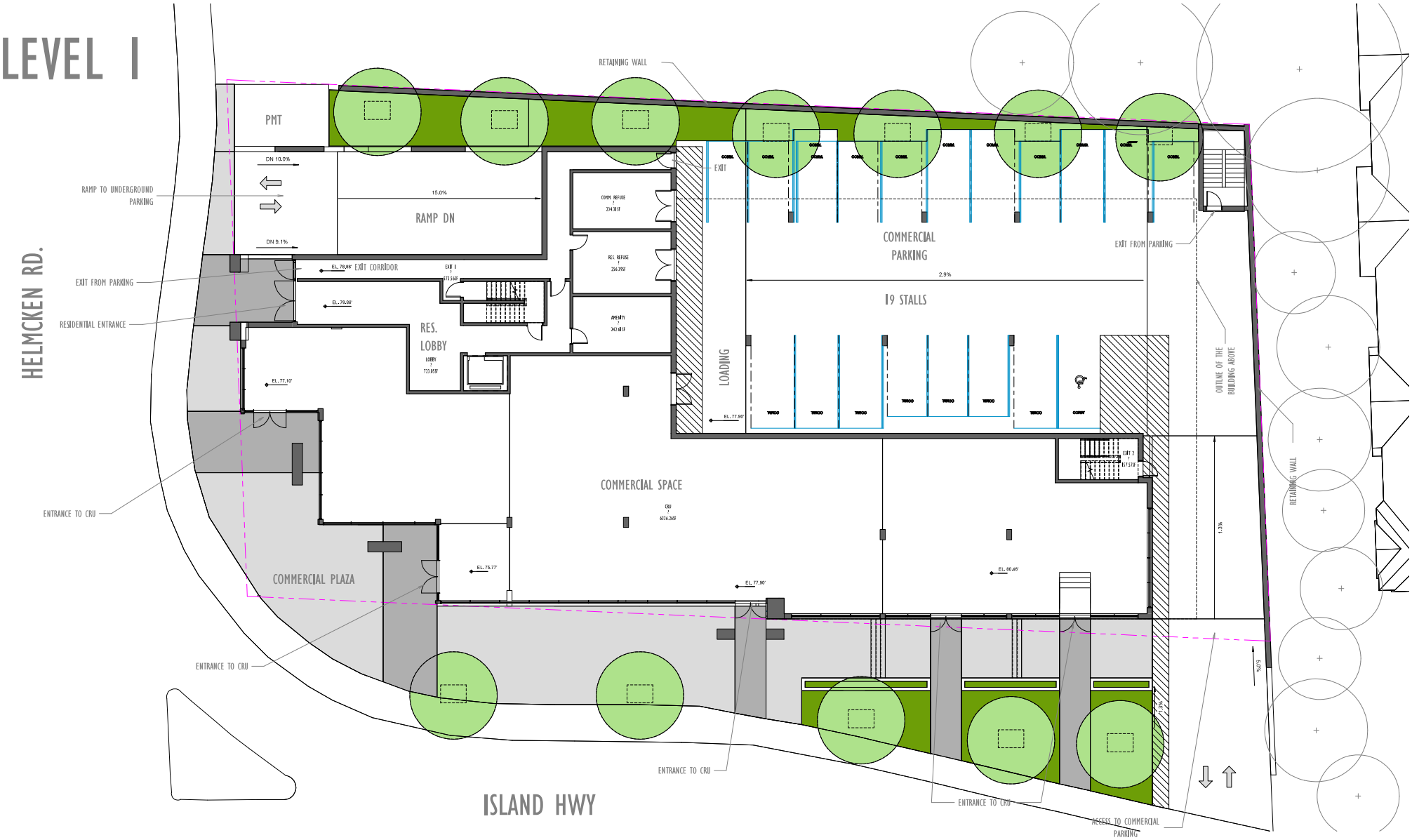
Appendix A

Project Development Site Plan

LEVEL 1


RETAINING WALL
PMT
DN 10.0%
RAMP TO UNDERGROUND PARKING
15.0%
RAMP DN
DN 9.1%
COMM REFUSE
RES REFUSE
EXIT
COMMERCIAL PARKING
EXIT FROM PARKING
EXIT FROM PARKING
EL. 78.84'
EXIT CORRIDOR
EXIT 1
2.9%
19 STALLS
RESIDENTIAL ENTRANCE
EL. 78.88'
RES. LOBBY
AMENITY
HELMCKEN RD.
LOADING
OUTLINE OF THE BUILDING ABOVE
EL. 77.10'
EL. 77.90'
EXIT 2
RETAINING WALL
COMMERCIAL SPACE
CRU
ENTRANCE TO CRU
1.3%
EL. 75.77'
EL. 77.90'
EL. 80.46'
COMMERCIAL PLAZA
ENTRANCE TO CRU
4.5%
1.3%
ENTRANCE TO CRU
ENTRANCE TO CRU
ACCESS TO COMMERCIAL PARKING
ISLAND HWY

Appendix B

Observed 2020 Intersection Turning Movement Traffic Counts

Intersection: #1, Island Highway and Helmcken Road
Count Date: 06/03/2020
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

ADDOZ ENGINEERING INC

ALL VEHICLES

AM Peak Hour Traffic Count at Island Highway and Helmcken Road Intersection

Time Period	Island Highway EB			Island Highway WB			Helmcken Road NB			Helmcken Road SB			Sum	4-P Total	PHF
AM	L	T	R	L	T	R	L	T	R	L	T	R			
7:00 - 7:15	4	160	4	4	67	22	1	5	1	58	5	4	335		
7:15 - 7:30	5	147	2	1	76	23	5	4	0	39	4	1	307		
7:30 - 7:45	3	135	3	1	79	38	1	2	3	58	0	5	328		
7:45 - 8:00	9	129	4	4	87	26	2	5	3	53	1	1	324	1294	
8:00 - 8:15	9	121	2	4	74	27	1	6	2	44	0	2	292	1251	
8:15 - 8:30	16	112	2	4	100	34	6	7	4	41	5	1	332	1276	
8:30 - 8:45	16	134	0	2	104	32	3	9	3	31	1	3	338	1286	
8:45 - 9:00	14	119	3	7	93	21	1	6	7	57	10	12	350	**1312**	**0.94**
Peak Hour	**55**	**486**	**7**	**17**	**371**	**114**	**11**	**28**	**16**	**173**	**16**	**18**	**1312**		
App Total	548			502			55			207			1312		
HV %	**1%**			**1%**			**0%**			**2%**			**1%**		

ALL VEHICLES

PM Peak Hour Traffic Count at Island Highway and Helmcken Road Intersection

Time Period	Island Highway EB			Island Highway WB			Helmcken Road NB			Helmcken Road SB			Sum	4-P Total	PHF
PM	L	T	R	L	T	R	L	T	R	L	T	R			
3:00 – 3:15	**12**	**144**	**2**	**4**	**200**	**45**	**7**	**2**	**5**	**56**	**6**	**9**	**492**		
3:15 – 3:30	**12**	**155**	**5**	**2**	**260**	**43**	**6**	**6**	**4**	**42**	**4**	**3**	**542**		
3:30 – 3:45	**12**	**134**	**3**	**3**	**223**	**39**	**8**	**3**	**1**	**39**	**3**	**8**	**476**		
3:45 – 4:00	**10**	**135**	**3**	**1**	**235**	**33**	**2**	**10**	**1**	**35**	**1**	**10**	**476**	**1986**	**0.90**
4:00 – 4:15	17	125	1	3	196	33	10	7	5	57	4	6	464	1958	
4:15 – 4:30	10	128	3	3	223	38	10	8	5	34	3	8	473	1889	
4:30 – 4:45	9	117	2	4	218	41	3	6	4	34	5	6	449	1862	
4:45 – 5:00	7	135	7	5	204	34	3	9	0	44	4	3	455	1841	
5:00 – 5:15	8	119	0	2	167	17	4	7	4	37	3	12	380	1757	
5:15 – 5:30	9	104	0	2	164	36	3	8	6	36	6	8	382	1666	
5:30 – 5:45	10	78	2	4	116	27	5	0	5	22	4	3	276	1493	
5:45 – 6:00	6	93	3	2	125	24	2	2	0	25	5	6	293	1331	
Peak Hour	**46**	**568**	**13**	**10**	**918**	**160**	**23**	**21**	**11**	**172**	**14**	**30**	**1986**		
App Total	627			1088			55			216			1986		
HV %	**0%**			**1%**			**2%**			**2%**			**1%**		

Intersection: #1, Island Highway and Helmcken Road
Count Date: 06/03/2020
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

ADDOZ ENGINEERING INC

AM Peak Hour BICYCLE AND PEDESTRIAN TRAFFIC

PED AND BIKE Count at Island Highway and Helmcken Road Intersection

Time Period	Island Highway EB				Island Highway WB				Helmcken Road NB				Helmcken Road SB			
AM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
7:00 - 7:15				0				0				1				0
7:15 - 7:30			1	0				0				0				1
7:30 - 7:45				2		1		0				1				0
7:45 - 8:00				2	1			0				2				0
8:00 - 8:15		**3**		**1**				**0**				**1**				**0**
8:15 - 8:30				**1**				**0**				**3**				**1**
8:30 - 8:45		**1**	**1**	**0**				**0**				**1**	**1**			**4**
8:45 - 9:00			**1**	**0**		**1**		**2**				**6**				**1**
Peak Hour	**0**	**4**	**2**	**2**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**11**	**1**	**0**	**0**	**6**

PM Peak Hour BICYCLE AND PEDESTRIAN TRAFFIC

PED AND BIKE Count at Island Highway and Helmcken Road Intersection

Time Period	Island Highway EB				Island Highway WB				Helmcken Road NB				Helmcken Road SB			
PM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
3:00 – 3:15		**2**		**2**		**1**		**0**				**0**				**1**
3:15 – 3:30				**2**			**1**	**0**				**8**				**1**
3:30 – 3:45		**3**		**2**				**3**				**0**			**2**	**4**
3:45 – 4:00				**1**				**0**		**1**		**3**				**0**
4:00 – 4:15				0		3		0				5				3
4:15 – 4:30		**1**		**2**		**1**		**1**				**1**				**0**
4:30 – 4:45				**2**		**1**		**0**		**1**		**2**				**1**
4:45 – 5:00				**0**				**2**				**3**				**1**
5:00 – 5:15				**0**				**3**				**2**				**3**
5:15 – 5:30				1		1		3				1				0
5:30 – 5:45				3				2				5				2
5:45 – 6:00		2	1	1				2				2				0
Peak Hour	**0**	**5**	**0**	**7**	**0**	**1**	**1**	**3**	**0**	**1**	**0**	**11**	**0**	**0**	**2**	**6**

Intersection: #1, Island Highway and Helmcken Road
Count Date: 06/03/2020
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

AM Peak Hour Traffic Count at Island Highway and Helmcken Road Intersection

Time Period	Island Highway EB			Island Highway WB			Helmcken Road NB			Helmcken Road SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15					1	1				3			5
7:15 - 7:30		2			1	2				2			7
7:30 - 7:45		1			0	2				2			**5**
7:45 - 8:00		1			1	1				2			**5**
8:00 - 8:15		**2**			**0**	**2**				**1**			**5**
8:15 - 8:30	**1**	**2**			**0**	**1**				**1**			**5**
8:30 - 8:45		**3**			**1**	**1**				**0**			**5**
8:45 - 9:00					**1**	**0**				**2**	**1**		**4**
Peak Hour	**1**	**7**	**0**	**0**	**2**	**4**	**0**	**0**	**0**	**4**	**1**	**0**	**19**
App Total		**8**			**6**			**0**			**5**		**19**

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

PM Peak Hour Traffic Count at Island Highway and Helmcken Road Intersection

Time Period	Island Highway EB			Island Highway WB			Helmcken Road NB			Helmcken Road SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
3:00 – 3:15		**0**			**1**	**0**				**1**			**2**
3:15 – 3:30		**1**			**1**	**1**				**1**			**4**
3:30 – 3:45		**2**			**0**	**0**	**1**			**1**			**4**
3:45 – 4:00		**0**			**1**	**2**				**0**		**1**	**4**
4:00 – 4:15	1	0			0	1				2			4
4:15 – 4:30		**1**			**1**	**1**				**0**	**1**		**4**
4:30 – 4:45		**2**			**0**	**1**				**0**	**1**		**4**
4:45 – 5:00		**0**			**1**	**1**				**0**			**2**
5:00 – 5:15		**0**			**0**	**1**				**2**			**3**
5:15 – 5:30		0			0	1				0	1		2
5:30 – 5:45		0			0	1				1			2
5:45 – 6:00		0			0	1				0			1
Peak Hour	**0**	**3**	**0**	**0**	**3**	**3**	**1**	**0**	**0**	**3**	**0**	**1**	**14**
App Total		**3**			**6**			**1**			**4**		**14**

Intersection: #1, Island Highway and Helmcken Road
Count Date: 06/03/2020
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

ADDOZ ENGINEERING INC

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

AM Peak Hour Traffic Count at Island Highway and Helmcken Road Intersection

Time Period	Island Highway EB			Island Highway WB			Helmcken Road NB			Helmcken Road SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	4	160	4	4	66	21	1	5	1	55	5	4	330
7:15 - 7:30	5	145	2	1	75	21	5	4	0	37	4	1	**300**
7:30 - 7:45	3	134	3	1	79	36	1	2	3	56	0	5	**323**
7:45 - 8:00	9	128	4	4	86	25	2	5	3	51	1	1	**319**
8:00 - 8:15	**9**	**119**	**2**	**4**	**74**	**25**	**1**	**6**	**2**	**43**	**0**	**2**	**287**
8:15 - 8:30	**15**	**110**	**2**	**4**	**100**	**33**	**6**	**7**	**4**	**40**	**5**	**1**	**327**
8:30 - 8:45	**16**	**131**	**0**	**2**	**103**	**31**	**3**	**9**	**3**	**31**	**1**	**3**	**333**
8:45 - 9:00	**14**	**119**	**3**	**7**	**92**	**21**	**1**	**6**	**7**	**55**	**9**	**12**	**346**
Peak Hour	**54**	**479**	**7**	**17**	**369**	**110**	**11**	**28**	**16**	**169**	**15**	**18**	**1293**
App Total	**540**			**496**			**55**			**202**			**1293**

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

PM Peak Hour Traffic Count at Island Highway and Helmcken Road Intersection

Time Period	Island Highway EB			Island Highway WB			Helmcken Road NB			Helmcken Road SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
3:00 – 3:15	**12**	**144**	**2**	**4**	**199**	**45**	**7**	**2**	**5**	**55**	**6**	**9**	**490**
3:15 – 3:30	**12**	**154**	**5**	**2**	**259**	**42**	**6**	**6**	**4**	**41**	**4**	**3**	**538**
3:30 – 3:45	**12**	**132**	**3**	**3**	**223**	**39**	**7**	**3**	**1**	**38**	**3**	**8**	**472**
3:45 – 4:00	**10**	**135**	**3**	**1**	**234**	**31**	**2**	**10**	**1**	**35**	**1**	**9**	**472**
4:00 – 4:15	16	125	1	3	196	32	10	7	5	55	4	6	460
4:15 – 4:30	10	127	3	3	222	37	10	8	5	34	2	8	469
4:30 – 4:45	9	115	2	4	218	40	3	6	4	34	4	6	445
4:45 – 5:00	7	135	7	5	203	33	3	9	0	44	4	3	453
5:00 – 5:15	8	119	0	2	167	16	4	7	4	35	3	12	377
5:15 – 5:30	9	104	0	2	164	35	3	8	6	36	5	8	380
5:30 – 5:45	10	78	2	4	116	26	5	0	5	21	4	3	274
5:45 – 6:00	6	93	3	2	125	23	2	2	0	25	5	6	292
Peak Hour	**46**	**565**	**13**	**10**	**915**	**157**	**22**	**21**	**11**	**169**	**14**	**29**	**1972**
App Total	**624**			**1082**			**54**			**212**			**1972**

Appendix C

Synchro - HCM 6th Edition Capacity Analysis Reports

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	656	9	23	501	154	15	38	22	234	22	24
Future Volume (veh/h)	74	656	9	23	501	154	15	38	22	234	22	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	698	10	24	533	0	16	40	23	249	23	26
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	362	962	816	277	729		240	180	153	485	265	299
Arrive On Green	0.07	0.51	0.51	0.39	0.39	0.00	0.10	0.10	0.10	0.15	0.33	0.33
Sat Flow, veh/h	1781	1870	1585	741	1870	1585	1356	1870	1585	1781	801	906
Grp Volume(v), veh/h	79	698	10	24	533	0	16	40	23	249	0	49
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	741	1870	1585	1356	1870	1585	1781	0	1707
Q Serve(g_s), s	1.6	19.0	0.2	1.7	16.0	0.0	0.7	1.3	0.9	7.7	0.0	1.3
Cycle Q Clear(g_c), s	1.6	19.0	0.2	12.5	16.0	0.0	0.7	1.3	0.9	7.7	0.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	362	962	816	277	729		240	180	153	485	0	564
V/C Ratio(X)	0.22	0.73	0.01	0.09	0.73		0.07	0.22	0.15	0.51	0.00	0.09
Avail Cap(c_a), veh/h	482	962	816	277	729		481	512	434	556	0	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.6	12.4	7.8	20.4	17.1	0.0	27.1	27.4	27.2	19.9	0.0	15.2
Incr Delay (d2), s/veh	0.4	4.8	0.0	0.2	4.1	0.0	0.2	0.9	0.6	1.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.3	0.0	0.1	1.5	0.0	0.1	0.3	0.2	1.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.1	17.1	7.8	20.6	21.2	0.0	27.3	28.3	27.9	21.1	0.0	15.3
LnGrp LOS	B	B	A	C	C		C	C	C	C	A	B
Approach Vol, veh/h		787			557	A		79			298	
Approach Delay, s/veh		16.5			21.1			28.0			20.1	
Approach LOS		B			C			C			C	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		38.7		27.0	8.2	30.5	15.4	11.6
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 34		36.0	9.0	* 21	12.7	18.0
Max Q Clear Time (g_c+I1), s		21.0		3.3	3.6	18.0	9.7	3.3
Green Ext Time (p_c), s		9.1		0.8	0.2	2.2	0.5	0.6

Intersection Summary	
HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	698	10	24	533	164	16	40	23	249	49
v/c Ratio	0.19	0.69	0.01	0.10	0.65	0.21	0.09	0.17	0.07	0.60	0.09
Control Delay	10.2	18.0	0.0	19.6	26.0	5.2	28.6	29.4	0.4	23.6	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.2	18.0	0.0	19.6	26.0	5.2	28.6	29.4	0.4	23.6	9.1
Queue Length 50th (m)	5.0	70.4	0.0	2.2	65.6	1.0	1.9	4.8	0.0	23.2	1.9
Queue Length 95th (m)	11.8	#122.7	0.0	7.9	#127.2	13.2	7.0	12.9	0.0	40.1	7.8
Internal Link Dist (m)		172.0			124.9			98.3			207.1
Turn Bay Length (m)	35.0		30.0	40.0		35.0	30.0		30.0	55.0	
Base Capacity (vph)	434	1015	911	244	820	784	426	522	549	437	972
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.69	0.01	0.10	0.65	0.21	0.04	0.08	0.04	0.57	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	687	16	12	1111	194	28	25	13	208	17	36
Future Volume (veh/h)	56	687	16	12	1111	194	28	25	13	208	17	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	763	18	13	1234	0	31	28	14	231	19	40
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	1292	1095	392	1151		141	111	94	332	119	251
Arrive On Green	0.04	0.69	0.69	0.62	0.62	0.00	0.06	0.06	0.06	0.12	0.22	0.22
Sat Flow, veh/h	1781	1870	1585	692	1870	1585	1344	1870	1585	1781	537	1130
Grp Volume(v), veh/h	62	763	18	13	1234	0	31	28	14	231	0	59
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	692	1870	1585	1344	1870	1585	1781	0	1667
Q Serve(g_s), s	1.4	24.9	0.4	1.2	71.9	0.0	2.6	1.7	1.0	13.7	0.0	3.3
Cycle Q Clear(g_c), s	1.4	24.9	0.4	17.2	71.9	0.0	2.6	1.7	1.0	13.7	0.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	141	1292	1095	392	1151		141	111	94	332	0	370
V/C Ratio(X)	0.44	0.59	0.02	0.03	1.07		0.22	0.25	0.15	0.70	0.00	0.16
Avail Cap(c_a), veh/h	184	1292	1095	392	1151		247	258	218	332	0	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.7	9.4	5.6	16.2	22.5	0.0	52.9	52.5	52.2	43.8	0.0	36.7
Incr Delay (d2), s/veh	3.1	2.0	0.0	0.0	48.0	0.0	1.1	1.7	1.0	6.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.7	0.0	0.1	22.0	0.0	0.7	0.6	0.3	4.8	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	11.4	5.7	16.3	70.5	0.0	54.0	54.2	53.2	50.7	0.0	37.0
LnGrp LOS	C	B	A	B	F		D	D	D	D	A	D
Approach Vol, veh/h		843			1247	A		73			290	
Approach Delay, s/veh		12.9			69.9			53.9			47.9	
Approach LOS		B			E			D			D	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		85.6		31.2	8.8	76.8	19.0	12.2
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 81		35.1	8.0	* 69	13.7	16.1
Max Q Clear Time (g_c+I1), s		26.9		5.3	3.4	73.9	15.7	4.6
Green Ext Time (p_c), s		28.1		0.9	0.1	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	47.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	62	763	18	13	1234	216	31	28	14	231	59
v/c Ratio	0.35	0.58	0.02	0.04	1.06	0.21	0.29	0.19	0.07	0.79	0.15
Control Delay	14.4	12.4	0.0	11.8	69.4	7.1	58.7	54.0	0.6	60.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	12.4	0.0	11.8	69.4	7.1	58.7	54.0	0.6	60.3	16.8
Queue Length 50th (m)	4.2	87.5	0.0	1.2	~333.1	11.9	7.0	6.3	0.0	47.5	3.5
Queue Length 95th (m)	12.5	132.4	0.0	4.4	#430.4	25.2	16.9	15.5	0.0	#75.3	14.1
Internal Link Dist (m)		172.0			124.9			98.3			207.1
Turn Bay Length (m)	35.0		30.0	40.0		35.0	30.0		30.0	55.0	
Base Capacity (vph)	186	1306	1131	362	1163	1026	186	259	301	293	535
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.58	0.02	0.04	1.06	0.21	0.17	0.11	0.05	0.79	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	656	9	23	501	154	15	38	22	234	22	24
Future Volume (veh/h)	74	656	9	23	501	154	15	38	22	234	22	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	698	10	24	533	0	16	40	23	249	23	26
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	419	1047	887	334	807		248	185	157	392	224	253
Arrive On Green	0.07	0.56	0.56	0.43	0.43	0.00	0.10	0.10	0.10	0.10	0.28	0.28
Sat Flow, veh/h	1781	1870	1585	741	1870	1585	1356	1870	1585	1781	801	906
Grp Volume(v), veh/h	79	698	10	24	533	0	16	40	23	249	0	49
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	741	1870	1585	1356	1870	1585	1781	0	1707
Q Serve(g_s), s	1.4	16.6	0.2	1.5	14.3	0.0	0.7	1.2	0.8	6.1	0.0	1.3
Cycle Q Clear(g_c), s	1.4	16.6	0.2	10.0	14.3	0.0	0.7	1.2	0.8	6.1	0.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	419	1047	887	334	807		248	185	157	392	0	477
V/C Ratio(X)	0.19	0.67	0.01	0.07	0.66		0.06	0.22	0.15	0.64	0.00	0.10
Avail Cap(c_a), veh/h	461	1047	887	334	807		500	532	451	392	0	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.5	9.8	6.2	16.1	14.3	0.0	26.0	26.2	26.1	22.9	0.0	16.9
Incr Delay (d2), s/veh	0.3	3.4	0.0	0.1	2.3	0.0	0.2	0.8	0.6	3.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	0.0	0.1	0.5	0.0	0.1	0.3	0.2	1.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	13.2	6.2	16.3	16.6	0.0	26.1	27.1	26.7	26.7	0.0	17.1
LnGrp LOS	A	B	A	B	B		C	C	C	C	A	B
Approach Vol, veh/h		787			557	A		79			298	
Approach Delay, s/veh		12.7			16.6			26.8			25.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		40.3		23.0	8.1	32.2	11.4	11.6
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 35		29.4	6.0	* 26	6.1	18.0
Max Q Clear Time (g_c+I1), s		18.6		3.3	3.4	16.3	8.1	3.2
Green Ext Time (p_c), s		11.4		0.7	0.1	5.7	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	698	10	24	533	164	16	40	23	249	49
v/c Ratio	0.17	0.62	0.01	0.07	0.55	0.18	0.08	0.17	0.07	0.88	0.12
Control Delay	7.3	12.5	0.0	13.6	16.9	3.3	26.1	26.8	0.4	53.0	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	12.5	0.0	13.6	16.9	3.3	26.1	26.8	0.4	53.0	10.8
Queue Length 50th (m)	3.8	54.6	0.0	1.8	51.7	0.1	1.8	4.4	0.0	24.2	2.0
Queue Length 95th (m)	9.3	95.1	0.0	6.3	#88.2	9.9	6.5	11.9	0.0	#53.0	8.4
Internal Link Dist (m)		172.0			124.9			98.3			207.1
Turn Bay Length (m)	35.0		30.0	40.0		35.0	30.0		30.0	55.0	
Base Capacity (vph)	466	1130	1005	323	965	900	451	552	580	283	844
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.62	0.01	0.07	0.55	0.18	0.04	0.07	0.04	0.88	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	687	16	12	1111	194	28	25	13	208	17	36
Future Volume (veh/h)	56	687	16	12	1111	194	28	25	13	208	17	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	763	18	13	1234	0	31	28	14	231	19	40
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1376	1166	438	1249		125	98	83	274	100	211
Arrive On Green	0.04	0.74	0.74	0.67	0.67	0.00	0.05	0.05	0.05	0.09	0.19	0.19
Sat Flow, veh/h	1781	1870	1585	692	1870	1585	1344	1870	1585	1781	537	1130
Grp Volume(v), veh/h	62	763	18	13	1234	0	31	28	14	231	0	59
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	692	1870	1585	1344	1870	1585	1781	0	1667
Q Serve(g_s), s	1.3	24.0	0.4	1.1	85.0	0.0	3.0	1.9	1.1	12.4	0.0	3.9
Cycle Q Clear(g_c), s	1.3	24.0	0.4	16.2	85.0	0.0	3.0	1.9	1.1	12.4	0.0	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	138	1376	1166	438	1249		125	98	83	274	0	311
V/C Ratio(X)	0.45	0.55	0.02	0.03	0.99		0.25	0.28	0.17	0.84	0.00	0.19
Avail Cap(c_a), veh/h	146	1376	1166	438	1249		207	213	180	274	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.7	7.8	4.7	13.4	21.4	0.0	60.6	60.1	59.7	54.4	0.0	45.2
Incr Delay (d2), s/veh	3.2	1.6	0.0	0.1	22.7	0.0	1.4	2.2	1.3	21.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.6	0.0	0.1	14.8	0.0	0.8	0.8	0.4	7.0	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	9.4	4.7	13.5	44.1	0.0	62.1	62.3	61.1	75.6	0.0	45.6
LnGrp LOS	D	A	A	B	D		E	E	E	E	A	D
Approach Vol, veh/h		843			1247	A		73			290	
Approach Delay, s/veh		11.5			43.8			62.0			69.5	
Approach LOS		B			D			E			E	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		102.0		29.9	9.0	93.0	17.7	12.2
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 97		32.7	6.0	* 88	12.4	15.0
Max Q Clear Time (g_c+I1), s		26.0		5.9	3.3	87.0	14.4	5.0
Green Ext Time (p_c), s		32.2		0.9	0.1	0.5	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	62	763	18	13	1234	216	31	28	14	231	59
v/c Ratio	0.45	0.55	0.02	0.03	0.96	0.19	0.32	0.21	0.07	0.94	0.17
Control Delay	22.5	10.4	0.0	9.4	40.6	6.0	67.8	62.1	0.7	95.1	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	10.4	0.0	9.4	40.6	6.0	67.8	62.1	0.7	95.1	20.2
Queue Length 50th (m)	4.1	85.0	0.0	1.2	~315.6	12.1	8.0	7.2	0.0	56.7	4.1
Queue Length 95th (m)	15.8	126.5	0.0	3.9	#441.5	24.0	18.6	16.9	0.0	#101.1	16.1
Internal Link Dist (m)		172.0			124.9			98.3			207.1
Turn Bay Length (m)	35.0		30.0	40.0		35.0	30.0		30.0	55.0	
Base Capacity (vph)	138	1386	1194	411	1279	1115	154	214	256	245	448
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.55	0.02	0.03	0.96	0.19	0.20	0.13	0.05	0.94	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	684	9	24	526	161	16	40	23	250	24	26
Future Volume (veh/h)	79	684	9	24	526	161	16	40	23	250	24	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	728	10	26	560	0	17	43	24	266	26	28
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	400	1045	885	313	802		250	188	160	391	231	249
Arrive On Green	0.07	0.56	0.56	0.43	0.43	0.00	0.10	0.10	0.10	0.10	0.28	0.28
Sat Flow, veh/h	1781	1870	1585	720	1870	1585	1350	1870	1585	1781	824	887
Grp Volume(v), veh/h	84	728	10	26	560	0	17	43	24	266	0	54
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	720	1870	1585	1350	1870	1585	1781	0	1711
Q Serve(g_s), s	1.5	17.8	0.2	1.7	15.5	0.0	0.7	1.3	0.9	6.1	0.0	1.5
Cycle Q Clear(g_c), s	1.5	17.8	0.2	11.3	15.5	0.0	0.7	1.3	0.9	6.1	0.0	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	400	1045	885	313	802		250	188	160	391	0	480
V/C Ratio(X)	0.21	0.70	0.01	0.08	0.70		0.07	0.23	0.15	0.68	0.00	0.11
Avail Cap(c_a), veh/h	439	1045	885	313	802		497	531	450	391	0	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.9	10.1	6.2	17.2	14.8	0.0	26.0	26.2	26.0	23.3	0.0	16.9
Incr Delay (d2), s/veh	0.4	3.9	0.0	0.2	3.0	0.0	0.2	0.9	0.6	5.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	0.0	0.1	0.7	0.0	0.1	0.3	0.2	1.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.3	14.0	6.2	17.3	17.7	0.0	26.1	27.1	26.6	28.6	0.0	17.1
LnGrp LOS	B	B	A	B	B		C	C	C	C	A	B
Approach Vol, veh/h		822			586	A		84			320	
Approach Delay, s/veh		13.5			17.7			26.8			26.6	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		40.3		23.1	8.2	32.1	11.4	11.7
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 35		29.4	6.0	* 26	6.1	18.0
Max Q Clear Time (g_c+I1), s		19.8		3.5	3.5	17.5	8.1	3.3
Green Ext Time (p_c), s		11.1		0.8	0.1	5.4	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	84	728	10	26	560	171	17	43	24	266	54
v/c Ratio	0.19	0.65	0.01	0.09	0.58	0.19	0.08	0.17	0.07	0.93	0.13
Control Delay	7.5	13.3	0.0	13.9	17.9	3.6	26.1	26.9	0.4	62.0	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	13.3	0.0	13.9	17.9	3.6	26.1	26.9	0.4	62.0	10.8
Queue Length 50th (m)	4.1	58.8	0.0	1.9	55.6	0.6	1.9	4.7	0.0	26.2	2.2
Queue Length 95th (m)	9.9	102.7	0.0	6.8	#105.5	10.7	6.8	12.6	0.0	#59.4	9.0
Internal Link Dist (m)		172.0			52.6			98.3			47.9
Turn Bay Length (m)	35.0		30.0	40.0		35.0	30.0		30.0	55.0	
Base Capacity (vph)	441	1124	1000	296	959	895	454	557	584	285	854
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.65	0.01	0.09	0.58	0.19	0.04	0.08	0.04	0.93	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↱
Traffic Vol, veh/h	0	957	707	2	0	4
Future Vol, veh/h	0	957	707	2	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1040	768	2	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	769
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	401
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	401
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.1
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	401
HCM Lane V/C Ratio	-	-	-	0.011
HCM Control Delay (s)	-	-	-	14.1
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	3	276	3	1	294
Future Vol, veh/h	6	3	276	3	1	294
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	3	300	3	1	320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	624	302	0	0	303	0
Stage 1	302	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	449	738	-	-	1258	-
Stage 1	750	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	449	738	-	-	1258	-
Mov Cap-2 Maneuver	449	-	-	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	734	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	516	1258	-
HCM Lane V/C Ratio	-	-	0.019	0.001	-
HCM Control Delay (s)	-	-	12.1	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	716	17	13	1160	204	29	27	14	220	19	39
Future Volume (veh/h)	64	716	17	13	1160	204	29	27	14	220	19	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	796	19	14	1289	0	32	30	16	244	21	43
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	1376	1166	417	1246		125	99	84	273	102	210
Arrive On Green	0.04	0.74	0.74	0.67	0.67	0.00	0.05	0.05	0.05	0.09	0.19	0.19
Sat Flow, veh/h	1781	1870	1585	670	1870	1585	1338	1870	1585	1781	547	1121
Grp Volume(v), veh/h	71	796	19	14	1289	0	32	30	16	244	0	64
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	670	1870	1585	1338	1870	1585	1781	0	1669
Q Serve(g_s), s	1.5	25.8	0.4	1.3	87.9	0.0	3.1	2.0	1.3	12.4	0.0	4.3
Cycle Q Clear(g_c), s	1.5	25.8	0.4	18.0	87.9	0.0	3.1	2.0	1.3	12.4	0.0	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	130	1376	1166	417	1246		125	99	84	273	0	312
V/C Ratio(X)	0.55	0.58	0.02	0.03	1.03		0.26	0.30	0.19	0.89	0.00	0.21
Avail Cap(c_a), veh/h	136	1376	1166	417	1246		207	213	180	273	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.9	8.0	4.7	14.3	22.0	0.0	60.7	60.2	59.8	55.1	0.0	45.4
Incr Delay (d2), s/veh	5.6	1.8	0.0	0.2	34.7	0.0	1.5	2.4	1.6	29.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.7	0.0	0.1	19.4	0.0	0.9	0.8	0.4	8.0	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	9.8	4.7	14.4	56.7	0.0	62.2	62.6	61.4	84.6	0.0	45.8
LnGrp LOS	D	A	A	B	F		E	E	E	F	A	D
Approach Vol, veh/h		886			1303	A		78			308	
Approach Delay, s/veh		12.2			56.3			62.2			76.5	
Approach LOS		B			E			E			E	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		102.0		30.0	9.2	92.8	17.7	12.3
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 97		32.7	6.0	* 88	12.4	15.0
Max Q Clear Time (g_c+I1), s		27.8		6.3	3.5	89.9	14.4	5.1
Green Ext Time (p_c), s		34.1		1.0	0.1	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	43.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	71	796	19	14	1289	227	32	30	16	244	64
v/c Ratio	0.52	0.57	0.02	0.04	1.01	0.20	0.33	0.22	0.08	0.99	0.18
Control Delay	28.5	10.9	0.0	9.5	50.8	6.2	68.1	62.4	0.9	106.8	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	10.9	0.0	9.5	50.8	6.2	68.1	62.4	0.9	106.8	20.0
Queue Length 50th (m)	4.7	91.5	0.0	1.3	~372.9	13.3	8.2	7.7	0.0	60.4	4.6
Queue Length 95th (m)	19.7	136.8	0.0	4.2	#473.9	25.9	18.8	17.7	0.0	#111.0	16.8
Internal Link Dist (m)		172.0			52.6			98.3			47.9
Turn Bay Length (m)	35.0		30.0	40.0		35.0	30.0		30.0	55.0	
Base Capacity (vph)	137	1385	1193	386	1278	1115	153	214	256	246	451
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.57	0.02	0.04	1.01	0.20	0.21	0.14	0.06	0.99	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↱
Traffic Vol, veh/h	0	950	1375	5	0	2
Future Vol, veh/h	0	950	1375	5	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1033	1495	5	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1498
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	150
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	150
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	29.4
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	150
HCM Lane V/C Ratio	-	-	-	0.014
HCM Control Delay (s)	-	-	-	29.4
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	2	286	9	2	275
Future Vol, veh/h	3	2	286	9	2	275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	2	311	10	2	299

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	619	316	0	0	321	0
Stage 1	316	-	-	-	-	-
Stage 2	303	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	452	724	-	-	1239	-
Stage 1	739	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	451	724	-	-	1239	-
Mov Cap-2 Maneuver	451	-	-	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	531	1239	-
HCM Lane V/C Ratio	-	-	0.01	0.002	-
HCM Control Delay (s)	-	-	11.9	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	684	9	24	522	160	16	40	23	244	23	25
Future Volume (veh/h)	77	684	9	24	522	160	16	40	23	244	23	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	728	10	26	555	0	17	43	24	260	24	27
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	404	1045	886	314	804		249	187	159	391	225	253
Arrive On Green	0.07	0.56	0.56	0.43	0.43	0.00	0.10	0.10	0.10	0.10	0.28	0.28
Sat Flow, veh/h	1781	1870	1585	720	1870	1585	1354	1870	1585	1781	804	904
Grp Volume(v), veh/h	82	728	10	26	555	0	17	43	24	260	0	51
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	720	1870	1585	1354	1870	1585	1781	0	1708
Q Serve(g_s), s	1.4	17.8	0.2	1.7	15.2	0.0	0.7	1.3	0.9	6.1	0.0	1.4
Cycle Q Clear(g_c), s	1.4	17.8	0.2	11.3	15.2	0.0	0.7	1.3	0.9	6.1	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	404	1045	886	314	804		249	187	159	391	0	478
V/C Ratio(X)	0.20	0.70	0.01	0.08	0.69		0.07	0.23	0.15	0.67	0.00	0.11
Avail Cap(c_a), veh/h	444	1045	886	314	804		498	531	450	391	0	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	10.1	6.2	17.1	14.7	0.0	26.0	26.2	26.0	23.2	0.0	16.9
Incr Delay (d2), s/veh	0.3	3.8	0.0	0.2	2.8	0.0	0.2	0.9	0.6	4.8	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	0.0	0.1	0.6	0.0	0.1	0.3	0.2	1.5	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.2	13.9	6.2	17.3	17.5	0.0	26.1	27.1	26.7	27.9	0.0	17.1
LnGrp LOS	B	B	A	B	B		C	C	C	C	A	B
Approach Vol, veh/h		820			581	A		84			311	
Approach Delay, s/veh		13.5			17.4			26.8			26.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		40.3		23.0	8.2	32.1	11.4	11.6
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 35		29.4	6.0	* 26	6.1	18.0
Max Q Clear Time (g_c+I1), s		19.8		3.4	3.4	17.2	8.1	3.3
Green Ext Time (p_c), s		11.1		0.7	0.1	5.4	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	82	728	10	26	555	170	17	43	24	260	51
v/c Ratio	0.18	0.65	0.01	0.09	0.58	0.19	0.09	0.18	0.07	0.91	0.12
Control Delay	7.4	13.3	0.0	13.9	17.7	3.6	26.1	26.9	0.4	58.3	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	13.3	0.0	13.9	17.7	3.6	26.1	26.9	0.4	58.3	10.8
Queue Length 50th (m)	4.0	58.8	0.0	1.9	54.8	0.5	1.9	4.7	0.0	25.5	2.0
Queue Length 95th (m)	9.7	102.7	0.0	6.8	#103.9	10.6	6.8	12.6	0.0	#57.2	8.5
Internal Link Dist (m)		172.0			124.9			98.3			207.1
Turn Bay Length (m)	35.0		30.0	40.0		35.0	30.0		30.0	55.0	
Base Capacity (vph)	446	1126	1002	296	961	897	453	555	583	285	850
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.65	0.01	0.09	0.58	0.19	0.04	0.08	0.04	0.91	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	716	17	13	1158	202	29	26	14	217	18	38
Future Volume (veh/h)	58	716	17	13	1158	202	29	26	14	217	18	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	796	19	14	1287	0	32	29	16	241	20	42
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	1376	1166	417	1248		125	99	84	273	100	211
Arrive On Green	0.04	0.74	0.74	0.67	0.67	0.00	0.05	0.05	0.05	0.09	0.19	0.19
Sat Flow, veh/h	1781	1870	1585	670	1870	1585	1340	1870	1585	1781	538	1129
Grp Volume(v), veh/h	64	796	19	14	1287	0	32	29	16	241	0	62
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	670	1870	1585	1340	1870	1585	1781	0	1667
Q Serve(g_s), s	1.4	25.8	0.4	1.3	88.1	0.0	3.1	2.0	1.3	12.4	0.0	4.1
Cycle Q Clear(g_c), s	1.4	25.8	0.4	18.1	88.1	0.0	3.1	2.0	1.3	12.4	0.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	128	1376	1166	417	1248		125	99	84	273	0	312
V/C Ratio(X)	0.50	0.58	0.02	0.03	1.03		0.26	0.29	0.19	0.88	0.00	0.20
Avail Cap(c_a), veh/h	136	1376	1166	417	1248		207	213	180	273	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	8.0	4.7	14.3	21.9	0.0	60.7	60.1	59.8	54.9	0.0	45.3
Incr Delay (d2), s/veh	4.3	1.8	0.0	0.2	33.7	0.0	1.5	2.3	1.6	27.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.7	0.0	0.1	18.9	0.0	0.9	0.8	0.4	7.8	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	9.8	4.7	14.4	55.7	0.0	62.2	62.5	61.4	82.0	0.0	45.8
LnGrp LOS	D	A	A	B	F		E	E	E	F	A	D
Approach Vol, veh/h		879			1301	A		77			303	
Approach Delay, s/veh		11.9			55.2			62.1			74.6	
Approach LOS		B			E			E			E	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		102.0		30.0	9.0	93.0	17.7	12.3
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 97		32.7	6.0	* 88	12.4	15.0
Max Q Clear Time (g_c+I1), s		27.8		6.1	3.4	90.1	14.4	5.1
Green Ext Time (p_c), s		34.1		0.9	0.1	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	64	796	19	14	1287	224	32	29	16	241	62
v/c Ratio	0.47	0.57	0.02	0.04	1.01	0.20	0.32	0.21	0.08	0.98	0.18
Control Delay	23.9	10.9	0.0	9.5	50.4	6.2	68.0	62.2	0.9	103.8	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	10.9	0.0	9.5	50.4	6.2	68.0	62.2	0.9	103.8	19.9
Queue Length 50th (m)	4.2	91.5	0.0	1.3	~371.8	13.0	8.2	7.4	0.0	59.6	4.3
Queue Length 95th (m)	16.8	136.8	0.0	4.2	#472.7	25.6	18.8	17.5	0.0	#108.2	16.3
Internal Link Dist (m)		172.0			124.9			98.3			207.1
Turn Bay Length (m)	35.0		30.0	40.0		35.0	30.0		30.0	55.0	
Base Capacity (vph)	137	1385	1193	386	1278	1115	153	214	256	246	450
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.57	0.02	0.04	1.01	0.20	0.21	0.14	0.06	0.98	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	775	11	27	592	182	18	45	26	277	26	28
Future Volume (veh/h)	87	775	11	27	592	182	18	45	26	277	26	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	93	824	12	29	630	0	19	48	28	295	28	30
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	1042	883	250	794		252	192	163	389	233	250
Arrive On Green	0.08	0.56	0.56	0.42	0.42	0.00	0.10	0.10	0.10	0.10	0.28	0.28
Sat Flow, veh/h	1781	1870	1585	657	1870	1585	1345	1870	1585	1781	826	885
Grp Volume(v), veh/h	93	824	12	29	630	0	19	48	28	295	0	58
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	657	1870	1585	1345	1870	1585	1781	0	1711
Q Serve(g_s), s	1.6	22.2	0.2	2.3	18.6	0.0	0.8	1.5	1.0	6.1	0.0	1.6
Cycle Q Clear(g_c), s	1.6	22.2	0.2	16.0	18.6	0.0	0.8	1.5	1.0	6.1	0.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	354	1042	883	250	794		252	192	163	389	0	483
V/C Ratio(X)	0.26	0.79	0.01	0.12	0.79		0.08	0.25	0.17	0.76	0.00	0.12
Avail Cap(c_a), veh/h	387	1042	883	250	794		494	530	449	389	0	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.1	11.1	6.3	20.8	15.9	0.0	25.9	26.2	26.0	24.2	0.0	16.9
Incr Delay (d2), s/veh	0.6	6.1	0.0	0.3	5.9	0.0	0.2	1.0	0.7	8.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.8	0.0	0.1	1.3	0.0	0.1	0.3	0.2	2.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.7	17.3	6.3	21.1	21.7	0.0	26.1	27.2	26.7	33.1	0.0	17.1
LnGrp LOS	B	B	A	C	C		C	C	C	C	A	B
Approach Vol, veh/h		929			659	A		95			353	
Approach Delay, s/veh		16.6			21.7			26.8			30.4	
Approach LOS		B			C			C			C	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		40.3		23.2	8.4	31.9	11.4	11.8
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 35		29.4	6.0	* 26	6.1	18.0
Max Q Clear Time (g_c+I1), s		24.2		3.6	3.6	20.6	8.1	3.5
Green Ext Time (p_c), s		9.1		0.8	0.1	3.9	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	93	824	12	29	630	194	19	48	28	295	58
v/c Ratio	0.26	0.74	0.01	0.14	0.71	0.23	0.09	0.19	0.08	1.02	0.13
Control Delay	8.3	16.6	0.0	15.6	22.6	4.6	26.2	27.0	0.5	84.2	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.3	16.6	0.0	15.6	22.6	4.6	26.2	27.0	0.5	84.2	10.8
Queue Length 50th (m)	4.6	73.2	0.0	2.2	66.5	2.2	2.1	5.3	0.0	29.6	2.4
Queue Length 95th (m)	10.8	#148.3	0.0	7.9	#127.2	13.5	7.3	13.6	0.0	#70.7	9.4
Internal Link Dist (m)		172.0			124.9			98.3			207.1
Turn Bay Length (m)	35.0		30.0	40.0		35.0	30.0		30.0	55.0	
Base Capacity (vph)	362	1115	993	207	882	836	451	563	589	288	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.74	0.01	0.14	0.71	0.23	0.04	0.09	0.05	1.02	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	812	19	14	1313	229	33	30	15	246	20	43
Future Volume (veh/h)	66	812	19	14	1313	229	33	30	15	246	20	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	902	21	16	1459	0	37	33	17	273	22	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	1376	1166	351	1246		125	99	84	271	98	213
Arrive On Green	0.04	0.74	0.74	0.67	0.67	0.00	0.05	0.05	0.05	0.09	0.19	0.19
Sat Flow, veh/h	1781	1870	1585	606	1870	1585	1331	1870	1585	1781	523	1142
Grp Volume(v), veh/h	73	902	21	16	1459	0	37	33	17	273	0	70
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	606	1870	1585	1331	1870	1585	1781	0	1665
Q Serve(g_s), s	1.6	32.5	0.5	1.8	87.9	0.0	3.6	2.2	1.4	12.4	0.0	4.7
Cycle Q Clear(g_c), s	1.6	32.5	0.5	25.1	87.9	0.0	3.6	2.2	1.4	12.4	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	130	1376	1166	351	1246		125	99	84	271	0	311
V/C Ratio(X)	0.56	0.66	0.02	0.05	1.17		0.30	0.33	0.20	1.01	0.00	0.22
Avail Cap(c_a), veh/h	136	1376	1166	351	1246		206	213	180	271	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.9	8.9	4.7	17.7	22.0	0.0	60.9	60.3	59.8	56.2	0.0	45.5
Incr Delay (d2), s/veh	6.2	2.5	0.0	0.2	85.8	0.0	1.9	2.8	1.7	57.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.9	0.0	0.2	37.0	0.0	1.0	0.9	0.5	11.2	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	11.4	4.7	17.9	107.9	0.0	62.7	63.0	61.5	113.3	0.0	46.0
LnGrp LOS	D	B	A	B	F		E	E	E	F	A	D
Approach Vol, veh/h		996			1475	A		87			343	
Approach Delay, s/veh		13.5			106.9			62.6			99.5	
Approach LOS		B			F			E			F	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		102.0		30.0	9.2	92.8	17.7	12.3
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 97		32.7	6.0	* 88	12.4	15.0
Max Q Clear Time (g_c+I1), s		34.5		6.7	3.6	89.9	14.4	5.6
Green Ext Time (p_c), s		39.1		1.1	0.1	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	72.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	73	902	21	16	1459	254	37	33	17	273	70
v/c Ratio	0.53	0.65	0.02	0.05	1.15	0.23	0.36	0.23	0.09	1.09	0.19
Control Delay	30.2	13.0	0.1	10.1	99.1	6.9	69.1	62.2	0.9	131.3	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	13.0	0.1	10.1	99.1	6.9	69.1	62.2	0.9	131.3	19.2
Queue Length 50th (m)	5.0	117.2	0.0	1.5	~470.3	16.4	9.6	8.5	0.0	~72.3	4.8
Queue Length 95th (m)	20.6	176.7	0.0	4.7	#576.3	30.8	21.1	19.1	0.0	#131.4	17.5
Internal Link Dist (m)		172.0			124.9			98.3			207.1
Turn Bay Length (m)	35.0		30.0	40.0		35.0	30.0		30.0	55.0	
Base Capacity (vph)	137	1380	1189	311	1274	1111	151	213	255	250	453
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.65	0.02	0.05	1.15	0.23	0.25	0.15	0.07	1.09	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	775	11	27	592	182	18	45	26	277	26	28
Future Volume (veh/h)	87	775	11	27	592	182	18	45	26	277	26	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	93	824	12	29	630	0	19	48	28	295	28	30
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	469	1059	15	80	1494		200	155	131	436	247	265
Arrive On Green	0.06	0.58	0.58	0.47	0.47	0.00	0.08	0.08	0.08	0.15	0.30	0.30
Sat Flow, veh/h	1781	1839	27	69	3195	1585	1345	1870	1585	1781	826	885
Grp Volume(v), veh/h	93	0	836	335	324	0	19	48	28	295	0	58
Grp Sat Flow(s),veh/h/ln	1781	0	1866	1648	1617	1585	1345	1870	1585	1781	0	1711
Q Serve(g_s), s	2.0	0.0	28.2	0.5	10.9	0.0	1.1	2.0	1.3	12.0	0.0	2.0
Cycle Q Clear(g_c), s	2.0	0.0	28.2	19.8	10.9	0.0	1.1	2.0	1.3	12.0	0.0	2.0
Prop In Lane	1.00		0.01	0.09		1.00	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	469	0	1074	818	756		200	155	131	436	0	512
V/C Ratio(X)	0.20	0.00	0.78	0.41	0.43		0.10	0.31	0.21	0.68	0.00	0.11
Avail Cap(c_a), veh/h	493	0	1074	818	756		335	343	291	436	0	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.6	0.0	13.3	14.2	14.5	0.0	34.9	35.3	35.0	27.0	0.0	20.8
Incr Delay (d2), s/veh	0.3	0.0	5.6	1.5	1.8	0.0	0.3	1.6	1.1	4.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.7	1.1	1.1	0.0	0.2	0.6	0.3	2.9	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.9	0.0	18.9	15.7	16.3	0.0	35.2	36.9	36.1	31.7	0.0	20.9
LnGrp LOS	A	A	B	B	B		D	D	D	C	A	C
Approach Vol, veh/h		929			659	A		95			353	
Approach Delay, s/veh		18.0			16.0			36.3			29.9	
Approach LOS		B			B			D			C	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		52.0		29.8	8.9	43.1	17.7	12.1
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 47		32.7	6.4	* 37	12.4	15.0
Max Q Clear Time (g_c+I1), s		30.2		4.0	4.0	21.8	14.0	4.0
Green Ext Time (p_c), s		13.2		0.9	0.1	9.4	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	93	836	659	194	19	48	28	295	58
v/c Ratio	0.21	0.76	0.43	0.22	0.13	0.24	0.10	0.78	0.11
Control Delay	9.3	19.9	16.4	3.1	36.0	37.4	0.7	39.8	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	19.9	16.4	3.1	36.0	37.4	0.7	39.8	12.3
Queue Length 50th (m)	6.0	96.6	37.3	0.0	2.8	7.2	0.0	38.3	3.1
Queue Length 95th (m)	13.1	158.3	54.4	11.1	9.0	17.0	0.0	#66.4	10.9
Internal Link Dist (m)		64.2	124.9			98.3			207.1
Turn Bay Length (m)	35.0			35.0	30.0		30.0	55.0	
Base Capacity (vph)	452	1100	1549	883	249	347	402	380	716
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.76	0.43	0.22	0.08	0.14	0.07	0.78	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	812	19	14	1313	229	33	30	15	246	20	43
Future Volume (veh/h)	66	812	19	14	1313	229	33	30	15	246	20	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	902	21	16	1459	0	37	33	17	273	22	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	1093	25	52	1710		199	156	132	405	144	314
Arrive On Green	0.06	0.60	0.60	0.50	0.50	0.00	0.08	0.08	0.08	0.13	0.28	0.28
Sat Flow, veh/h	1781	1820	42	14	3443	1585	1331	1870	1585	1781	523	1142
Grp Volume(v), veh/h	73	0	923	787	688	0	37	33	17	273	0	70
Grp Sat Flow(s),veh/h/ln	1781	0	1863	1840	1617	1585	1331	1870	1585	1781	0	1665
Q Serve(g_s), s	1.5	0.0	32.1	5.8	30.5	0.0	2.1	1.3	0.8	10.4	0.0	2.6
Cycle Q Clear(g_c), s	1.5	0.0	32.1	30.3	30.5	0.0	2.1	1.3	0.8	10.4	0.0	2.6
Prop In Lane	1.00		0.02	0.02		1.00	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	239	0	1118	959	803		199	156	132	405	0	458
V/C Ratio(X)	0.31	0.00	0.83	0.82	0.86		0.19	0.21	0.13	0.67	0.00	0.15
Avail Cap(c_a), veh/h	273	0	1118	959	803		332	343	291	405	0	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	13.0	17.9	18.0	0.0	35.4	35.0	34.8	28.6	0.0	22.4
Incr Delay (d2), s/veh	1.0	0.0	7.0	7.8	11.4	0.0	0.6	1.0	0.6	4.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.2	3.7	3.9	0.0	0.4	0.4	0.2	2.8	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	0.0	20.0	25.7	29.4	0.0	36.0	36.0	35.4	33.5	0.0	22.7
LnGrp LOS	B	A	B	C	C		D	D	D	C	A	C
Approach Vol, veh/h		996			1475	A		87			343	
Approach Delay, s/veh		19.7			27.4			35.9			31.3	
Approach LOS		B			C			D			C	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		54.0		27.8	8.5	45.5	15.7	12.1
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 49		30.7	6.4	* 39	10.4	15.0
Max Q Clear Time (g_c+I1), s		34.1		4.6	3.5	32.5	12.4	4.1
Green Ext Time (p_c), s		12.7		1.1	0.1	6.4	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	73	923	1475	254	37	33	17	273	70
v/c Ratio	0.32	0.81	0.85	0.29	0.26	0.16	0.06	0.81	0.14
Control Delay	11.2	21.2	26.3	7.7	38.8	35.7	0.4	45.2	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	21.2	26.3	7.7	38.8	35.7	0.4	45.2	10.7
Queue Length 50th (m)	4.4	109.5	112.6	10.4	5.6	4.9	0.0	36.3	2.5
Queue Length 95th (m)	10.4	#206.5	#172.2	26.1	14.2	13.0	0.0	#64.8	11.3
Internal Link Dist (m)		172.0	124.9			98.3			207.1
Turn Bay Length (m)	35.0			35.0	30.0		30.0	55.0	
Base Capacity (vph)	229	1145	1733	890	244	343	399	339	661
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.81	0.85	0.29	0.15	0.10	0.04	0.81	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	775	11	27	596	183	18	45	26	283	27	29
Future Volume (veh/h)	89	775	11	27	596	183	18	45	26	283	27	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	824	12	29	634	0	19	48	28	301	29	31
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	467	1059	15	80	1495		200	155	132	436	248	265
Arrive On Green	0.06	0.58	0.58	0.47	0.47	0.00	0.08	0.08	0.08	0.15	0.30	0.30
Sat Flow, veh/h	1781	1839	27	69	3202	1585	1343	1870	1585	1781	827	884
Grp Volume(v), veh/h	95	0	836	337	326	0	19	48	28	301	0	60
Grp Sat Flow(s),veh/h/ln	1781	0	1866	1654	1617	1585	1343	1870	1585	1781	0	1711
Q Serve(g_s), s	2.0	0.0	28.2	0.5	11.0	0.0	1.1	2.0	1.3	12.3	0.0	2.1
Cycle Q Clear(g_c), s	2.0	0.0	28.2	19.7	11.0	0.0	1.1	2.0	1.3	12.3	0.0	2.1
Prop In Lane	1.00		0.01	0.09		1.00	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	467	0	1074	820	755		200	155	132	436	0	512
V/C Ratio(X)	0.20	0.00	0.78	0.41	0.43		0.10	0.31	0.21	0.69	0.00	0.12
Avail Cap(c_a), veh/h	491	0	1074	820	755		334	343	291	436	0	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	0.0	13.3	14.2	14.6	0.0	34.9	35.3	35.0	27.1	0.0	20.8
Incr Delay (d2), s/veh	0.3	0.0	5.6	1.5	1.8	0.0	0.3	1.6	1.1	5.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.7	1.1	1.1	0.0	0.2	0.6	0.3	3.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	0.0	18.9	15.7	16.3	0.0	35.2	36.9	36.1	32.2	0.0	20.9
LnGrp LOS	A	A	B	B	B		D	D	D	C	A	C
Approach Vol, veh/h		931			663	A		95			361	
Approach Delay, s/veh		18.0			16.0			36.3			30.3	
Approach LOS		B			B			D			C	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		52.0		29.8	8.9	43.1	17.7	12.1
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 47		32.7	6.4	* 37	12.4	15.0
Max Q Clear Time (g_c+I1), s		30.2		4.1	4.0	21.7	14.3	4.0
Green Ext Time (p_c), s		13.2		0.9	0.1	9.4	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	95	836	663	195	19	48	28	301	60
v/c Ratio	0.21	0.76	0.43	0.22	0.13	0.24	0.10	0.79	0.11
Control Delay	9.4	19.9	16.4	3.1	36.0	37.4	0.7	41.0	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	19.9	16.4	3.1	36.0	37.4	0.7	41.0	12.4
Queue Length 50th (m)	6.2	96.6	37.6	0.0	2.8	7.2	0.0	39.2	3.2
Queue Length 95th (m)	13.3	158.3	54.8	11.2	9.0	17.0	0.0	#69.2	11.1
Internal Link Dist (m)		64.8	52.6			98.3			47.9
Turn Bay Length (m)	35.0			35.0	30.0		30.0	55.0	
Base Capacity (vph)	450	1099	1548	883	249	347	402	380	718
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.76	0.43	0.22	0.08	0.14	0.07	0.79	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↱
Traffic Vol, veh/h	0	1084	802	2	0	4
Future Vol, veh/h	0	1084	802	2	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1178	872	2	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	873
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	349
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	349
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	349
HCM Lane V/C Ratio	-	-	-	0.012
HCM Control Delay (s)	-	-	-	15.4
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	3	314	3	1	333
Future Vol, veh/h	6	3	314	3	1	333
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	3	341	3	1	362

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	707	343	0	0	344	0
Stage 1	343	-	-	-	-	-
Stage 2	364	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	402	700	-	-	1215	-
Stage 1	719	-	-	-	-	-
Stage 2	703	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	402	700	-	-	1215	-
Mov Cap-2 Maneuver	402	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	702	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	468	1215	-
HCM Lane V/C Ratio	-	-	0.021	0.001	-
HCM Control Delay (s)	-	-	12.9	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	812	19	14	1315	231	33	31	15	249	21	44
Future Volume (veh/h)	72	812	19	14	1315	231	33	31	15	249	21	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	902	21	16	1461	0	37	34	17	277	23	49
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	1092	25	52	1703		199	156	132	404	146	312
Arrive On Green	0.06	0.60	0.60	0.49	0.49	0.00	0.08	0.08	0.08	0.13	0.28	0.28
Sat Flow, veh/h	1781	1820	42	14	3443	1585	1328	1870	1585	1781	532	1134
Grp Volume(v), veh/h	80	0	923	788	689	0	37	34	17	277	0	72
Grp Sat Flow(s),veh/h/ln	1781	0	1863	1840	1617	1585	1328	1870	1585	1781	0	1666
Q Serve(g_s), s	1.6	0.0	32.1	6.1	30.7	0.0	2.1	1.4	0.8	10.4	0.0	2.7
Cycle Q Clear(g_c), s	1.6	0.0	32.1	30.5	30.7	0.0	2.1	1.4	0.8	10.4	0.0	2.7
Prop In Lane	1.00		0.02	0.02		1.00	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	241	0	1118	955	800		199	156	132	404	0	459
V/C Ratio(X)	0.33	0.00	0.83	0.83	0.86		0.19	0.22	0.13	0.69	0.00	0.16
Avail Cap(c_a), veh/h	271	0	1118	955	800		332	343	291	404	0	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	13.0	18.1	18.2	0.0	35.4	35.0	34.7	28.8	0.0	22.5
Incr Delay (d2), s/veh	1.1	0.0	7.0	8.1	11.8	0.0	0.6	1.0	0.6	5.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.2	3.8	4.1	0.0	0.4	0.4	0.2	2.9	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	20.0	26.1	30.0	0.0	36.0	36.0	35.4	34.1	0.0	22.7
LnGrp LOS	B	A	B	C	C		D	D	D	C	A	C
Approach Vol, veh/h		1003			1477	A		88			349	
Approach Delay, s/veh		19.7			27.9			35.9			31.7	
Approach LOS		B			C			D			C	

Timer - Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		54.0		27.8	8.6	45.4	15.7	12.1
Change Period (Y+Rc), s		* 4.9		5.3	3.6	* 4.9	5.3	5.3
Max Green Setting (Gmax), s		* 49		30.7	6.4	* 39	10.4	15.0
Max Q Clear Time (g_c+I1), s		34.1		4.7	3.6	32.7	12.4	4.1
Green Ext Time (p_c), s		12.7		1.1	0.1	6.2	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	80	923	1477	257	37	34	17	277	72
v/c Ratio	0.35	0.81	0.85	0.29	0.26	0.17	0.06	0.82	0.15
Control Delay	11.7	21.2	26.4	7.7	38.9	35.8	0.4	46.5	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	21.2	26.4	7.7	38.9	35.8	0.4	46.5	10.7
Queue Length 50th (m)	4.8	109.5	113.0	10.7	5.6	5.1	0.0	36.9	2.6
Queue Length 95th (m)	11.1	#206.5	#172.6	26.5	14.2	13.1	0.0	#67.1	11.6
Internal Link Dist (m)		48.6	52.6			98.3			47.9
Turn Bay Length (m)	35.0			35.0	30.0		30.0	55.0	
Base Capacity (vph)	229	1144	1731	889	244	344	400	338	663
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.81	0.85	0.29	0.15	0.10	0.04	0.82	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↱
Traffic Vol, veh/h	0	1076	1558	5	0	2
Future Vol, veh/h	0	1076	1558	5	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1170	1693	5	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1696
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	115
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	115
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	36.9
HCM LOS			E

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	115
HCM Lane V/C Ratio	-	-	-	0.019
HCM Control Delay (s)	-	-	-	36.9
HCM Lane LOS	-	-	-	E
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	2	325	9	2	311
Future Vol, veh/h	3	2	325	9	2	311
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	2	353	10	2	338

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	700	358	0	0	363	0
Stage 1	358	-	-	-	-	-
Stage 2	342	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	405	686	-	-	1196	-
Stage 1	707	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	404	686	-	-	1196	-
Mov Cap-2 Maneuver	404	-	-	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	718	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	484	1196	-
HCM Lane V/C Ratio	-	-	0.011	0.002	-
HCM Control Delay (s)	-	-	12.5	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-