

























# HCM 6th Signalized Intersection Summary

## 3: University Ave & Towne Centre Dr

04/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	64	193	284	94	160	275	1039	115	67	1934	71
Future Volume (veh/h)	54	64	193	284	94	160	275	1039	115	67	1934	71
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	59	70	210	309	102	174	299	1129	125	73	2102	77
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	96	518	231	346	775	346	342	2936	911	112	2596	806
Arrive On Green	0.03	0.15	0.15	0.10	0.22	0.22	0.10	0.57	0.57	0.06	1.00	1.00
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	59	70	210	309	102	174	299	1129	125	73	2102	77
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	2.5	2.6	19.6	13.3	3.5	14.5	12.8	18.1	5.5	3.1	0.0	0.0
Cycle Q Clear(g_c), s	2.5	2.6	19.6	13.3	3.5	14.5	12.8	18.1	5.5	3.1	0.0	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	96	518	231	346	775	346	342	2936	911	112	2596	806
V/C Ratio(X)	0.62	0.14	0.91	0.89	0.13	0.50	0.87	0.38	0.14	0.65	0.81	0.10
Avail Cap(c_a), veh/h	346	877	391	346	877	391	415	2936	911	415	2596	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.1	55.8	63.1	66.7	47.2	51.5	66.7	17.4	14.7	69.3	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	8.6	23.7	0.0	0.4	14.2	0.4	0.3	2.4	2.9	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	1.2	1.2	8.5	7.0	1.6	5.9	6.3	7.2	2.1	1.4	0.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.3	55.9	71.7	90.4	47.2	51.9	80.8	17.8	15.0	71.7	2.9	0.2
LnGrp LOS	E	E	E	F	D	D	F	B	B	E	A	A
Approach Vol, veh/h	339				585				1553			
Approach Delay, s/veh	68.9				71.4				29.7			
Approach LOS	E				E				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	92.2	20.0	27.9	19.9	82.3	9.2	38.7				
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0				
Max Green Setting (Gmax), s	18.0	58.0	15.0	37.0	18.0	58.0	15.0	37.0				
Max Q Clear Time (g_c+I1), s	5.1	20.1	15.3	21.6	14.8	2.0	4.5	16.5				
Green Ext Time (p_c), s	0.0	4.4	0.0	0.3	0.1	12.1	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay	25.9											
HCM 6th LOS	C											

Educational Use Only

# HCM 6th Signalized Intersection Summary

## 5: Towne Centre Blvd & Towne Centre Dr

04/01/2023



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↱	↱	↰	↱	↰↱	↰↱
Traffic Volume (veh/h)	259	170	30	215	104	25
Future Volume (veh/h)	259	170	30	215	104	25
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	282	0	33	0	113	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	598		124		357	1217
Arrive On Green	0.17	0.00	0.07	0.00	0.10	0.34
Sat Flow, veh/h	3456	1585	1870	1585	3456	3647
Grp Volume(v), veh/h	282	0	33	0	113	27
Grp Sat Flow(s),veh/h/ln	1728	1585	1870	1585	1728	1777
Q Serve(g_s), s	2.1	0.0	0.5	0.0	0.9	0.1
Cycle Q Clear(g_c), s	2.1	0.0	0.5	0.0	0.9	0.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	598		124		357	1217
V/C Ratio(X)	0.47		0.27		0.32	0.02
Avail Cap(c_a), veh/h	2631		1554		2392	2952
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	10.8	0.0	12.8	0.0	12.0	6.3
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.2	0.0	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.0	0.0	13.2	0.0	12.2	6.3
LnGrp LOS	B		B		B	A
Approach Vol, veh/h	282		33			140
Approach Delay, s/veh	11.0		13.2			11.1
Approach LOS	B		B			B
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.0	7.9		13.0		15.9
Change Period (Y+Rc), s	5.0	6.0		8.0		6.0
Max Green Setting (Gmax), s	20.0	24.0		22.0		24.0
Max Q Clear Time (g_c+I1), s	2.9	2.5		4.1		2.1
Green Ext Time (p_c), s	0.2	0.1		0.5		0.1

### Intersection Summary

HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

### Notes
























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

Educational Use Only

# HCM 6th Signalized Intersection Summary

## 6: University Ave & 1200 S

04/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	19	117	68	28	33	61	1111	48	54	1829	71
Future Volume (veh/h)	66	19	117	68	28	33	61	1111	48	54	1829	71
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	72	21	127	74	30	36	66	1208	52	59	1988	77
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	138	198	168	164	75	92	219	3781	1174	428	3777	1172
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.06	1.00	1.00	0.03	0.74	0.74
Sat Flow, veh/h	1335	1870	1585	1100	713	871	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	72	21	127	76	0	64	66	1208	52	59	1988	77
Grp Sat Flow(s),veh/h/ln	1335	1870	1585	1138	0	1545	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	8.0	1.5	11.7	8.7	0.0	5.8	1.3	0.0	0.0	1.2	24.9	2.0
Cycle Q Clear(g_c), s	13.8	1.5	11.7	10.2	0.0	5.8	1.3	0.0	0.0	1.2	24.9	2.0
Prop In Lane	1.00		1.00	0.97		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	198	168	168	0	163	219	3781	1174	428	3777	1172
V/C Ratio(X)	0.52	0.11	0.76	0.45	0.00	0.39	0.30	0.32	0.04	0.14	0.53	0.07
Avail Cap(c_a), veh/h	237	337	285	261	0	278	289	3781	1174	498	3777	1172
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	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	69.0	60.7	65.2	65.2	0.0	62.6	6.9	0.0	0.0	4.1	8.3	5.3
Incr Delay (d2), s/veh	1.1	0.1	2.6	0.7	0.0	0.6	0.3	0.2	0.1	0.1	0.5	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	2.8	0.7	4.9	2.9	0.0	2.3	0.4	0.1	0.0	0.4	8.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.1	60.7	67.8	65.9	0.0	63.1	7.2	0.2	0.1	4.2	8.9	5.4
LnGrp LOS	E	E	E	E	A	E	A	A	A	A	A	A
Approach Vol, veh/h	220				140				1326			
Approach Delay, s/veh	67.9				64.7				0.6			
Approach LOS	E				E				A			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	117.1		23.9	9.2	117.0		23.9				
Change Period (Y+Rc), s	4.5	6.0		8.0	4.5	6.0		8.0				
Max Green Setting (Gmax), s	10.5	94.0		27.0	10.5	94.0		27.0				
Max Q Clear Time (g_c+l1), s	3.2	2.0		15.8	3.3	26.9		12.2				
Green Ext Time (p_c), s	0.0	4.2		0.1	0.0	9.3		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	11.3											
HCM 6th LOS	B											

# Educational Use Only