

HCM 7th Signalized Intersection Summary 16: NC Hwy 96 E & NC 96 Bypass

06/10/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↱	↱	↰
Traffic Volume (veh/h)	98	417	325	111	83	59
Future Volume (veh/h)	98	417	325	111	83	59
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	109	463	361	123	92	66
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	505	449	754	1029	510	432
Arrive On Green	0.28	0.28	0.19	0.55	0.27	0.27
Sat Flow, veh/h	1781	1585	1781	1870	1870	1585
Grp Volume(v), veh/h	109	463	361	123	92	66
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	1870	1585
Q Serve(g_s), s	2.8	17.0	7.6	1.9	2.3	1.9
Cycle Q Clear(g_c), s	2.8	17.0	7.6	1.9	2.3	1.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	505	449	754	1029	510	432
V/C Ratio(X)	0.22	1.03	0.48	0.12	0.18	0.15
Avail Cap(c_a), veh/h	505	449	765	1029	510	432
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	16.4	21.5	9.6	6.5	16.7	16.6
Incr Delay (d2), s/veh	0.2	50.6	0.5	0.2	0.8	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	19.2	2.0	0.5	0.9	2.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.6	72.1	10.1	6.7	17.5	17.3
LnGrp LOS	B	F	B	A	B	B
Approach Vol, veh/h	572			484	158	
Approach Delay, s/veh	61.6			9.2	17.4	
Approach LOS	E			A	B	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	38.0		22.0		16.7	21.3
Change Period (Y+Rc), s	7.0		7.0		7.0	7.0
Max Green Setting (Gmax), s	31.0		15.0		10.0	14.0
Max Q Clear Time (g_c+I1), s	3.9		19.0		9.6	4.3
Green Ext Time (p_c), s	0.5		0.0		0.0	0.4
Intersection Summary						
HCM 7th Control Delay, s/veh			35.0			
HCM 7th LOS			C			