APPENDIX C

TECHNICAL MEMORANDUM RE: INTERSECTION CONFIGURATIONS AND SIGNAL TIMING PLANS FOR THE SH 7/US 287, SH 7 /75TH STREET, SH 7/95TH STREET INTERSECTIONS

FELSBURG HOLT & ULLEVIG
connecting & enhancing communities

MEMORANDUM

TO: Marc Ambrosi, Boulder County

FROM: D. Holly Buck, PE, PTP, Kevin R. Maddoux, AICP, CEP, Tyler Spurlock, EI

DATE: January 17, 2018

SUBJECT: State Highway 7 Bus Rapid Transit (115138-01)

As part of the SH 7 PEL traffic analysis, various intersection configurations and signal timing plans were reviewed for the US 287, 95th and 75th Street intersections with SH 7. This analysis provided an understanding about what improvements could be implemented to reduce queues and delays along the corridor as well as what enhancements would improve transit travel time and reliability. The analysis year is 2040. The projected traffic volumes were developed using the Denver Regional Council of Government's (DRCOG) 2040 Compass model which includes approved land use and the fiscally constrained transportation network improvements. Synchro version 10 and methodology from the *Highway Capacity Manual* 6th Edition, Transportation Research Board, 2017 were used for the analysis (updated January 17, 2018).

Analysis Summary

Intersection capacity and queuing analyses were conducted for the three signalized study area intersections for the year 2040. The basis of the analysis is the latest count data collected by DRCOG for each intersection. Turning movement counts were projected for the year 2040 and those traffic volumes were analyzed for up to five (5) scenarios per intersection.

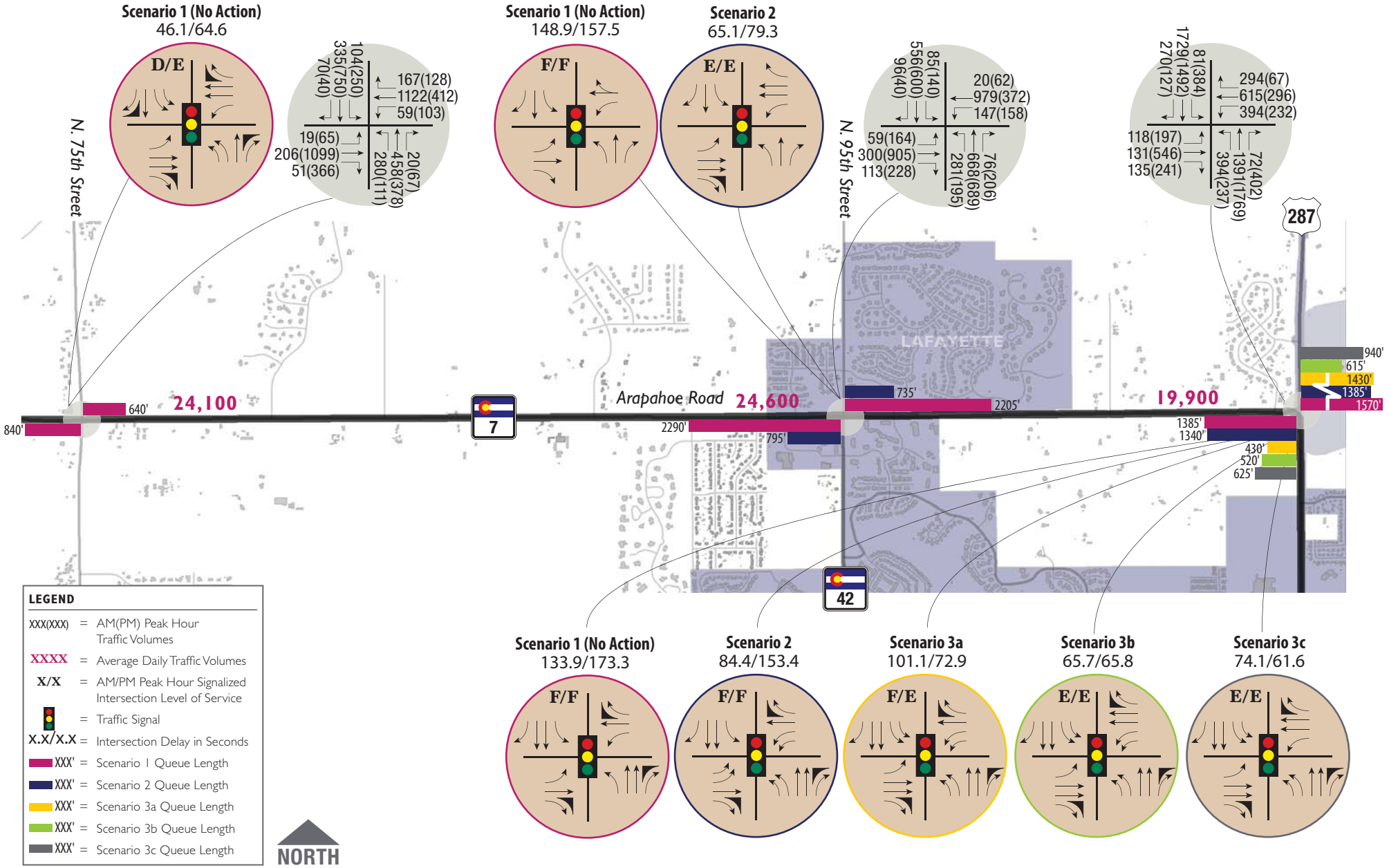
- Scenario 1
    - Each intersection was analyzed with existing lane geometry.
- Scenario 2
    - SH 7 intersections with 95th and US 287 were analyzed with proposed geometric improvements.
- Scenario 3 (a, b, and c)
    - The SH 7 intersection with US 287 was analyzed with additional geometric configurations for the east leg of the intersection.

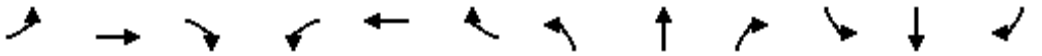
The results of the analyses show that under existing lane geometry the SH 7/75th Street intersection continues to operate acceptably in the 2040, but the intersections of SH 7/95th Street and SH 7/US 287 require geometric improvements to reduce delay and queueing. **Figure 1** shows the traffic volumes, lane geometry, and projected 95th percentile queue lengths along SH 7. The supporting Synchro worksheets are also included as an attachment to this memorandum. These intersection configurations were evaluated as potential options for future consideration. Further evaluation will be required to identify a final recommendation.

SH 7 BUS RAPID TRANSIT STUDY

Figure 1

2040 Traffic Conditions - Geometry Alternatives





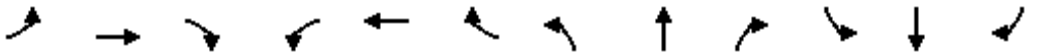
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	206	51	59	1122	167	280	458	20	104	335	70
Future Volume (veh/h)	19	206	51	59	1122	167	280	458	20	104	335	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	21	224	0	64	1220	0	304	498	0	113	364	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1545		554	1598		352	673		157	568	
Arrive On Green	0.01	0.43	0.00	0.03	0.45	0.00	0.10	0.36	0.00	0.05	0.30	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	21	224	0	64	1220	0	304	498	0	113	364	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1728	1870	1585
Q Serve(g_s), s	1.0	5.7	0.0	3.0	43.2	0.0	13.0	34.8	0.0	4.8	25.2	0.0
Cycle Q Clear(g_c), s	1.0	5.7	0.0	3.0	43.2	0.0	13.0	34.8	0.0	4.8	25.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	1545		554	1598		352	673		157	568	
V/C Ratio(X)	0.15	0.15		0.12	0.76		0.86	0.74		0.72	0.64	
Avail Cap(c_a), veh/h	170	1545		554	1598		461	673		184	568	
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.1	25.6	0.0	22.7	34.6	0.0	66.3	41.9	0.0	70.7	45.2	0.0
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	3.5	0.0	10.4	7.2	0.0	8.1	5.5	0.0
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(95%),veh/ln	0.7	4.3	0.0	2.2	25.6	0.0	10.3	24.0	0.0	4.1	18.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	25.8	0.0	22.7	38.1	0.0	76.8	49.0	0.0	78.7	50.7	0.0
LnGrp LOS	C	C		C	D		E	D		E	D	
Approach Vol, veh/h		245	A		1284	A		802	A		477	A
Approach Delay, s/veh		26.1			37.3			59.5			57.3	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	70.2	20.3	50.5	6.7	72.5	11.8	59.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	4.0	64.0	20.0	42.0	4.0	64.0	8.0	54.0
Max Q Clear Time (g_c+I1), s	5.0	7.7	15.0	27.2	3.0	45.2	6.8	36.8
Green Ext Time (p_c), s	0.0	2.7	0.3	1.7	0.0	12.5	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

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



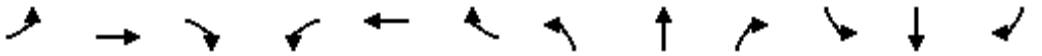
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	300	113	147	979	20	281	668	76	85	556	96
Future Volume (veh/h)	59	300	113	147	979	20	281	668	76	85	556	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	326	123	160	1064	22	305	726	83	92	604	104
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	439	1141	967	184	840	17	214	623	528	71	474	402
Arrive On Green	0.25	0.61	0.61	0.10	0.46	0.46	0.12	0.33	0.33	0.04	0.25	0.25
Sat Flow, veh/h	1781	1870	1585	1781	1826	38	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	64	326	123	160	0	1086	305	726	83	92	604	104
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1864	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.2	12.3	5.3	13.3	0.0	69.0	18.0	50.0	5.5	6.0	38.0	7.9
Cycle Q Clear(g_c), s	4.2	12.3	5.3	13.3	0.0	69.0	18.0	50.0	5.5	6.0	38.0	7.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	439	1141	967	184	0	857	214	623	528	71	474	402
V/C Ratio(X)	0.15	0.29	0.13	0.87	0.00	1.27	1.43	1.16	0.16	1.29	1.27	0.26
Avail Cap(c_a), veh/h	439	1141	967	261	0	857	214	623	528	71	474	402
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	13.8	14.6	66.3	0.0	40.5	66.0	50.0	35.2	72.0	56.0	44.7
Incr Delay (d2), s/veh	0.2	0.6	0.3	19.4	0.0	129.3	217.0	90.7	0.6	203.3	139.3	1.6
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(95%),veh/ln	3.4	9.3	3.4	11.4	0.0	88.2	32.7	54.4	4.1	11.7	52.7	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.3	14.4	14.8	85.7	0.0	169.8	283.0	140.7	35.8	275.3	195.3	46.3
LnGrp LOS	D	B	B	F	A	F	F	F	D	F	F	D
Approach Vol, veh/h		513			1246			1114			800	
Approach Delay, s/veh		18.3			159.0			171.8			185.1	
Approach LOS		B			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.5	98.5	23.0	43.0	44.0	75.0	11.0	55.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.0	6.0	* 6	5.0	5.0
Max Green Setting (Gmax), s	22.0	51.0	18.0	38.0	4.0	* 69	6.0	50.0
Max Q Clear Time (g_c+I1), s	15.3	14.3	20.0	40.0	6.2	71.0	8.0	52.0
Green Ext Time (p_c), s	0.2	2.6	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	148.9
HCM 6th LOS	F

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	131	135	394	615	294	394	1391	72	81	1729	270
Future Volume (veh/h)	118	131	135	394	615	294	394	1391	72	81	1729	270
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	128	142	0	428	668	0	428	1512	0	88	1879	293
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	274		337	486		996	1753		818	1398	623
Arrive On Green	0.03	0.15	0.00	0.16	0.26	0.00	0.56	0.49	0.00	0.46	0.39	0.39
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	128	142	0	428	668	0	428	1512	0	88	1879	293
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.0	10.5	0.0	24.0	39.0	0.0	20.9	56.3	0.0	4.2	59.0	20.6
Cycle Q Clear(g_c), s	5.0	10.5	0.0	24.0	39.0	0.0	20.9	56.3	0.0	4.2	59.0	20.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	274		337	486		996	1753		818	1398	623
V/C Ratio(X)	1.19	0.52		1.27	1.37		0.43	0.86		0.11	1.34	0.47
Avail Cap(c_a), veh/h	107	274		337	486		996	1753		818	1398	623
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.4	59.1	0.0	53.9	55.5	0.0	19.2	33.5	0.0	23.1	45.5	33.9
Incr Delay (d2), s/veh	147.4	1.7	0.0	142.8	180.8	0.0	0.3	5.9	0.0	0.1	159.8	2.5
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(95%),veh/ln	13.8	8.7	0.0	37.1	62.8	0.0	12.9	31.9	0.0	3.1	81.4	13.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	218.8	60.8	0.0	196.7	236.3	0.0	19.5	39.4	0.0	23.1	205.3	36.4
LnGrp LOS	F	E		F	F		B	D		C	F	D
Approach Vol, veh/h		270	A		1096	A		1940	A		2260	
Approach Delay, s/veh		135.7			220.8			35.0			176.3	
Approach LOS		F			F			D			F	

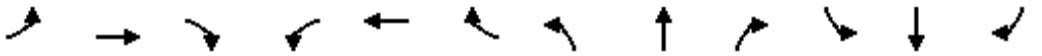
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	74.1	81.0	28.0	28.0	89.1	66.0	11.0	45.0
Change Period (Y+Rc), s	5.0	7.0	4.0	6.0	5.0	7.0	6.0	* 6
Max Green Setting (Gmax), s	10.0	74.0	24.0	20.0	25.0	59.0	5.0	* 39
Max Q Clear Time (g_c+I1), s	6.2	58.3	26.0	12.5	22.9	61.0	7.0	41.0
Green Ext Time (p_c), s	0.0	8.8	0.0	0.3	0.3	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	133.9
HCM 6th LOS	F

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1099	366	103	412	128	111	378	67	250	750	40
Future Volume (veh/h)	65	1099	366	103	412	128	111	378	67	250	750	40
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	1195	0	112	448	0	121	411	0	272	815	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	1208		110	1208		138	748		322	848	
Arrive On Green	0.03	0.34	0.00	0.03	0.34	0.00	0.04	0.40	0.00	0.09	0.45	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	71	1195	0	112	448	0	121	411	0	272	815	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1728	1870	1585
Q Serve(g_s), s	3.9	50.2	0.0	5.0	14.3	0.0	5.2	25.3	0.0	11.6	63.3	0.0
Cycle Q Clear(g_c), s	3.9	50.2	0.0	5.0	14.3	0.0	5.2	25.3	0.0	11.6	63.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	1208		110	1208		138	748		322	848	
V/C Ratio(X)	0.21	0.99		1.02	0.37		0.88	0.55		0.84	0.96	
Avail Cap(c_a), veh/h	338	1208		110	1208		138	748		415	848	
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.4	49.2	0.0	46.1	37.4	0.0	71.6	34.6	0.0	66.9	39.7	0.0
Incr Delay (d2), s/veh	0.3	23.2	0.0	90.8	0.2	0.0	42.1	2.9	0.0	11.9	22.8	0.0
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(95%),veh/ln	3.0	33.5	0.0	8.1	10.5	0.0	5.6	17.7	0.0	9.5	42.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	72.4	0.0	136.9	37.6	0.0	113.7	37.5	0.0	78.9	62.5	0.0
LnGrp LOS	C	E		F	D		F	D		E	E	
Approach Vol, veh/h		1266	A		560	A		532	A		1087	A
Approach Delay, s/veh		70.1			57.4			54.8			66.6	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	65.0	10.0	56.0	11.0	73.0	10.0	56.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	18.0	56.0	5.0	51.0	6.0	68.0	5.0	51.0
Max Q Clear Time (g_c+I1), s	13.6	27.3	7.0	52.2	7.2	65.3	5.9	16.3
Green Ext Time (p_c), s	0.4	2.5	0.0	0.0	0.0	1.3	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	64.6
HCM 6th LOS	E

Notes

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

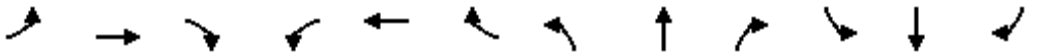
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	905	228	158	372	62	195	689	206	140	600	40
Future Volume (veh/h)	164	905	228	158	372	62	195	689	206	140	600	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	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	178	984	248	172	404	67	212	749	224	152	652	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	332	723	645	119	438	73	154	599	507	119	561	476
Arrive On Green	0.19	0.41	0.41	0.07	0.28	0.28	0.09	0.32	0.32	0.07	0.30	0.30
Sat Flow, veh/h	1781	1777	1585	1781	1564	259	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	178	984	248	172	0	471	212	749	224	152	652	43
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	0	1824	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	13.5	61.0	12.1	10.0	0.0	37.6	13.0	48.0	13.5	10.0	45.0	2.9
Cycle Q Clear(g_c), s	13.5	61.0	12.1	10.0	0.0	37.6	13.0	48.0	13.5	10.0	45.0	2.9
Prop In Lane	1.00		1.00	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	723	645	119	0	511	154	599	507	119	561	476
V/C Ratio(X)	0.54	1.36	0.38	1.45	0.00	0.92	1.37	1.25	0.44	1.28	1.16	0.09
Avail Cap(c_a), veh/h	332	723	645	119	0	632	154	599	507	119	561	476
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	44.5	16.7	70.0	0.0	52.4	68.5	51.0	26.1	70.0	52.5	37.8
Incr Delay (d2), s/veh	1.7	171.7	0.4	242.5	0.0	16.9	203.4	126.5	2.8	175.7	91.3	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(95%),veh/ln	10.4	89.6	8.0	20.5	0.0	26.9	23.3	62.2	9.4	16.9	49.5	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.8	216.2	17.1	312.5	0.0	69.3	271.9	177.5	28.9	245.7	143.8	38.2
LnGrp LOS	E	F	B	F	A	E	F	F	C	F	F	D
Approach Vol, veh/h		1410			643			1185			847	
Approach Delay, s/veh		161.1			134.3			166.3			156.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	53.0	15.0	67.0	18.0	50.0	34.0	48.0
Change Period (Y+Rc), s	5.0	5.0	5.0	6.0	5.0	5.0	6.0	* 6
Max Green Setting (Gmax), s	10.0	48.0	10.0	61.0	13.0	45.0	19.0	* 52
Max Q Clear Time (g_c+I1), s	12.0	50.0	12.0	63.0	15.0	47.0	15.5	39.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.4

Intersection Summary	
HCM 6th Ctrl Delay	157.5
HCM 6th LOS	F

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	546	241	232	296	67	237	1769	402	384	1492	127
Future Volume (veh/h)	197	546	241	232	296	67	237	1769	402	384	1492	127
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	214	593	0	252	322	0	258	1923	0	417	1622	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	436		167	349		190	1398		285	1587	708
Arrive On Green	0.10	0.23	0.00	0.07	0.19	0.00	0.11	0.39	0.00	0.16	0.45	0.45
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	214	593	0	252	322	0	258	1923	0	417	1622	138
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.4	35.0	0.0	10.0	25.4	0.0	16.0	59.0	0.0	24.0	67.0	7.9
Cycle Q Clear(g_c), s	13.4	35.0	0.0	10.0	25.4	0.0	16.0	59.0	0.0	24.0	67.0	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	436		167	349		190	1398		285	1587	708
V/C Ratio(X)	0.93	1.36		1.51	0.92		1.36	1.38		1.46	1.02	0.19
Avail Cap(c_a), veh/h	231	436		167	392		190	1398		285	1587	708
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.1	57.5	0.0	60.0	59.9	0.0	67.0	45.5	0.0	63.0	41.5	25.2
Incr Delay (d2), s/veh	40.0	175.8	0.0	258.5	25.5	0.0	191.3	173.7	0.0	226.7	28.3	0.6
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(95%),veh/ln	15.8	55.4	0.0	21.8	20.6	0.0	26.8	86.0	0.0	43.5	43.8	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.1	233.3	0.0	318.5	85.5	0.0	258.3	219.2	0.0	289.7	69.8	25.8
LnGrp LOS	F	F		F	F		F	F		F	F	C
Approach Vol, veh/h		807	A		574	A		2181	A		2177	
Approach Delay, s/veh		199.3			187.8			223.8			109.1	
Approach LOS		F			F			F			F	

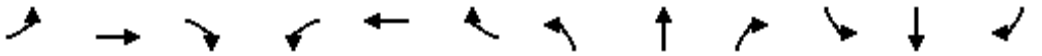
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	66.0	14.0	41.0	21.0	74.0	21.0	34.0
Change Period (Y+Rc), s	5.0	7.0	4.0	6.0	5.0	7.0	6.0	* 6
Max Green Setting (Gmax), s	24.0	59.0	10.0	35.0	16.0	67.0	13.6	* 31
Max Q Clear Time (g_c+I1), s	26.0	61.0	12.0	37.0	18.0	69.0	15.4	27.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	173.3
HCM 6th LOS	F

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	300	113	147	979	20	281	668	76	85	556	96
Future Volume (veh/h)	59	300	113	147	979	20	281	668	76	85	556	96
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	326	0	160	1064	22	305	726	83	92	604	104
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	451	1694		184	1137	507	309	817	693	112	611	518
Arrive On Green	0.25	0.48	0.00	0.10	0.32	0.32	0.17	0.44	0.44	0.06	0.33	0.33
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	64	326	0	160	1064	22	305	726	83	92	604	104
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.2	7.9	0.0	13.3	43.6	1.6	25.6	53.6	4.7	7.7	48.2	7.1
Cycle Q Clear(g_c), s	4.2	7.9	0.0	13.3	43.6	1.6	25.6	53.6	4.7	7.7	48.2	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	451	1694		184	1137	507	309	817	693	112	611	518
V/C Ratio(X)	0.14	0.19		0.87	0.94	0.04	0.99	0.89	0.12	0.82	0.99	0.20
Avail Cap(c_a), veh/h	451	1694		273	1137	507	309	817	693	119	611	518
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	22.6	0.0	66.3	49.5	44.4	61.8	38.9	25.1	69.4	50.2	36.4
Incr Delay (d2), s/veh	0.1	0.3	0.0	17.6	15.1	0.2	47.8	13.7	0.4	33.4	33.7	0.9
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(95%),veh/ln	3.4	6.2	0.0	11.3	29.3	1.1	22.2	36.1	3.4	8.0	36.9	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	22.9	0.0	83.9	64.6	44.5	109.6	52.6	25.4	102.8	83.9	37.3
LnGrp LOS	D	C		F	E	D	F	D	C	F	F	D
Approach Vol, veh/h		390	A		1246			1114			800	
Approach Delay, s/veh		26.2			66.7			66.2			80.0	
Approach LOS		C			E			E			F	

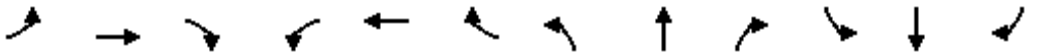
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.5	78.3	31.0	54.0	44.8	54.0	14.5	70.5
Change Period (Y+Rc), s	5.0	6.0	5.0	5.0	6.0	* 6	5.0	5.0
Max Green Setting (Gmax), s	23.0	31.0	26.0	49.0	6.0	* 48	10.0	65.0
Max Q Clear Time (g_c+I1), s	15.3	9.9	27.6	50.2	6.2	45.6	9.7	55.6
Green Ext Time (p_c), s	0.2	2.0	0.0	0.0	0.0	1.6	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	65.1
HCM 6th LOS	E

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	131	135	394	615	294	394	1391	72	81	1729	270
Future Volume (veh/h)	118	131	135	394	615	294	394	1391	72	81	1729	270
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	128	142	0	428	668	0	428	1512	0	88	1879	293
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	361		485	536		2568	4063		95	1564	697
Arrive On Green	0.03	0.19	0.00	0.14	0.29	0.00	0.74	1.00	0.00	0.05	0.44	0.44
Sat Flow, veh/h	3456	1870	1585	3456	1870	1585	3456	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	128	142	0	428	668	0	428	1512	0	88	1879	293
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1728	1870	1585	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.0	9.9	0.0	18.2	43.0	0.0	5.4	0.0	0.0	7.4	66.0	19.0
Cycle Q Clear(g_c), s	5.0	9.9	0.0	18.2	43.0	0.0	5.4	0.0	0.0	7.4	66.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	361		485	536		2568	4063		95	1564	697
V/C Ratio(X)	1.11	0.39		0.88	1.25		0.17	0.37		0.93	1.20	0.42
Avail Cap(c_a), veh/h	115	361		599	536		2568	4063		95	1564	697
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.5	52.8	0.0	63.3	53.5	0.0	5.6	0.0	0.0	70.7	42.0	28.9
Incr Delay (d2), s/veh	116.9	0.7	0.0	12.5	125.6	0.0	0.0	0.3	0.0	68.6	97.2	1.9
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(95%),veh/ln	7.3	8.2	0.0	13.6	55.4	0.0	3.0	0.3	0.0	8.8	67.7	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	189.4	53.5	0.0	75.8	179.1	0.0	5.7	0.3	0.0	139.3	139.2	30.7
LnGrp LOS	F	D		E	F		A	A		F	F	C
Approach Vol, veh/h		270	A		1096	A		1940	A		2260	
Approach Delay, s/veh		117.9			138.8			1.5			125.1	
Approach LOS		F			F			A			F	

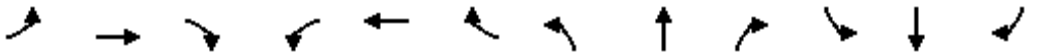
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	180.5	25.0	35.0	120.5	73.0	11.0	49.0
Change Period (Y+Rc), s	5.0	7.0	4.0	6.0	7.0	* 7	6.0	* 6
Max Green Setting (Gmax), s	8.0	72.0	26.0	22.0	14.0	* 66	5.0	* 43
Max Q Clear Time (g_c+I1), s	9.4	2.0	20.2	11.9	7.4	68.0	7.0	45.0
Green Ext Time (p_c), s	0.0	15.2	0.8	0.4	0.8	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	84.4
HCM 6th LOS	F

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	905	228	158	372	62	195	689	206	140	600	40
Future Volume (veh/h)	164	905	228	158	372	62	195	689	206	140	600	40
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	178	984	0	172	404	67	212	749	224	152	652	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	948		178	494	220	226	761	645	154	686	581
Arrive On Green	0.22	0.27	0.00	0.10	0.14	0.14	0.13	0.41	0.41	0.09	0.37	0.37
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	178	984	0	172	404	67	212	749	224	152	652	43
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	13.0	40.0	0.0	14.4	16.6	5.7	17.7	59.4	10.5	12.8	50.8	2.6
Cycle Q Clear(g_c), s	13.0	40.0	0.0	14.4	16.6	5.7	17.7	59.4	10.5	12.8	50.8	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	948		178	494	220	226	761	645	154	686	581
V/C Ratio(X)	0.45	1.04		0.97	0.82	0.30	0.94	0.98	0.35	0.98	0.95	0.07
Avail Cap(c_a), veh/h	394	948		178	734	328	226	761	645	154	686	581
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	55.0	0.0	67.2	62.7	58.1	64.9	44.0	15.9	68.4	46.2	30.9
Incr Delay (d2), s/veh	0.8	39.6	0.0	57.2	4.6	0.8	43.3	29.1	1.5	67.6	24.2	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(95%),veh/ln	9.9	31.7	0.0	14.5	12.4	0.1	16.2	42.9	7.5	13.6	36.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	94.6	0.0	124.4	67.3	58.8	108.2	73.2	17.4	136.0	70.4	31.2
LnGrp LOS	D	F		F	E	E	F	E	B	F	E	C
Approach Vol, veh/h		1162	A		643			1185			847	
Approach Delay, s/veh		88.0			81.7			68.9			80.2	
Approach LOS		F			F			E			F	

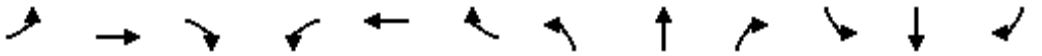
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	66.0	20.0	46.0	24.0	60.0	39.1	26.9
Change Period (Y+Rc), s	5.0	5.0	5.0	6.0	5.0	5.0	6.0	* 6
Max Green Setting (Gmax), s	13.0	61.0	15.0	40.0	19.0	55.0	24.0	* 31
Max Q Clear Time (g_c+I1), s	14.8	61.4	16.4	42.0	19.7	52.8	15.0	18.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.0	0.3	2.3

Intersection Summary	
HCM 6th Ctrl Delay	79.3
HCM 6th LOS	E

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	546	241	232	296	67	237	1769	402	384	1492	127
Future Volume (veh/h)	197	546	241	232	296	67	237	1769	402	384	1492	127
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	214	593	0	252	322	0	258	1923	0	417	1622	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	342	449		207	351		270	1398		285	1689	753
Arrive On Green	0.10	0.24	0.00	0.06	0.19	0.00	0.08	0.39	0.00	0.16	0.48	0.48
Sat Flow, veh/h	3456	1870	1585	3456	1870	1585	3456	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	214	593	0	252	322	0	258	1923	0	417	1622	138
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1728	1870	1585	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	8.9	36.0	0.0	9.0	25.3	0.0	11.2	59.0	0.0	24.0	66.1	7.5
Cycle Q Clear(g_c), s	8.9	36.0	0.0	9.0	25.3	0.0	11.2	59.0	0.0	24.0	66.1	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	342	449		207	351		270	1398		285	1689	753
V/C Ratio(X)	0.63	1.32		1.22	0.92		0.96	1.38		1.46	0.96	0.18
Avail Cap(c_a), veh/h	342	449		207	409		270	1398		285	1689	753
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.9	57.0	0.0	70.5	59.8	0.0	68.9	45.5	0.0	63.0	38.0	22.6
Incr Delay (d2), s/veh	3.5	159.4	0.0	132.7	23.4	0.0	43.1	173.7	0.0	226.7	14.3	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(95%),veh/ln	7.2	53.5	0.0	13.1	20.3	0.0	10.6	86.0	0.0	43.5	39.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.4	216.4	0.0	203.2	83.2	0.0	112.0	219.2	0.0	289.7	52.3	23.1
LnGrp LOS	E	F		F	F		F	F		F	D	C
Approach Vol, veh/h		807	A		574	A		2181	A		2177	
Approach Delay, s/veh		177.2			135.9			206.5			95.9	
Approach LOS		F			F			F			F	

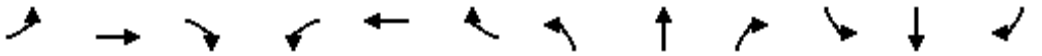
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	66.0	13.0	42.0	16.7	78.3	20.9	34.1
Change Period (Y+Rc), s	5.0	7.0	4.0	6.0	5.0	7.0	6.0	* 6
Max Green Setting (Gmax), s	24.0	59.0	9.0	36.0	11.7	71.3	12.2	* 33
Max Q Clear Time (g_c+I1), s	26.0	61.0	11.0	38.0	13.2	68.1	10.9	27.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.6	0.1	0.8

Intersection Summary	
HCM 6th Ctrl Delay	153.4
HCM 6th LOS	F

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	131	135	394	615	294	394	1391	72	81	1729	270
Future Volume (veh/h)	118	131	135	394	615	294	394	1391	72	81	1729	270
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	128	142	0	428	668	0	428	1512	0	88	1879	293
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	734		485	524		1798	1729		1614	1540	687
Arrive On Green	0.05	0.21	0.00	0.14	0.28	0.00	0.52	0.49	0.00	0.47	0.43	0.43
Sat Flow, veh/h	1781	3554	1585	3456	1870	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	128	142	0	428	668	0	428	1512	0	88	1879	293
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1870	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	8.0	5.0	0.0	18.2	42.0	0.0	10.2	57.0	0.0	2.1	65.0	19.3
Cycle Q Clear(g_c), s	8.0	5.0	0.0	18.2	42.0	0.0	10.2	57.0	0.0	2.1	65.0	19.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	95	734		485	524		1798	1729		1614	1540	687
V/C Ratio(X)	1.35	0.19		0.88	1.28		0.24	0.87		0.05	1.22	0.43
Avail Cap(c_a), veh/h	95	734		599	524		1798	1729		1614	1540	687
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	49.2	0.0	63.3	54.0	0.0	19.7	34.4	0.0	21.9	42.5	29.5
Incr Delay (d2), s/veh	210.8	0.1	0.0	12.5	138.3	0.0	0.1	6.5	0.0	0.0	105.2	1.9
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(95%),veh/ln	15.3	3.9	0.0	13.6	57.2	0.0	7.0	32.5	0.0	1.5	69.6	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	281.8	49.3	0.0	75.8	192.3	0.0	19.8	40.9	0.0	21.9	147.7	31.5
LnGrp LOS	F	D		E	F		B	D		C	F	C
Approach Vol, veh/h		270	A		1096	A		1940	A		2260	
Approach Delay, s/veh		159.5			146.8			36.2			127.7	
Approach LOS		F			F			D			F	

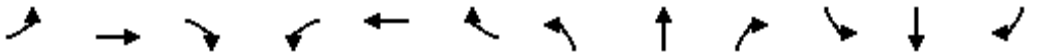
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	76.4	80.0	25.0	37.0	84.4	72.0	14.0	48.0
Change Period (Y+Rc), s	5.0	7.0	4.0	6.0	5.0	7.0	6.0	* 6
Max Green Setting (Gmax), s	5.0	73.0	26.0	24.0	13.0	65.0	8.0	* 42
Max Q Clear Time (g_c+I1), s	4.1	59.0	20.2	7.0	12.2	67.0	10.0	44.0
Green Ext Time (p_c), s	0.0	8.1	0.8	0.6	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	101.1
HCM 6th LOS	F

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	546	241	232	296	67	237	1769	402	384	1492	127
Future Volume (veh/h)	197	546	241	232	296	67	237	1769	402	384	1492	127
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	214	593	0	252	322	0	258	1923	0	417	1622	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	698		276	274		1371	1753		1456	1841	821
Arrive On Green	0.11	0.19	0.00	0.08	0.15	0.00	0.40	0.49	0.00	0.42	0.52	0.52
Sat Flow, veh/h	1781	3741	1585	3456	1870	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	214	593	0	252	322	0	258	1923	0	417	1622	138
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	16.0	23.0	0.0	10.9	22.0	0.0	7.3	74.0	0.0	11.9	60.7	6.9
Cycle Q Clear(g_c), s	16.0	23.0	0.0	10.9	22.0	0.0	7.3	74.0	0.0	11.9	60.7	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	698		276	274		1371	1753		1456	1841	821
V/C Ratio(X)	1.13	0.85		0.91	1.17		0.19	1.10		0.29	0.88	0.17
Avail Cap(c_a), veh/h	190	698		276	274		1371	1753		1456	1841	821
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.0	59.0	0.0	68.5	64.0	0.0	29.5	38.0	0.0	28.6	32.1	19.1
Incr Delay (d2), s/veh	103.3	9.7	0.0	32.0	109.8	0.0	0.1	53.1	0.0	0.1	6.5	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(95%),veh/ln	19.3	17.1	0.0	10.0	27.8	0.0	5.3	57.2	0.0	8.4	34.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	170.3	68.7	0.0	100.5	173.8	0.0	29.6	91.1	0.0	28.7	38.5	19.5
LnGrp LOS	F	E		F	F		C	F		C	D	B
Approach Vol, veh/h		807	A		574	A		2181	A		2177	
Approach Delay, s/veh		95.6			141.6			83.9			35.4	
Approach LOS		F			F			F			D	

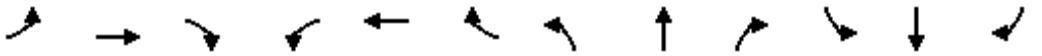
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	68.5	81.0	16.0	34.0	64.8	84.7	22.0	28.0
Change Period (Y+Rc), s	5.0	7.0	4.0	6.0	5.0	7.0	6.0	* 6
Max Green Setting (Gmax), s	16.0	74.0	12.0	26.0	12.3	77.7	16.0	* 22
Max Q Clear Time (g_c+I1), s	13.9	76.0	12.9	25.0	9.3	62.7	18.0	24.0
Green Ext Time (p_c), s	0.3	0.0	0.0	0.4	0.2	9.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	72.9
HCM 6th LOS	E

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	131	135	394	615	294	394	1391	72	81	1729	270
Future Volume (veh/h)	118	131	135	394	615	294	394	1391	72	81	1729	270
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	128	142	0	428	668	0	428	1512	0	88	1879	293
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	119	450		438	616		1369	1990		1161	1777	793
Arrive On Green	0.07	0.13	0.00	0.13	0.17	0.00	0.40	0.56	0.00	0.34	0.50	0.50
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	128	142	0	428	668	0	428	1512	0	88	1879	293
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	10.0	5.5	0.0	18.5	26.0	0.0	12.8	48.9	0.0	2.6	75.0	17.0
Cycle Q Clear(g_c), s	10.0	5.5	0.0	18.5	26.0	0.0	12.8	48.9	0.0	2.6	75.0	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	119	450		438	616		1369	1990		1161	1777	793
V/C Ratio(X)	1.08	0.32		0.98	1.08		0.31	0.76		0.08	1.06	0.37
Avail Cap(c_a), veh/h	119	450		438	616		1369	1990		1161	1777	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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.0	59.6	0.0	65.3	62.0	0.0	31.2	25.3	0.0	33.9	37.5	23.0
Incr Delay (d2), s/veh	105.0	0.4	0.0	37.1	61.3	0.0	0.1	2.8	0.0	0.0	38.4	1.3
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(95%),veh/ln	12.9	4.4	0.0	15.6	24.5	0.0	8.9	26.9	0.0	1.9	52.0	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	175.0	60.0	0.0	102.4	123.3	0.0	31.4	28.1	0.0	34.0	75.9	24.3
LnGrp LOS	F	E		F	F		C	C		C	F	C
Approach Vol, veh/h		270	A		1096	A		1940	A		2260	
Approach Delay, s/veh		114.5			115.1			28.8			67.6	
Approach LOS		F			F			C			E	

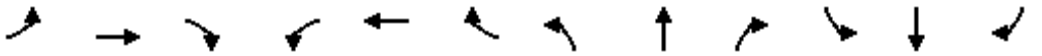
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	55.6	91.0	23.0	25.0	64.6	82.0	16.0	32.0
Change Period (Y+Rc), s	5.0	7.0	4.0	6.0	5.0	7.0	6.0	* 6
Max Green Setting (Gmax), s	8.0	84.0	19.0	17.0	17.0	75.0	10.0	* 26
Max Q Clear Time (g_c+I1), s	4.6	50.9	20.5	7.5	14.8	77.0	12.0	28.0
Green Ext Time (p_c), s	0.1	12.9	0.0	0.4	0.4	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	65.7
HCM 6th LOS	E

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	546	241	232	296	67	237	1769	402	384	1492	127
Future Volume (veh/h)	197	546	241	232	296	67	237	1769	402	384	1492	127
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	214	593	0	252	322	0	258	1923	0	417	1622	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	580		253	373		948	1831		1017	1902	849
Arrive On Green	0.12	0.16	0.00	0.07	0.10	0.00	0.27	0.52	0.00	0.29	0.54	0.54
Sat Flow, veh/h	1781	3741	1585	3456	3741	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	214	593	0	252	322	0	258	1923	0	417	1622	138
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	17.3	23.3	0.0	10.9	12.7	0.0	8.8	77.3	0.0	14.5	58.5	6.6
Cycle Q Clear(g_c), s	17.3	23.3	0.0	10.9	12.7	0.0	8.8	77.3	0.0	14.5	58.5	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	580		253	373		948	1831		1017	1902	849
V/C Ratio(X)	1.04	1.02		0.99	0.86		0.27	1.05		0.41	0.85	0.16
Avail Cap(c_a), veh/h	205	580		253	399		948	1831		1017	1902	849
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	63.4	0.0	69.5	66.5	0.0	42.7	36.4	0.0	42.5	29.8	17.7
Incr Delay (d2), s/veh	74.1	43.1	0.0	54.9	16.7	0.0	0.2	35.6	0.0	0.3	5.1	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(95%),veh/ln	17.9	20.7	0.0	11.0	11.2	0.0	6.6	52.0	0.0	10.1	32.3	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.5	106.5	0.0	124.4	83.2	0.0	42.8	71.9	0.0	42.7	34.9	18.1
LnGrp LOS	F	F		F	F		D	F		D	C	B
Approach Vol, veh/h		807	A		574	A		2181	A		2177	
Approach Delay, s/veh		115.5			101.3			68.5			35.3	
Approach LOS		F			F			E			D	

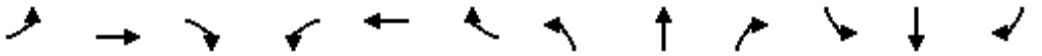
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	49.4	84.3	15.0	29.3	46.4	87.3	23.3	21.0
Change Period (Y+Rc), s	5.0	7.0	4.0	6.0	5.0	7.0	6.0	* 6
Max Green Setting (Gmax), s	17.4	77.3	11.0	22.3	14.4	80.3	17.3	* 16
Max Q Clear Time (g_c+I1), s	16.5	79.3	12.9	25.3	10.8	60.5	19.3	14.7
Green Ext Time (p_c), s	0.2	0.0	0.0	0.0	0.3	11.4	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	65.8
HCM 6th LOS	E

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	131	135	394	615	294	394	1391	72	81	1729	270
Future Volume (veh/h)	118	131	135	394	615	294	394	1391	72	81	1729	270
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	128	142	0	428	668	0	428	1512	0	88	1879	293
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	384		344	725		1689	3262		130	1611	719
Arrive On Green	0.08	0.11	0.00	0.19	0.20	0.00	0.49	0.92	0.00	0.04	0.45	0.45
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	128	142	0	428	668	0	428	1512	0	88	1879	293
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	10.6	5.6	0.0	29.0	27.6	0.0	10.8	9.1	0.0	3.8	68.0	18.6
Cycle Q Clear(g_c), s	10.6	5.6	0.0	29.0	27.6	0.0	10.8	9.1	0.0	3.8	68.0	18.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	384		344	725		1689	3262		130	1611	719
V/C Ratio(X)	0.86	0.37		1.24	0.92		0.25	0.46		0.68	1.17	0.41
Avail Cap(c_a), veh/h	154	384		344	758		1689	3262		138	1611	719
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	62.2	0.0	60.5	58.5	0.0	22.4	0.9	0.0	71.3	41.0	27.5
Incr Delay (d2), s/veh	34.3	0.6	0.0	131.5	16.2	0.0	0.1	0.5	0.0	11.7	82.0	1.7
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(95%),veh/ln	10.2	4.5	0.0	37.6	20.0	0.0	7.6	0.4	0.0	3.3	63.9	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.1	62.7	0.0	192.0	74.7	0.0	22.4	1.4	0.0	83.0	123.0	29.2
LnGrp LOS	F	E		F	E		C	A		F	F	C
Approach Vol, veh/h		270	A		1096	A		1940	A		2260	
Approach Delay, s/veh		81.4			120.5			6.0			109.3	
Approach LOS		F			F			A			F	

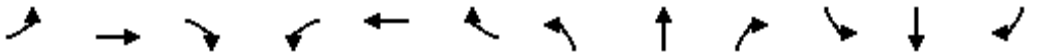
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	145.1	33.0	22.2	80.7	75.0	18.6	36.6
Change Period (Y+Rc), s	5.0	7.0	4.0	6.0	7.0	* 7	6.0	* 6
Max Green Setting (Gmax), s	6.0	77.0	29.0	16.0	15.0	* 68	13.0	* 32
Max Q Clear Time (g_c+I1), s	5.8	11.1	31.0	7.6	12.8	70.0	12.6	29.6
Green Ext Time (p_c), s	0.0	15.1	0.0	0.4	0.4	0.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	74.1
HCM 6th LOS	E

Notes

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	546	241	232	296	67	237	1769	402	384	1492	127
Future Volume (veh/h)	197	546	241	232	296	67	237	1769	402	384	1492	127
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	214	593	0	252	322	0	258	1923	0	417	1622	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	499		226	374		1066	2582		369	1817	810
Arrive On Green	0.15	0.13	0.00	0.13	0.10	0.00	0.31	0.73	0.00	0.11	0.51	0.51
Sat Flow, veh/h	1781	3741	1585	1781	3741	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	214	593	0	252	322	0	258	1923	0	417	1622	138
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	17.5	20.0	0.0	19.0	12.7	0.0	8.4	48.4	0.0	16.0	61.5	7.0
Cycle Q Clear(g_c), s	17.5	20.0	0.0	19.0	12.7	0.0	8.4	48.4	0.0	16.0	61.5	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	499		226	374		1066	2582		369	1817	810
V/C Ratio(X)	0.82	1.19		1.12	0.86		0.24	0.74		1.13	0.89	0.17
Avail Cap(c_a), veh/h	271	499		226	404		1066	2582		369	1817	810
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.1	65.0	0.0	65.5	66.5	0.0	38.8	12.2	0.0	67.0	32.9	19.6
Incr Delay (d2), s/veh	17.3	103.7	0.0	94.9	16.2	0.0	0.1	2.0	0.0	87.5	7.2	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(95%),veh/ln	13.9	24.9	0.0	21.8	11.2	0.0	6.3	22.8	0.0	17.7	34.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.3	168.7	0.0	160.4	82.7	0.0	38.9	14.2	0.0	154.5	40.1	20.1
LnGrp LOS	E	F		F	F		D	B		F	D	C
Approach Vol, veh/h		807	A		574	A		2181	A		2177	
Approach Delay, s/veh		145.0			116.8			17.1			60.8	
Approach LOS		F			F			B			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	116.2	23.0	26.0	53.5	83.7	28.0	21.0
Change Period (Y+Rc), s	5.0	7.0	4.0	6.0	7.0	* 7	6.0	* 6
Max Green Setting (Gmax), s	16.0	73.0	19.0	20.0	12.3	* 77	22.8	* 16
Max Q Clear Time (g_c+I1), s	18.0	50.4	21.0	22.0	10.4	63.5	19.5	14.7
Green Ext Time (p_c), s	0.0	14.6	0.0	0.0	0.2	8.7	0.2	0.3

Intersection Summary	
HCM 6th Ctrl Delay	61.6
HCM 6th LOS	E

Notes

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

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