# APPENDIX P

# SMUP TIA Memo

# Appendices

# Appendix A
# Future Year 2035 AM/PM Peak Hour Intersection LOS Worksheets – SMUP Strategy

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 10 | 20 | 10 | 370 | 0 | 90 | 10 | 280 | 130 | 160 | 1050 | 25 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.97 | 1.00 | | 0.97 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 0 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 11 | 22 | 11 | 402 | 0 | 98 | 11 | 304 | 141 | 174 | 1141 | 27 |
| Adj No. of Lanes | 1 | 1 | 1 | 2 | 0 | 1 | 1 | 2 | 1 | 2 | 2 | 1 |
| 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 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 319 | 335 | 271 | 0 | 0 | 0 | 20 | 1455 | 634 | 282 | 1704 | 738 |
| Arrive On Green | 0.18 | 0.18 | 0.18 | 0.00 | 0.00 | 0.00 | 0.01 | 0.41 | 0.41 | 0.08 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1774 | 1863 | 1509 | | 0 | | 1774 | 3539 | 1543 | 3442 | 3539 | 1533 |
| Grp Volume(v), veh/h | 11 | 22 | 11 | | 0.0 | | 11 | 304 | 141 | 174 | 1141 | 27 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1509 | | | | 1774 | 1770 | 1543 | 1721 | 1770 | 1533 |
| Q Serve(g_s), s | 0.3 | 0.5 | 0.3 | | | | 0.3 | 2.8 | 3.0 | 2.5 | 12.4 | 0.5 |
| Cycle Q Clear(g_c), s | 0.3 | 0.5 | 0.3 | | | | 0.3 | 2.8 | 3.0 | 2.5 | 12.4 | 0.5 |
| Prop In Lane | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 319 | 335 | 271 | | | | 20 | 1455 | 634 | 282 | 1704 | 738 |
| V/C Ratio(X) | 0.03 | 0.07 | 0.04 | | | | 0.55 | 0.21 | 0.22 | 0.62 | 0.67 | 0.04 |
| Avail Cap(c_a), veh/h | 1197 | 1257 | 1018 | | | | 141 | 2206 | 962 | 451 | 2389 | 1035 |
| HCM Platoon Ratio | 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 17.1 | 17.2 | 17.1 | | | | 24.8 | 9.6 | 9.6 | 22.4 | 10.0 | 6.9 |
| Incr Delay (d2), s/veh | 0.1 | 0.1 | 0.1 | | | | 8.3 | 0.1 | 0.2 | 0.8 | 0.5 | 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 |
| %ile BackOfQ(50%),veh/ln | 0.1 | 0.3 | 0.1 | | | | 0.2 | 1.4 | 1.3 | 1.2 | 6.1 | 0.2 |
| LnGrp Delay(d),s/veh | 17.1 | 17.3 | 17.2 | | | | 33.1 | 9.6 | 9.8 | 23.2 | 10.5 | 6.9 |
| LnGrp LOS | B | B | B | | | | C | A | A | C | B | A |
| Approach Vol, veh/h | | 44 | | | | | | 456 | | | 1342 | |
| Approach Delay, s/veh | | 17.2 | | | | | | 10.2 | | | 12.0 | |
| Approach LOS | | B | | | | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | 8.6 | 27.2 | | 14.5 | 5.1 | 30.8 | | |
| Change Period (Y+Rc), s | 4.5 | 6.5 | | 5.5 | 4.5 | 6.5 | | |
| Max Green Setting (Gmax), s | 6.6 | 31.4 | | 34.0 | 4.0 | 34.0 | | |
| Max Q Clear Time (g_c+I1), s | 4.5 | 5.0 | | 2.5 | 2.3 | 14.4 | | |
| Green Ext Time (p_c), s | 0.1 | 11.3 | | 0.2 | 0.0 | 9.8 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 11.7 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 530 | 120 | 460 | 780 | 0 | 0 | 0 | 0 | 230 | 5 | 245 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | | | | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.96 | 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 |
| Adj Sat Flow, veh/h/ln | 0 | 1863 | 1863 | 1863 | 1863 | 0 | | | | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 0 | 576 | 130 | 500 | 848 | 0 | | | | 254 | 0 | 266 |
| Adj No. of Lanes | 0 | 2 | 1 | 2 | 2 | 0 | | | | 2 | 0 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 2 | 2 |
| Cap, veh/h | 0 | 1144 | 494 | 617 | 2100 | 0 | | | | 744 | 0 | 332 |
| Arrive On Green | 0.00 | 0.32 | 0.32 | 0.18 | 0.59 | 0.00 | | | | 0.21 | 0.00 | 0.21 |
| Sat Flow, veh/h | 0 | 3632 | 1528 | 3442 | 3632 | 0 | | | | 3548 | 0 | 1583 |
| Grp Volume(v), veh/h | 0 | 576 | 130 | 500 | 848 | 0 | | | | 254 | 0 | 266 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1770 | 1528 | 1721 | 1770 | 0 | | | | 1774 | 0 | 1583 |
| Q Serve(g_s), s | 0.0 | 6.8 | 3.3 | 7.2 | 6.6 | 0.0 | | | | 3.2 | 0.0 | 8.3 |
| Cycle Q Clear(g_c), s | 0.0 | 6.8 | 3.3 | 7.2 | 6.6 | 0.0 | | | | 3.2 | 0.0 | 8.3 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 1144 | 494 | 617 | 2100 | 0 | | | | 744 | 0 | 332 |
| V/C Ratio(X) | 0.00 | 0.50 | 0.26 | 0.81 | 0.40 | 0.00 | | | | 0.34 | 0.00 | 0.80 |
| Avail Cap(c_a), veh/h | 0 | 1326 | 573 | 645 | 2311 | 0 | | | | 1097 | 0 | 489 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 14.2 | 13.0 | 20.4 | 5.6 | 0.0 | | | | 17.4 | 0.0 | 19.4 |
| Incr Delay (d2), s/veh | 0.0 | 0.1 | 0.1 | 6.8 | 0.3 | 0.0 | | | | 0.1 | 0.0 | 3.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 3.3 | 1.4 | 4.0 | 3.3 | 0.0 | | | | 1.6 | 0.0 | 3.9 |
| LnGrp Delay(d),s/veh | 0.0 | 14.3 | 13.1 | 27.2 | 5.9 | 0.0 | | | | 17.5 | 0.0 | 22.8 |
| LnGrp LOS | | B | B | C | A | | | | | B | | C |
| Approach Vol, veh/h | | 706 | | | 1348 | | | | | | 520 | |
| Approach Delay, s/veh | | 14.1 | | | 13.8 | | | | | | 20.2 | |
| Approach LOS | | B | | | B | | | | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 14.0 | 21.8 | | 16.0 | | 35.8 | | |
| Change Period (Y+Rc), s | 4.7 | 5.1 | | 5.1 | | 5.1 | | |
| Max Green Setting (Gmax), s | 9.3 | 19.4 | | 16.0 | | 33.8 | | |
| Max Q Clear Time (g_c+I1), s | 10.2 | 8.8 | | 10.3 | | 8.6 | | |
| Green Ext Time (p_c), s | 0.1 | 7.6 | | 0.6 | | 14.1 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 15.2 |
| HCM 2010 LOS | B |

Notes

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 150 | 610 | 0 | 0 | 1010 | 460 | 320 | 5 | 780 | 0 | 0 | 0 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.96 | 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 | | | |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 0 | 0 | 1863 | 1863 | 1900 | 1863 | 1863 | | | |
| Adj Flow Rate, veh/h | 163 | 663 | 0 | 0 | 1098 | 500 | 348 | 5 | 848 | | | |
| Adj No. of Lanes | 1 | 2 | 0 | 0 | 3 | 1 | 0 | 1 | 2 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | |
| Percent Heavy Veh, % | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | | | |
| Cap, veh/h | 205 | 1886 | 0 | 0 | 1710 | 513 | 510 | 7 | 812 | | | |
| Arrive On Green | 0.12 | 0.53 | 0.00 | 0.00 | 0.34 | 0.34 | 0.29 | 0.29 | 0.29 | | | |
| Sat Flow, veh/h | 1774 | 3632 | 0 | 0 | 5253 | 1526 | 1750 | 25 | 2787 | | | |
| Grp Volume(v), veh/h | 163 | 663 | 0 | 0 | 1098 | 500 | 353 | 0 | 848 | | | |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 0 | 0 | 1695 | 1526 | 1775 | 0 | 1393 | | | |
| Q Serve(g_s), s | 5.2 | 6.2 | 0.0 | 0.0 | 10.6 | 18.8 | 10.2 | 0.0 | 16.9 | | | |
| Cycle Q Clear(g_c), s | 5.2 | 6.2 | 0.0 | 0.0 | 10.6 | 18.8 | 10.2 | 0.0 | 16.9 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.99 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 205 | 1886 | 0 | 0 | 1710 | 513 | 517 | 0 | 812 | | | |
| V/C Ratio(X) | 0.80 | 0.35 | 0.00 | 0.00 | 0.64 | 0.97 | 0.68 | 0.00 | 1.04 | | | |
| Avail Cap(c_a), veh/h | 266 | 2008 | 0 | 0 | 1710 | 513 | 517 | 0 | 812 | | | |
| HCM Platoon Ratio | 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 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 25.0 | 7.8 | 0.0 | 0.0 | 16.3 | 19.0 | 18.2 | 0.0 | 20.6 | | | |
| Incr Delay (d2), s/veh | 8.9 | 0.2 | 0.0 | 0.0 | 0.6 | 33.1 | 3.0 | 0.0 | 43.8 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 3.0 | 3.1 | 0.0 | 0.0 | 5.0 | 12.5 | 5.4 | 0.0 | 11.4 | | | |
| LnGrp Delay(d),s/veh | 33.9 | 8.0 | 0.0 | 0.0 | 16.9 | 52.1 | 21.2 | 0.0 | 64.3 | | | |
| LnGrp LOS | C | A | | | B | D | C | | F | | | |
| Approach Vol, veh/h | | 826 | | | 1598 | | | 1201 | | | | |
| Approach Delay, s/veh | | 13.1 | | | 27.9 | | | 51.7 | | | | |
| Approach LOS | | B | | | C | | | D | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 36.0 | | | 11.4 | 24.6 | | 22.0 |
| Change Period (Y+Rc), s | | 5.1 | | | * 4.7 | 5.1 | | 5.1 |
| Max Green Setting (Gmax), s | | 32.9 | | | * 8.7 | 19.5 | | 16.9 |
| Max Q Clear Time (g_c+I1), s | | 8.2 | | | 7.2 | 20.8 | | 18.9 |
| Green Ext Time (p_c), s | | 15.6 | | | 0.0 | 0.0 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 32.4 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 390 | 360 | 230 | 20 | 400 | 190 | 250 | 270 | 30 | 110 | 230 | 120 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 424 | 391 | 250 | 22 | 435 | 207 | 272 | 293 | 26 | 120 | 250 | 34 |
| Adj No. of Lanes | 2 | 1 | 2 | 1 | 2 | 0 | 2 | 2 | 0 | 1 | 2 | 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 | 514 | 524 | 1051 | 225 | 617 | 291 | 357 | 594 | 52 | 153 | 512 | 69 |
| Arrive On Green | 0.15 | 0.28 | 0.28 | 0.13 | 0.27 | 0.27 | 0.10 | 0.18 | 0.18 | 0.09 | 0.16 | 0.16 |
| Sat Flow, veh/h | 3442 | 1863 | 2709 | 1774 | 2322 | 1093 | 3442 | 3284 | 289 | 1774 | 3130 | 420 |
| Grp Volume(v), veh/h | 424 | 391 | 250 | 22 | 331 | 311 | 272 | 157 | 162 | 120 | 140 | 144 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1863 | 1354 | 1774 | 1770 | 1645 | 1721 | 1770 | 1804 | 1774 | 1770 | 1781 |
| Q Serve(g_s), s | 8.7 | 13.8 | 1.8 | 0.8 | 12.2 | 12.4 | 5.6 | 5.8 | 5.9 | 4.8 | 5.2 | 5.3 |
| Cycle Q Clear(g_c), s | 8.7 | 13.8 | 1.8 | 0.8 | 12.2 | 12.4 | 5.6 | 5.8 | 5.9 | 4.8 | 5.2 | 5.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.66 | 1.00 | | 0.16 | 1.00 | | 0.24 |
| Lane Grp Cap(c), veh/h | 514 | 524 | 1051 | 225 | 471 | 437 | 357 | 320 | 326 | 153 | 289 | 291 |
| V/C Ratio(X) | 0.83 | 0.75 | 0.24 | 0.10 | 0.70 | 0.71 | 0.76 | 0.49 | 0.50 | 0.79 | 0.48 | 0.49 |
| Avail Cap(c_a), veh/h | 547 | 965 | 1692 | 225 | 734 | 682 | 357 | 758 | 773 | 233 | 807 | 812 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 29.9 | 23.7 | 4.2 | 27.9 | 24.0 | 24.1 | 31.6 | 26.6 | 26.7 | 32.4 | 27.5 | 27.6 |
| Incr Delay (d2), s/veh | 9.6 | 3.0 | 0.2 | 0.1 | 2.7 | 3.1 | 9.0 | 1.4 | 1.4 | 7.4 | 1.5 | 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(50%),veh/ln | 4.8 | 7.5 | 1.0 | 0.4 | 6.3 | 6.0 | 3.1 | 2.9 | 3.1 | 2.6 | 2.6 | 2.7 |
| LnGrp Delay(d),s/veh | 39.4 | 26.7 | 4.3 | 28.1 | 26.7 | 27.1 | 40.6 | 28.0 | 28.1 | 39.9 | 29.0 | 29.1 |
| LnGrp LOS | D | C | A | C | C | C | D | C | C | D | C | C |
| Approach Vol, veh/h | | 1065 | | | 664 | | | 591 | | | 404 | |
| Approach Delay, s/veh | | 26.5 | | | 26.9 | | | 33.8 | | | 32.3 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 11.7 | 19.1 | 15.2 | 26.4 | 13.0 | 17.8 | 16.3 | 25.2 |
| Change Period (Y+Rc), s | 5.5 | 6.0 | 6.0 | * 6 | 5.5 | 6.0 | 5.5 | 6.0 |
| Max Green Setting (Gmax), s | 9.5 | 31.0 | 4.0 | * 38 | 7.5 | 33.0 | 11.5 | 30.0 |
| Max Q Clear Time (g_c+I1), s | 6.8 | 7.9 | 2.8 | 15.8 | 7.6 | 7.3 | 10.7 | 14.4 |
| Green Ext Time (p_c), s | 0.0 | 4.4 | 0.6 | 4.5 | 0.0 | 4.5 | 0.2 | 4.8 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 29.1 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 400 | 150 | 250 | 240 | 360 | 1250 |
| Number | 7 | 14 | 2 | 12 | 1 | 6 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 435 | 0 | 272 | 0 | 391 | 1359 |
| Adj No. of Lanes | 1 | 1 | 2 | 1 | 1 | 2 |
| 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 | 499 | 445 | 867 | 388 | 437 | 1964 |
| Arrive On Green | 0.28 | 0.00 | 0.24 | 0.00 | 0.25 | 0.55 |
| Sat Flow, veh/h | 1774 | 1583 | 3632 | 1583 | 1774 | 3632 |
| Grp Volume(v), veh/h | 435 | 0 | 272 | 0 | 391 | 1359 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1583 | 1770 | 1583 | 1774 | 1770 |
| Q Serve(g_s), s | 14.7 | 0.0 | 4.0 | 0.0 | 13.4 | 17.5 |
| Cycle Q Clear(g_c), s | 14.7 | 0.0 | 4.0 | 0.0 | 13.4 | 17.5 |
| Prop In Lane | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Lane Grp Cap(c), veh/h | 499 | 445 | 867 | 388 | 437 | 1964 |
| V/C Ratio(X) | 0.87 | 0.00 | 0.31 | 0.00 | 0.89 | 0.69 |
| Avail Cap(c_a), veh/h | 761 | 679 | 1221 | 546 | 479 | 2402 |
| 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 | 21.5 | 0.0 | 19.4 | 0.0 | 22.9 | 10.1 |
| Incr Delay (d2), s/veh | 7.1 | 0.0 | 0.2 | 0.0 | 17.0 | 0.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.1 | 0.0 | 2.0 | 0.0 | 8.6 | 8.5 |
| LnGrp Delay(d),s/veh | 28.7 | 0.0 | 19.6 | 0.0 | 39.9 | 10.8 |
| LnGrp LOS | C | | B | | D | B |
| Approach Vol, veh/h | 435 | | 272 | | | 1750 |
| Approach Delay, s/veh | 28.7 | | 19.6 | | | 17.3 |
| Approach LOS | C | | B | | | B |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 19.5 | 20.7 | | 22.7 | | 40.2 | | |
| Change Period (Y+Rc), s | 4.0 | 5.3 | | 5.0 | | 5.3 | | |
| Max Green Setting (Gmax), s | 17.3 | 21.7 | | 27.0 | | 42.7 | | |
| Max Q Clear Time (g_c+I1), s | 15.4 | 6.0 | | 16.7 | | 19.5 | | |
| Green Ext Time (p_c), s | 0.1 | 9.5 | | 1.0 | | 12.0 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 19.6 |
| HCM 2010 LOS | B |

| Intersection | |
|---|---|
| Int Delay, s/veh | 12.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Vol, veh/h | 470 | 130 | 245 | 490 | 60 | 230 |
| Conflicting Peds, #/hr | 0 | 3 | 3 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | 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 | 511 | 141 | 266 | 533 | 65 | 250 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 652 | 0 | 1647 | 585 |
| Stage 1 | - | - | - | - | 582 | - |
| Stage 2 | - | - | - | - | 1065 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 935 | - | 109 | 511 |
| Stage 1 | - | - | - | - | 559 | - |
| Stage 2 | - | - | - | - | 331 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 933 | - | ~ 65 | 510 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 65 | - |
| Stage 1 | - | - | - | - | 559 | - |
| Stage 2 | - | - | - | - | 196 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 3.5 | 60.2 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 65 | 510 | - | - | 933 | - |
| HCM Lane V/C Ratio | 1.003 | 0.49 | - | - | 0.285 | - |
| HCM Control Delay (s) | 219.3 | 18.7 | - | - | 10.4 | 0 |
| HCM Lane LOS | F | C | - | - | B | A |
| HCM 95th %tile Q(veh) | 5 | 2.7 | - | - | 1.2 | - |

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 760 | 250 | 640 | 490 | 0 | 0 | 0 | 0 | 700 | 15 | 340 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | | | | 7 | 4 | 14 |
| Initial Q (Qb), veh | 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 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 0 | 1863 | 1900 | 1863 | 1863 | 0 | | | | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 0 | 826 | 272 | 696 | 533 | 0 | | | | 772 | 0 | 207 |
| Adj No. of Lanes | 0 | 2 | 0 | 2 | 2 | 0 | | | | 2 | 0 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 2 | 2 |
| Cap, veh/h | 0 | 876 | 288 | 987 | 2365 | 0 | | | | 853 | 0 | 381 |
| Arrive On Green | 0.00 | 0.33 | 0.33 | 0.29 | 0.67 | 0.00 | | | | 0.24 | 0.00 | 0.24 |
| Sat Flow, veh/h | 0 | 2712 | 862 | 3442 | 3632 | 0 | | | | 3548 | 0 | 1583 |
| Grp Volume(v), veh/h | 0 | 558 | 540 | 696 | 533 | 0 | | | | 772 | 0 | 207 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1770 | 1711 | 1721 | 1770 | 0 | | | | 1774 | 0 | 1583 |
| Q Serve(g_s), s | 0.0 | 35.2 | 35.3 | 20.8 | 6.8 | 0.0 | | | | 24.3 | 0.0 | 13.1 |
| Cycle Q Clear(g_c), s | 0.0 | 35.2 | 35.3 | 20.8 | 6.8 | 0.0 | | | | 24.3 | 0.0 | 13.1 |
| Prop In Lane | 0.00 | | 0.50 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 592 | 572 | 987 | 2365 | 0 | | | | 853 | 0 | 381 |
| V/C Ratio(X) | 0.00 | 0.94 | 0.94 | 0.71 | 0.23 | 0.00 | | | | 0.90 | 0.00 | 0.54 |
| Avail Cap(c_a), veh/h | 0 | 609 | 589 | 987 | 2365 | 0 | | | | 1006 | 0 | 449 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 37.2 | 37.2 | 36.7 | 7.5 | 0.0 | | | | 42.4 | 0.0 | 38.2 |
| Incr Delay (d2), s/veh | 0.0 | 25.3 | 26.1 | 2.0 | 0.2 | 0.0 | | | | 9.4 | 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 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 21.4 | 20.8 | 10.1 | 3.3 | 0.0 | | | | 13.0 | 0.0 | 5.8 |
| LnGrp Delay(d),s/veh | 0.0 | 62.5 | 63.3 | 38.6 | 7.7 | 0.0 | | | | 51.8 | 0.0 | 38.6 |
| LnGrp LOS | | E | E | D | A | | | | | D | | D |
| Approach Vol, veh/h | | 1098 | | | 1229 | | | | | | 979 | |
| Approach Delay, s/veh | | 62.9 | | | 25.2 | | | | | | 49.0 | |
| Approach LOS | | E | | | C | | | | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 38.4 | 43.9 | | 32.8 | | 82.2 | | |
| Change Period (Y+Rc), s | 5.4 | * 5.4 | | 5.1 | | 5.4 | | |
| Max Green Setting (Gmax), s | 27.6 | * 40 | | 32.6 | | 71.9 | | |
| Max Q Clear Time (g_c+I1), s | 22.8 | 37.3 | | 26.3 | | 8.8 | | |
| Green Ext Time (p_c), s | 1.9 | 1.1 | | 1.4 | | 3.8 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 44.8 |
| HCM 2010 LOS | D |

Notes

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 290 | 1170 | 0 | 0 | 1040 | 610 | 90 | 5 | 600 | 0 | 0 | 0 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | | | |
| Initial Q (Qb), veh | 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 | | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 0 | 0 | 1863 | 1863 | 1900 | 1863 | 1863 | | | |
| Adj Flow Rate, veh/h | 315 | 1272 | 0 | 0 | 1130 | 89 | 98 | 5 | 390 | | | |
| Adj No. of Lanes | 1 | 2 | 0 | 0 | 3 | 1 | 0 | 1 | 2 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | |
| Percent Heavy Veh, % | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | | | |
| Cap, veh/h | 350 | 2614 | 0 | 0 | 2544 | 792 | 276 | 14 | 454 | | | |
| Arrive On Green | 0.20 | 0.74 | 0.00 | 0.00 | 0.17 | 0.17 | 0.16 | 0.16 | 0.16 | | | |
| Sat Flow, veh/h | 1774 | 3632 | 0 | 0 | 5253 | 1583 | 1692 | 86 | 2787 | | | |
| Grp Volume(v), veh/h | 315 | 1272 | 0 | 0 | 1130 | 89 | 103 | 0 | 390 | | | |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 0 | 0 | 1695 | 1583 | 1778 | 0 | 1393 | | | |
| Q Serve(g_s), s | 19.9 | 16.9 | 0.0 | 0.0 | 23.0 | 5.5 | 5.9 | 0.0 | 15.7 | | | |
| Cycle Q Clear(g_c), s | 19.9 | 16.9 | 0.0 | 0.0 | 23.0 | 5.5 | 5.9 | 0.0 | 15.7 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.95 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 350 | 2614 | 0 | 0 | 2544 | 792 | 290 | 0 | 454 | | | |
| V/C Ratio(X) | 0.90 | 0.49 | 0.00 | 0.00 | 0.44 | 0.11 | 0.36 | 0.00 | 0.86 | | | |
| Avail Cap(c_a), veh/h | 437 | 2614 | 0 | 0 | 2544 | 792 | 462 | 0 | 725 | | | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 0.00 | 0.94 | 0.94 | 1.00 | 0.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 45.0 | 6.1 | 0.0 | 0.0 | 33.6 | 26.3 | 42.8 | 0.0 | 46.8 | | | |
| Incr Delay (d2), s/veh | 19.6 | 0.7 | 0.0 | 0.0 | 0.5 | 0.3 | 0.3 | 0.0 | 3.4 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 11.7 | 8.4 | 0.0 | 0.0 | 11.0 | 2.5 | 2.9 | 0.0 | 6.2 | | | |
| LnGrp Delay(d),s/veh | 64.6 | 6.8 | 0.0 | 0.0 | 34.1 | 26.6 | 43.0 | 0.0 | 50.3 | | | |
| LnGrp LOS | E | A | | | C | C | D | | D | | | |
| Approach Vol, veh/h | | 1587 | | | 1219 | | | 493 | | | | |
| Approach Delay, s/veh | | 18.3 | | | 33.6 | | | 48.8 | | | | |
| Approach LOS | | B | | | C | | | D | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 91.2 | | | 27.4 | 63.7 | | 23.8 |
| Change Period (Y+Rc), s | | * 6.2 | | | * 4.7 | 6.2 | | 5.1 |
| Max Green Setting (Gmax), s | | * 74 | | | * 28 | 40.8 | | 29.9 |
| Max Q Clear Time (g_c+I1), s | | 18.9 | | | 21.9 | 25.0 | | 17.7 |
| Green Ext Time (p_c), s | | 17.5 | | | 0.8 | 10.0 | | 1.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 28.5 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 1550 | 220 | 85 | 1475 | 130 | 90 |
| Number | 2 | 12 | 1 | 6 | 3 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | 0.97 | 1.00 | | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 1685 | 212 | 92 | 1603 | 141 | 98 |
| Adj No. of Lanes | 2 | 0 | 1 | 4 | 1 | 1 |
| 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 | 1837 | 226 | 258 | 5054 | 185 | 165 |
| Arrive On Green | 0.58 | 0.58 | 0.15 | 0.79 | 0.10 | 0.10 |
| Sat Flow, veh/h | 3256 | 389 | 1774 | 6669 | 1774 | 1583 |
| Grp Volume(v), veh/h | 926 | 971 | 92 | 1603 | 141 | 98 |
| Grp Sat Flow(s),veh/h/ln | 1770 | 1782 | 1774 | 1602 | 1774 | 1583 |
| Q Serve(g_s), s | 53.0 | 57.7 | 5.4 | 8.1 | 8.9 | 6.8 |
| Cycle Q Clear(g_c), s | 53.0 | 57.7 | 5.4 | 8.1 | 8.9 | 6.8 |
| Prop In Lane | | 0.22 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 1028 | 1035 | 258 | 5054 | 185 | 165 |
| V/C Ratio(X) | 0.90 | 0.94 | 0.36 | 0.32 | 0.76 | 0.59 |
| Avail Cap(c_a), veh/h | 1136 | 1144 | 258 | 5054 | 214 | 191 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.72 | 0.72 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 21.2 | 22.2 | 44.3 | 3.4 | 50.1 | 49.2 |
| Incr Delay (d2), s/veh | 9.4 | 12.9 | 0.3 | 0.2 | 10.5 | 1.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 28.4 | 31.7 | 2.7 | 3.6 | 4.9 | 3.0 |
| LnGrp Delay(d),s/veh | 30.6 | 35.1 | 44.6 | 3.6 | 60.6 | 50.8 |
| LnGrp LOS | C | D | D | A | E | D |
| Approach Vol, veh/h | 1897 | | | 1695 | 239 | |
| Approach Delay, s/veh | 32.9 | | | 5.8 | 56.6 | |
| Approach LOS | C | | | A | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 23.9 | 74.0 | | | | 97.9 | | 17.1 |
| Change Period (Y+Rc), s | 7.2 | * 7.2 | | | | 7.2 | | 5.1 |
| Max Green Setting (Gmax), s | 10.3 | * 74 | | | | 88.8 | | 13.9 |
| Max Q Clear Time (g_c+I1), s | 7.4 | 59.7 | | | | 10.1 | | 10.9 |
| Green Ext Time (p_c), s | 2.8 | 7.1 | | | | 58.5 | | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 22.4 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 1460 | 180 | 175 | 1490 | 70 | 120 |
| Number | 4 | 14 | 3 | 8 | 5 | 12 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | 0.97 | 1.00 | | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 1587 | 196 | 190 | 1620 | 76 | 130 |
| Adj No. of Lanes | 2 | 0 | 1 | 2 | 1 | 1 |
| 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 | 1800 | 219 | 219 | 2668 | 196 | 175 |
| Arrive On Green | 0.57 | 0.57 | 0.12 | 0.75 | 0.11 | 0.11 |
| Sat Flow, veh/h | 3261 | 385 | 1774 | 3632 | 1774 | 1583 |
| Grp Volume(v), veh/h | 875 | 908 | 190 | 1620 | 76 | 130 |
| Grp Sat Flow(s),veh/h/ln | 1770 | 1783 | 1774 | 1770 | 1774 | 1583 |
| Q Serve(g_s), s | 34.1 | 36.3 | 8.5 | 16.8 | 3.2 | 6.4 |
| Cycle Q Clear(g_c), s | 34.1 | 36.3 | 8.5 | 16.8 | 3.2 | 6.4 |
| Prop In Lane | | 0.22 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 1006 | 1013 | 219 | 2668 | 196 | 175 |
| V/C Ratio(X) | 0.87 | 0.90 | 0.87 | 0.61 | 0.39 | 0.74 |
| Avail Cap(c_a), veh/h | 1006 | 1014 | 219 | 2669 | 614 | 548 |
| 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 | 14.9 | 15.4 | 34.8 | 4.5 | 33.4 | 34.9 |
| Incr Delay (d2), s/veh | 8.9 | 11.0 | 27.5 | 0.6 | 1.3 | 6.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 19.0 | 20.8 | 5.8 | 8.3 | 1.7 | 3.1 |
| LnGrp Delay(d),s/veh | 23.8 | 26.4 | 62.3 | 5.1 | 34.7 | 41.0 |
| LnGrp LOS | C | C | E | A | C | D |
| Approach Vol, veh/h | 1783 | | | 1810 | 206 | |
| Approach Delay, s/veh | 25.1 | | | 11.1 | 38.7 | |
| Approach LOS | C | | | B | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | 3 | 4 | | | | 8 |
| Phs Duration (G+Y+Rc), s | | 13.9 | 15.0 | 52.0 | | | | 67.0 |
| Change Period (Y+Rc), s | | 5.0 | 5.0 | 6.0 | | | | 6.0 |
| Max Green Setting (Gmax), s | | 28.0 | 10.0 | 46.0 | | | | 61.0 |
| Max Q Clear Time (g_c+I1), s | | 8.4 | 10.5 | 38.3 | | | | 18.8 |
| Green Ext Time (p_c), s | | 0.6 | 0.0 | 7.7 | | | | 41.5 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 19.2 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 720 | 320 | 380 | 220 | 800 | 270 | 255 | 940 | 90 | 100 | 1220 | 590 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.99 | 1.00 | | 0.98 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 783 | 348 | 304 | 239 | 870 | 239 | 277 | 1022 | 87 | 109 | 1326 | 641 |
| Adj No. of Lanes | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 3 | 0 | 2 | 3 | 1 |
| 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 | 819 | 1259 | 554 | 262 | 897 | 395 | 317 | 1222 | 104 | 534 | 1686 | 894 |
| Arrive On Green | 0.24 | 0.36 | 0.36 | 0.15 | 0.25 | 0.25 | 0.15 | 0.43 | 0.43 | 0.26 | 0.55 | 0.55 |
| Sat Flow, veh/h | 3442 | 3539 | 1558 | 1774 | 3539 | 1561 | 3442 | 4765 | 405 | 3442 | 5085 | 1559 |
| Grp Volume(v), veh/h | 783 | 348 | 304 | 239 | 870 | 239 | 277 | 727 | 382 | 109 | 1326 | 641 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1770 | 1558 | 1774 | 1770 | 1561 | 1721 | 1695 | 1779 | 1721 | 1695 | 1559 |
| Q Serve(g_s), s | 33.7 | 10.5 | 23.4 | 19.9 | 36.5 | 20.2 | 11.8 | 28.6 | 28.7 | 3.7 | 30.9 | 15.8 |
| Cycle Q Clear(g_c), s | 33.7 | 10.5 | 23.4 | 19.9 | 36.5 | 20.2 | 11.8 | 28.6 | 28.7 | 3.7 | 30.9 | 15.8 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.23 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 819 | 1259 | 554 | 262 | 897 | 395 | 317 | 869 | 456 | 534 | 1686 | 894 |
| V/C Ratio(X) | 0.96 | 0.28 | 0.55 | 0.91 | 0.97 | 0.60 | 0.87 | 0.84 | 0.84 | 0.20 | 0.79 | 0.72 |
| Avail Cap(c_a), veh/h | 821 | 1259 | 554 | 375 | 897 | 395 | 317 | 1049 | 550 | 534 | 1686 | 894 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 56.4 | 34.5 | 38.7 | 63.0 | 55.4 | 49.4 | 62.6 | 40.1 | 40.1 | 48.3 | 29.3 | 7.3 |
| Incr Delay (d2), s/veh | 21.4 | 0.1 | 0.9 | 16.8 | 23.0 | 2.6 | 22.0 | 9.4 | 16.6 | 0.1 | 3.8 | 4.9 |
| 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(50%),veh/ln | 18.4 | 5.2 | 10.2 | 11.0 | 20.7 | 9.0 | 6.5 | 14.4 | 16.1 | 1.8 | 14.9 | 8.2 |
| LnGrp Delay(d),s/veh | 77.7 | 34.6 | 39.6 | 79.7 | 78.4 | 52.0 | 84.6 | 49.4 | 56.7 | 48.4 | 33.1 | 12.2 |
| LnGrp LOS | E | C | D | E | E | D | F | D | E | D | C | B |
| Approach Vol, veh/h | | 1435 | | | 1348 | | | 1386 | | | 2076 | |
| Approach Delay, s/veh | | 59.2 | | | 74.0 | | | 58.5 | | | 27.4 | |
| Approach LOS | | E | | | E | | | E | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 29.3 | 44.5 | 26.3 | 59.2 | 18.0 | 55.7 | 41.5 | 44.0 |
| Change Period (Y+Rc), s | 6.0 | * 6 | * 4.2 | 5.8 | * 4.2 | 6.0 | 5.8 | * 6 |
| Max Green Setting (Gmax), s | 9.4 | * 46 | * 32 | 42.3 | * 14 | 42.0 | 35.8 | * 38 |
| Max Q Clear Time (g_c+I1), s | 15.7 | 30.7 | 21.9 | 25.4 | 13.8 | 32.9 | 35.7 | 38.5 |
| Green Ext Time (p_c), s | 3.3 | 7.7 | 0.2 | 6.5 | 0.0 | 7.6 | 0.1 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 51.7 |
| HCM 2010 LOS | D |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 30 | 70 | 20 | 220 | 70 | 140 | 20 | 200 | 90 | 400 | 1270 | 50 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.92 | 1.00 | | 0.94 | 1.00 | | 0.94 | 1.00 | | 0.96 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1900 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 33 | 76 | 22 | 234 | 84 | 152 | 22 | 217 | 98 | 435 | 1380 | 54 |
| Adj No. of Lanes | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 2 | 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 | 42 | 96 | 28 | 366 | 118 | 214 | 34 | 790 | 660 | 471 | 1529 | 60 |
| Arrive On Green | 0.09 | 0.09 | 0.09 | 0.21 | 0.21 | 0.21 | 0.02 | 0.22 | 0.22 | 0.27 | 0.44 | 0.44 |
| Sat Flow, veh/h | 443 | 1020 | 295 | 1774 | 572 | 1035 | 1774 | 3539 | 1493 | 1774 | 3467 | 135 |
| Grp Volume(v), veh/h | 131 | 0 | 0 | 234 | 0 | 236 | 22 | 217 | 98 | 435 | 703 | 731 |
| Grp Sat Flow(s),veh/h/ln | 1758 | 0 | 0 | 1774 | 0 | 1608 | 1774 | 1770 | 1493 | 1774 | 1770 | 1833 |
| Q Serve(g_s), s | 6.4 | 0.0 | 0.0 | 10.5 | 0.0 | 11.9 | 1.1 | 4.4 | 3.5 | 20.8 | 32.1 | 32.3 |
| Cycle Q Clear(g_c), s | 6.4 | 0.0 | 0.0 | 10.5 | 0.0 | 11.9 | 1.1 | 4.4 | 3.5 | 20.8 | 32.1 | 32.3 |
| Prop In Lane | 0.25 | | 0.17 | 1.00 | | 0.64 | 1.00 | | 1.00 | 1.00 | | 0.07 |
| Lane Grp Cap(c), veh/h | 165 | 0 | 0 | 366 | 0 | 332 | 34 | 790 | 660 | 471 | 780 | 808 |
| V/C Ratio(X) | 0.79 | 0.00 | 0.00 | 0.64 | 0.00 | 0.71 | 0.65 | 0.27 | 0.15 | 0.92 | 0.90 | 0.90 |
| Avail Cap(c_a), veh/h | 322 | 0 | 0 | 569 | 0 | 516 | 81 | 815 | 671 | 559 | 834 | 864 |
| 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 | 0.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 38.7 | 0.0 | 0.0 | 31.6 | 0.0 | 32.2 | 42.5 | 28.0 | 15.2 | 31.2 | 22.6 | 22.7 |
| Incr Delay (d2), s/veh | 3.2 | 0.0 | 0.0 | 0.7 | 0.0 | 1.1 | 7.8 | 0.1 | 0.0 | 17.9 | 11.8 | 11.8 |
| 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 | 3.2 | 0.0 | 0.0 | 5.2 | 0.0 | 5.4 | 0.6 | 2.2 | 2.0 | 12.5 | 18.2 | 18.9 |
| LnGrp Delay(d),s/veh | 41.9 | 0.0 | 0.0 | 32.3 | 0.0 | 33.2 | 50.3 | 28.1 | 15.2 | 49.1 | 34.4 | 34.5 |
| LnGrp LOS | D | | | C | | C | D | C | B | D | C | C |
| Approach Vol, veh/h | | 131 | | | 470 | | | 337 | | | 1869 | |
| Approach Delay, s/veh | | 41.9 | | | 32.8 | | | 25.8 | | | 37.9 | |
| Approach LOS | | D | | | C | | | C | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 16.7 | 24.8 | | 12.7 | 7.7 | 43.8 | | 23.1 |
| Change Period (Y+Rc), s | 3.5 | 5.3 | | 4.5 | 6.0 | 5.3 | | 5.1 |
| Max Green Setting (Gmax), s | 7.5 | 20.1 | | 16.0 | 4.0 | 41.1 | | 28.0 |
| Max Q Clear Time (g_c+I1), s | 12.8 | 6.4 | | 8.4 | 3.1 | 34.3 | | 13.9 |
| Green Ext Time (p_c), s | 0.4 | 6.6 | | 0.2 | 0.0 | 4.1 | | 1.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 35.8 |
| HCM 2010 LOS | D |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 60 | 290 | 210 | 130 | 335 | 45 | 40 | 60 | 100 | 50 | 350 | 55 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.98 | 0.99 | | 0.97 | 1.00 | | 0.99 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 65 | 315 | 228 | 141 | 364 | 49 | 43 | 65 | 87 | 54 | 380 | 60 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 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 | 537 | 503 | 364 | 375 | 1153 | 154 | 234 | 230 | 308 | 447 | 500 | 79 |
| Arrive On Green | 0.07 | 0.51 | 0.51 | 0.37 | 0.37 | 0.37 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 |
| Sat Flow, veh/h | 1774 | 995 | 720 | 855 | 3127 | 417 | 943 | 721 | 965 | 1225 | 1566 | 247 |
| Grp Volume(v), veh/h | 65 | 0 | 543 | 141 | 205 | 208 | 43 | 0 | 152 | 54 | 0 | 440 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 0 | 1715 | 855 | 1770 | 1774 | 943 | 0 | 1686 | 1225 | 0 | 1813 |
| Q Serve(g_s), s | 1.0 | 0.0 | 11.9 | 7.4 | 4.3 | 4.4 | 2.2 | 0.0 | 3.5 | 1.8 | 0.0 | 11.4 |
| Cycle Q Clear(g_c), s | 1.0 | 0.0 | 11.9 | 12.2 | 4.3 | 4.4 | 13.6 | 0.0 | 3.5 | 5.3 | 0.0 | 11.4 |
| Prop In Lane | 1.00 | | 0.42 | 1.00 | | 0.24 | 1.00 | | 0.57 | 1.00 | | 0.14 |
| Lane Grp Cap(c), veh/h | 537 | 0 | 868 | 375 | 653 | 654 | 234 | 0 | 539 | 447 | 0 | 579 |
| V/C Ratio(X) | 0.12 | 0.00 | 0.63 | 0.38 | 0.31 | 0.32 | 0.18 | 0.00 | 0.28 | 0.12 | 0.00 | 0.76 |
| Avail Cap(c_a), veh/h | 974 | 0 | 1381 | 420 | 747 | 748 | 365 | 0 | 773 | 617 | 0 | 831 |
| 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 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 7.8 | 0.0 | 9.3 | 16.3 | 11.7 | 11.8 | 22.1 | 0.0 | 13.3 | 15.3 | 0.0 | 15.9 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 1.1 | 0.9 | 0.4 | 0.4 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 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(50%),veh/ln | 0.5 | 0.0 | 5.8 | 1.8 | 2.2 | 2.2 | 0.6 | 0.0 | 1.6 | 0.6 | 0.0 | 5.8 |
| LnGrp Delay(d),s/veh | 7.9 | 0.0 | 10.4 | 17.2 | 12.1 | 12.2 | 22.2 | 0.0 | 13.4 | 15.3 | 0.0 | 17.3 |
| LnGrp LOS | A | | B | B | B | B | C | | B | B | | B |
| Approach Vol, veh/h | | 608 | | | 554 | | | 195 | | | 494 | |
| Approach Delay, s/veh | | 10.1 | | | 13.4 | | | 15.3 | | | 17.0 | |
| Approach LOS | | B | | | B | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 30.4 | | 21.8 | 7.2 | 23.2 | | 21.8 |
| Change Period (Y+Rc), s | | 4.0 | | 5.1 | 3.5 | 4.0 | | 5.1 |
| Max Green Setting (Gmax), s | | 42.0 | | 23.9 | 16.5 | 22.0 | | 23.9 |
| Max Q Clear Time (g_c+I1), s | | 13.9 | | 13.4 | 3.0 | 14.2 | | 15.6 |
| Green Ext Time (p_c), s | | 11.7 | | 2.0 | 0.0 | 5.0 | | 1.8 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 13.5 |
| HCM 2010 LOS | | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 30 | 550 | 35 | 160 | 490 | 160 | 15 | 20 | 170 | 195 | 60 | 40 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.97 | 1.00 | | 1.00 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 33 | 598 | 38 | 174 | 533 | 174 | 16 | 22 | 151 | 212 | 65 | 43 |
| Adj No. of Lanes | 1 | 2 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 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 | 128 | 926 | 59 | 466 | 1195 | 519 | 471 | 64 | 439 | 407 | 324 | 215 |
| Arrive On Green | 0.07 | 0.27 | 0.27 | 0.14 | 0.34 | 0.34 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 |
| Sat Flow, veh/h | 1774 | 3376 | 214 | 3442 | 3539 | 1537 | 1279 | 205 | 1408 | 1206 | 1041 | 689 |
| Grp Volume(v), veh/h | 33 | 313 | 323 | 174 | 533 | 174 | 16 | 0 | 173 | 212 | 0 | 108 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1821 | 1721 | 1770 | 1537 | 1279 | 0 | 1613 | 1206 | 0 | 1730 |
| Q Serve(g_s), s | 1.0 | 8.6 | 8.6 | 2.5 | 6.4 | 4.6 | 0.5 | 0.0 | 4.5 | 9.0 | 0.0 | 2.5 |
| Cycle Q Clear(g_c), s | 1.0 | 8.6 | 8.6 | 2.5 | 6.4 | 4.6 | 3.0 | 0.0 | 4.5 | 13.6 | 0.0 | 2.5 |
| Prop In Lane | 1.00 | | 0.12 | 1.00 | | 1.00 | 1.00 | | 0.87 | 1.00 | | 0.40 |
| Lane Grp Cap(c), veh/h | 128 | 486 | 500 | 466 | 1195 | 519 | 471 | 0 | 502 | 407 | 0 | 539 |
| V/C Ratio(X) | 0.26 | 0.64 | 0.65 | 0.37 | 0.45 | 0.34 | 0.03 | 0.00 | 0.34 | 0.52 | 0.00 | 0.20 |
| Avail Cap(c_a), veh/h | 323 | 699 | 720 | 501 | 1270 | 552 | 888 | 0 | 1028 | 800 | 0 | 1103 |
| 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 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 24.1 | 17.6 | 17.6 | 21.6 | 14.2 | 13.6 | 15.0 | 0.0 | 14.6 | 19.8 | 0.0 | 13.9 |
| Incr Delay (d2), s/veh | 0.4 | 0.5 | 0.5 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.2 | 0.4 | 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 | 0.5 | 4.2 | 4.4 | 1.2 | 3.1 | 2.0 | 0.2 | 0.0 | 2.0 | 3.0 | 0.0 | 1.2 |
| LnGrp Delay(d),s/veh | 24.5 | 18.1 | 18.1 | 21.8 | 14.3 | 13.7 | 15.0 | 0.0 | 14.7 | 20.2 | 0.0 | 13.9 |
| LnGrp LOS | C | B | B | C | B | B | B | | B | C | | B |
| Approach Vol, veh/h | | 669 | | | 881 | | | 189 | | | 320 | |
| Approach Delay, s/veh | | 18.4 | | | 15.6 | | | 14.8 | | | 18.1 | |
| Approach LOS | | B | | | B | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 12.5 | 20.2 | | 22.2 | 9.1 | 23.6 | | 22.2 |
| Change Period (Y+Rc), s | 5.1 | 5.1 | | 5.1 | 5.1 | 5.1 | | 5.1 |
| Max Green Setting (Gmax), s | 8.0 | 21.7 | | 35.0 | 10.0 | 19.7 | | 35.0 |
| Max Q Clear Time (g_c+I1), s | 4.5 | 10.6 | | 15.6 | 3.0 | 8.4 | | 6.5 |
| Green Ext Time (p_c), s | 0.1 | 4.3 | | 1.5 | 0.0 | 4.4 | | 1.6 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 16.8 |
| HCM 2010 LOS | | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 680 | 220 | 600 | 670 | 0 | 0 | 0 | 0 | 220 | 5 | 140 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | | | | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 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 |
| Adj Sat Flow, veh/h/ln | 0 | 1863 | 1863 | 1863 | 1863 | 0 | | | | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 0 | 739 | 239 | 652 | 728 | 0 | | | | 243 | 0 | 152 |
| Adj No. of Lanes | 0 | 2 | 1 | 2 | 2 | 0 | | | | 2 | 0 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 2 | 2 |
| Cap, veh/h | 0 | 1153 | 508 | 809 | 2335 | 0 | | | | 507 | 0 | 226 |
| Arrive On Green | 0.00 | 0.33 | 0.33 | 0.24 | 0.66 | 0.00 | | | | 0.14 | 0.00 | 0.14 |
| Sat Flow, veh/h | 0 | 3632 | 1558 | 3442 | 3632 | 0 | | | | 3548 | 0 | 1583 |
| Grp Volume(v), veh/h | 0 | 739 | 239 | 652 | 728 | 0 | | | | 243 | 0 | 152 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1770 | 1558 | 1721 | 1770 | 0 | | | | 1774 | 0 | 1583 |
| Q Serve(g_s), s | 0.0 | 9.2 | 6.3 | 9.2 | 4.6 | 0.0 | | | | 3.3 | 0.0 | 4.7 |
| Cycle Q Clear(g_c), s | 0.0 | 9.2 | 6.3 | 9.2 | 4.6 | 0.0 | | | | 3.3 | 0.0 | 4.7 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 1153 | 508 | 809 | 2335 | 0 | | | | 507 | 0 | 226 |
| V/C Ratio(X) | 0.00 | 0.64 | 0.47 | 0.81 | 0.31 | 0.00 | | | | 0.48 | 0.00 | 0.67 |
| Avail Cap(c_a), veh/h | 0 | 1479 | 651 | 1205 | 3067 | 0 | | | | 2402 | 0 | 1072 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 14.8 | 13.9 | 18.7 | 3.8 | 0.0 | | | | 20.4 | 0.0 | 21.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.2 | 0.3 | 1.4 | 0.0 | 0.0 | | | | 0.3 | 0.0 | 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 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 4.4 | 2.8 | 4.5 | 2.1 | 0.0 | | | | 1.6 | 0.0 | 2.2 |
| LnGrp Delay(d),s/veh | 0.0 | 15.1 | 14.1 | 20.1 | 3.8 | 0.0 | | | | 20.6 | 0.0 | 22.3 |
| LnGrp LOS | | B | B | C | A | | | | | C | | C |
| Approach Vol, veh/h | | 978 | | | 1380 | | | | | | 395 | |
| Approach Delay, s/veh | | 14.8 | | | 11.5 | | | | | | 21.3 | |
| Approach LOS | | B | | | B | | | | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 17.3 | 21.9 | | 12.5 | | 39.2 | | |
| Change Period (Y+Rc), s | 5.1 | 5.1 | | 5.1 | | 5.1 | | |
| Max Green Setting (Gmax), s | 18.1 | 21.6 | | 35.0 | | 44.8 | | |
| Max Q Clear Time (g_c+I1), s | 11.2 | 11.2 | | 6.7 | | 6.6 | | |
| Green Ext Time (p_c), s | 0.9 | 5.6 | | 0.7 | | 9.5 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 14.1 |
| HCM 2010 LOS | B |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 240 | 660 | 0 | 0 | 1090 | 440 | 170 | 80 | 310 | 0 | 0 | 0 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.97 | 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 | | | |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 0 | 0 | 1863 | 1900 | 1863 | 1863 | 1863 | | | |
| Adj Flow Rate, veh/h | 261 | 717 | 0 | 0 | 1185 | 478 | 136 | 156 | 337 | | | |
| Adj No. of Lanes | 1 | 2 | 0 | 0 | 3 | 0 | 1 | 1 | 2 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | |
| Percent Heavy Veh, % | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | | | |
| Cap, veh/h | 293 | 2647 | 0 | 0 | 1860 | 748 | 240 | 252 | 429 | | | |
| Arrive On Green | 0.28 | 1.00 | 0.00 | 0.00 | 0.88 | 0.88 | 0.14 | 0.14 | 0.14 | | | |
| Sat Flow, veh/h | 1774 | 3632 | 0 | 0 | 3704 | 1422 | 1774 | 1863 | 3167 | | | |
| Grp Volume(v), veh/h | 261 | 717 | 0 | 0 | 1136 | 527 | 136 | 156 | 337 | | | |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 0 | 0 | 1695 | 1568 | 1774 | 1863 | 1583 | | | |
| Q Serve(g_s), s | 12.7 | 0.0 | 0.0 | 0.0 | 8.3 | 8.4 | 6.5 | 7.1 | 9.3 | | | |
| Cycle Q Clear(g_c), s | 12.7 | 0.0 | 0.0 | 0.0 | 8.3 | 8.4 | 6.5 | 7.1 | 9.3 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 0.91 | 1.00 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 293 | 2647 | 0 | 0 | 1783 | 825 | 240 | 252 | 429 | | | |
| V/C Ratio(X) | 0.89 | 0.27 | 0.00 | 0.00 | 0.64 | 0.64 | 0.57 | 0.62 | 0.79 | | | |
| Avail Cap(c_a), veh/h | 392 | 2647 | 0 | 0 | 1783 | 825 | 333 | 350 | 595 | | | |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.00 | 1.00 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 0.72 | 0.72 | 0.00 | 0.00 | 0.63 | 0.63 | 1.00 | 1.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 31.8 | 0.0 | 0.0 | 0.0 | 3.1 | 3.1 | 36.4 | 36.7 | 37.6 | | | |
| Incr Delay (d2), s/veh | 11.2 | 0.2 | 0.0 | 0.0 | 1.1 | 2.4 | 0.8 | 0.9 | 3.0 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 7.1 | 0.1 | 0.0 | 0.0 | 3.7 | 3.7 | 3.2 | 3.7 | 4.3 | | | |
| LnGrp Delay(d),s/veh | 43.0 | 0.2 | 0.0 | 0.0 | 4.2 | 5.5 | 37.2 | 37.6 | 40.7 | | | |
| LnGrp LOS | D | A | | | A | A | D | D | D | | | |
| Approach Vol, veh/h | | 978 | | | 1663 | | | 629 | | | | |
| Approach Delay, s/veh | | 11.6 | | | 4.6 | | | 39.2 | | | | |
| Approach LOS | | B | | | A | | | D | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 72.7 | | | 20.0 | 52.7 | | 17.3 |
| Change Period (Y+Rc), s | | 5.4 | | | 5.1 | 5.4 | | 5.1 |
| Max Green Setting (Gmax), s | | 62.6 | | | 19.9 | 37.6 | | 16.9 |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 14.7 | 10.4 | | 11.3 |
| Green Ext Time (p_c), s | | 21.1 | | | 0.2 | 15.3 | | 0.9 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 13.4 |
| HCM 2010 LOS | B |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 90 | 1050 | 300 | 280 | 1140 | 50 | 120 | 70 | 110 | 90 | 240 | 50 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 0.97 | 1.00 | | 0.99 | 1.00 | | 0.97 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 98 | 1141 | 271 | 304 | 1239 | 47 | 130 | 76 | 120 | 98 | 261 | 54 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 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 | 120 | 1211 | 285 | 318 | 1870 | 71 | 136 | 133 | 210 | 110 | 285 | 59 |
| Arrive On Green | 0.07 | 0.43 | 0.43 | 0.18 | 0.54 | 0.54 | 0.08 | 0.21 | 0.21 | 0.06 | 0.19 | 0.19 |
| Sat Flow, veh/h | 1774 | 2836 | 668 | 1774 | 3473 | 132 | 1774 | 648 | 1023 | 1774 | 1490 | 308 |
| Grp Volume(v), veh/h | 98 | 708 | 704 | 304 | 631 | 655 | 130 | 0 | 196 | 98 | 0 | 315 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1733 | 1774 | 1770 | 1835 | 1774 | 0 | 1672 | 1774 | 0 | 1798 |
| Q Serve(g_s), s | 7.4 | 52.2 | 53.5 | 23.2 | 34.9 | 35.0 | 10.0 | 0.0 | 14.4 | 7.5 | 0.0 | 23.5 |
| Cycle Q Clear(g_c), s | 7.4 | 52.2 | 53.5 | 23.2 | 34.9 | 35.0 | 10.0 | 0.0 | 14.4 | 7.5 | 0.0 | 23.5 |
| Prop In Lane | 1.00 | | 0.39 | 1.00 | | 0.07 | 1.00 | | 0.61 | 1.00 | | 0.17 |
| Lane Grp Cap(c), veh/h | 120 | 756 | 740 | 318 | 953 | 988 | 136 | 0 | 344 | 110 | 0 | 343 |
| V/C Ratio(X) | 0.81 | 0.94 | 0.95 | 0.96 | 0.66 | 0.66 | 0.95 | 0.00 | 0.57 | 0.89 | 0.00 | 0.92 |
| Avail Cap(c_a), veh/h | 201 | 796 | 780 | 318 | 953 | 988 | 136 | 0 | 346 | 110 | 0 | 355 |
| 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 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 62.8 | 37.4 | 37.8 | 55.5 | 22.6 | 22.6 | 62.8 | 0.0 | 48.8 | 63.6 | 0.0 | 54.2 |
| Incr Delay (d2), s/veh | 5.0 | 17.8 | 20.4 | 38.4 | 1.6 | 1.5 | 62.3 | 0.0 | 1.4 | 51.0 | 0.0 | 26.8 |
| 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 | 3.8 | 29.1 | 29.8 | 14.8 | 17.4 | 18.1 | 7.2 | 0.0 | 6.8 | 5.2 | 0.0 | 14.2 |
| LnGrp Delay(d),s/veh | 67.8 | 55.2 | 58.2 | 93.9 | 24.2 | 24.2 | 125.1 | 0.0 | 50.2 | 114.6 | 0.0 | 81.0 |
| LnGrp LOS | E | E | E | F | C | C | F | | D | F | | F |
| Approach Vol, veh/h | | 1510 | | | 1590 | | | 326 | | | 413 | |
| Approach Delay, s/veh | | 57.4 | | | 37.5 | | | 80.1 | | | 89.0 | |
| Approach LOS | | E | | | D | | | F | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 8.0 | 63.7 | 14.0 | 31.0 | 12.8 | 78.9 | 12.0 | 33.0 |
| Change Period (Y+Rc), s | 3.5 | 5.3 | 3.5 | * 4.9 | 3.5 | 5.3 | 3.5 | 4.9 |
| Max Green Setting (Gmax), s | 24.5 | 61.5 | 10.5 | * 27 | 15.5 | 70.5 | 8.5 | 28.3 |
| Max Q Clear Time (g_c+I1), s | 25.2 | 55.5 | 12.0 | 25.5 | 9.4 | 37.0 | 9.5 | 16.4 |
| Green Ext Time (p_c), s | 0.0 | 2.8 | 0.0 | 0.4 | 0.1 | 22.9 | 0.0 | 1.7 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 54.5 |
| HCM 2010 LOS | D |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 50 | 920 | 150 | 380 | 1160 | 100 | 140 | 60 | 160 | 100 | 100 | 60 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 54 | 1000 | 139 | 413 | 1261 | 100 | 152 | 65 | 174 | 109 | 109 | 65 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 | 69 | 1152 | 160 | 445 | 1933 | 153 | 276 | 394 | 334 | 288 | 394 | 329 |
| Arrive On Green | 0.04 | 0.37 | 0.37 | 0.25 | 0.58 | 0.58 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1774 | 3116 | 433 | 1774 | 3323 | 263 | 1203 | 1863 | 1579 | 1134 | 1863 | 1558 |
| Grp Volume(v), veh/h | 54 | 568 | 571 | 413 | 670 | 691 | 152 | 65 | 174 | 109 | 109 | 65 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1780 | 1774 | 1770 | 1816 | 1203 | 1863 | 1579 | 1134 | 1863 | 1558 |
| Q Serve(g_s), s | 2.7 | 26.7 | 26.8 | 20.4 | 22.9 | 23.0 | 10.9 | 2.6 | 8.8 | 7.8 | 4.4 | 3.1 |
| Cycle Q Clear(g_c), s | 2.7 | 26.7 | 26.8 | 20.4 | 22.9 | 23.0 | 15.3 | 2.6 | 8.8 | 10.4 | 4.4 | 3.1 |
| Prop In Lane | 1.00 | | 0.24 | 1.00 | | 0.14 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 69 | 654 | 658 | 445 | 1029 | 1056 | 276 | 394 | 334 | 288 | 394 | 329 |
| V/C Ratio(X) | 0.78 | 0.87 | 0.87 | 0.93 | 0.65 | 0.65 | 0.55 | 0.17 | 0.52 | 0.38 | 0.28 | 0.20 |
| Avail Cap(c_a), veh/h | 128 | 678 | 682 | 464 | 1029 | 1056 | 383 | 560 | 475 | 389 | 560 | 469 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 42.8 | 26.2 | 26.3 | 32.8 | 12.6 | 12.7 | 36.0 | 28.9 | 31.4 | 33.2 | 29.6 | 29.1 |
| Incr Delay (d2), s/veh | 7.1 | 11.9 | 12.0 | 23.9 | 1.6 | 1.6 | 0.6 | 0.1 | 0.5 | 0.3 | 0.1 | 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 | 1.5 | 15.1 | 15.2 | 12.9 | 11.4 | 12.0 | 3.6 | 1.3 | 3.9 | 2.5 | 2.3 | 1.3 |
| LnGrp Delay(d),s/veh | 49.8 | 38.2 | 38.2 | 56.8 | 14.2 | 14.2 | 36.7 | 29.0 | 31.8 | 33.5 | 29.8 | 29.2 |
| LnGrp LOS | D | D | D | E | B | B | D | C | C | C | C | C |
| Approach Vol, veh/h | | 1193 | | | 1774 | | | 391 | | | 283 | |
| Approach Delay, s/veh | | 38.7 | | | 24.1 | | | 33.3 | | | 31.1 | |
| Approach LOS | | D | | | C | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 16.0 | 39.9 | | 23.9 | 7.0 | 58.9 | | 23.9 |
| Change Period (Y+Rc), s | 3.5 | 6.7 | | 4.9 | 3.5 | 6.7 | | 4.9 |
| Max Green Setting (Gmax), s | 12.5 | 34.4 | | 27.0 | 6.5 | 51.4 | | 27.0 |
| Max Q Clear Time (g_c+I1), s | 12.4 | 28.8 | | 12.4 | 4.7 | 25.0 | | 17.3 |
| Green Ext Time (p_c), s | 0.1 | 4.4 | | 1.5 | 0.0 | 23.2 | | 1.3 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 30.4 |
| HCM 2010 LOS | | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 160 | 700 | 270 | 150 | 1140 | 40 | 210 | 90 | 50 | 40 | 160 | 330 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.99 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 174 | 761 | 210 | 163 | 1239 | 38 | 228 | 98 | 54 | 43 | 174 | 359 |
| Adj No. of Lanes | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 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 | 593 | 1407 | 388 | 214 | 1359 | 42 | 283 | 586 | 301 | 83 | 358 | 320 |
| Arrive On Green | 0.29 | 0.86 | 0.86 | 0.10 | 0.65 | 0.65 | 0.08 | 0.26 | 0.26 | 0.02 | 0.20 | 0.20 |
| Sat Flow, veh/h | 3442 | 2732 | 754 | 3442 | 3506 | 107 | 3442 | 2251 | 1157 | 3442 | 1770 | 1581 |
| Grp Volume(v), veh/h | 174 | 493 | 478 | 163 | 625 | 652 | 228 | 76 | 76 | 43 | 174 | 359 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1770 | 1716 | 1721 | 1770 | 1844 | 1721 | 1770 | 1639 | 1721 | 1770 | 1581 |
| Q Serve(g_s), s | 5.1 | 9.5 | 9.5 | 6.0 | 39.5 | 39.6 | 8.5 | 4.3 | 4.7 | 1.6 | 11.3 | 26.3 |
| Cycle Q Clear(g_c), s | 5.1 | 9.5 | 9.5 | 6.0 | 39.5 | 39.6 | 8.5 | 4.3 | 4.7 | 1.6 | 11.3 | 26.3 |
| Prop In Lane | 1.00 | | 0.44 | 1.00 | | 0.06 | 1.00 | | 0.71 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 593 | 911 | 884 | 214 | 686 | 715 | 283 | 460 | 427 | 83 | 358 | 320 |
| V/C Ratio(X) | 0.29 | 0.54 | 0.54 | 0.76 | 0.91 | 0.91 | 0.81 | 0.16 | 0.18 | 0.52 | 0.49 | 1.12 |
| Avail Cap(c_a), veh/h | 593 | 911 | 884 | 278 | 826 | 861 | 357 | 467 | 432 | 146 | 358 | 320 |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.84 | 0.84 | 0.84 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 40.1 | 5.1 | 5.1 | 57.3 | 21.0 | 21.0 | 58.6 | 37.2 | 37.3 | 62.7 | 45.9 | 51.9 |
| Incr Delay (d2), s/veh | 0.3 | 2.3 | 2.4 | 7.4 | 16.1 | 15.7 | 10.3 | 0.2 | 0.2 | 4.8 | 1.0 | 87.6 |
| 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(50%),veh/ln | 2.4 | 4.9 | 4.8 | 3.0 | 21.9 | 22.7 | 4.4 | 2.1 | 2.1 | 0.8 | 5.6 | 19.2 |
| LnGrp Delay(d),s/veh | 40.4 | 7.4 | 7.5 | 64.8 | 37.1 | 36.7 | 68.9 | 37.3 | 37.5 | 67.5 | 46.9 | 139.4 |
| LnGrp LOS | D | A | A | E | D | D | E | D | D | E | D | F |
| Approach Vol, veh/h | | 1145 | | | 1440 | | | 380 | | | 576 | |
| Approach Delay, s/veh | | 12.4 | | | 40.0 | | | 56.3 | | | 106.1 | |
| Approach LOS | | B | | | D | | | E | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 11.6 | 72.6 | 14.2 | 31.6 | 28.1 | 56.1 | 6.7 | 39.1 |
| Change Period (Y+Rc), s | 3.5 | 5.7 | 3.5 | 5.3 | 5.7 | * 5.7 | 3.5 | 5.3 |
| Max Green Setting (Gmax), s | 10.5 | 61.7 | 13.5 | 26.3 | 11.5 | * 61 | 5.5 | 34.3 |
| Max Q Clear Time (g_c+I1), s | 8.1 | 11.5 | 10.5 | 28.3 | 7.1 | 41.6 | 3.6 | 6.7 |
| Green Ext Time (p_c), s | 0.1 | 9.1 | 0.2 | 0.0 | 2.6 | 8.8 | 0.0 | 4.8 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 43.6 |
| HCM 2010 LOS | D |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 40 | 640 | 120 | 270 | 1140 | 250 | 100 | 60 | 160 | 100 | 70 | 100 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 43 | 696 | 130 | 293 | 1239 | 272 | 87 | 96 | 174 | 92 | 99 | 109 |
| Adj No. of Lanes | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 | 697 | 1979 | 872 | 347 | 1569 | 836 | 223 | 234 | 199 | 151 | 159 | 135 |
| Arrive On Green | 0.34 | 0.93 | 0.93 | 0.17 | 0.74 | 0.74 | 0.13 | 0.13 | 0.13 | 0.09 | 0.09 | 0.09 |
| Sat Flow, veh/h | 3442 | 3539 | 1561 | 3442 | 3539 | 1581 | 1774 | 1863 | 1583 | 1774 | 1863 | 1583 |
| Grp Volume(v), veh/h | 43 | 696 | 130 | 293 | 1239 | 272 | 87 | 96 | 174 | 92 | 99 | 109 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1770 | 1561 | 1721 | 1770 | 1581 | 1774 | 1863 | 1583 | 1774 | 1863 | 1583 |
| Q Serve(g_s), s | 1.1 | 2.5 | 0.8 | 10.7 | 28.4 | 6.9 | 5.9 | 6.2 | 14.0 | 6.5 | 6.7 | 8.8 |
| Cycle Q Clear(g_c), s | 1.1 | 2.5 | 0.8 | 10.7 | 28.4 | 6.9 | 5.9 | 6.2 | 14.0 | 6.5 | 6.7 | 8.8 |
| 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 | 697 | 1979 | 872 | 347 | 1569 | 836 | 223 | 234 | 199 | 151 | 159 | 135 |
| V/C Ratio(X) | 0.06 | 0.35 | 0.15 | 0.85 | 0.79 | 0.33 | 0.39 | 0.41 | 0.87 | 0.61 | 0.62 | 0.81 |
| Avail Cap(c_a), veh/h | 697 | 1979 | 872 | 543 | 2006 | 1031 | 273 | 287 | 244 | 205 | 215 | 183 |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.79 | 0.79 | 0.79 | 0.58 | 0.58 | 0.58 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 34.7 | 2.0 | 1.9 | 53.1 | 13.1 | 7.5 | 52.2 | 52.4 | 55.8 | 57.4 | 57.5 | 58.4 |
| Incr Delay (d2), s/veh | 0.0 | 0.4 | 0.3 | 2.4 | 2.4 | 0.6 | 0.4 | 0.4 | 21.5 | 1.5 | 1.5 | 12.7 |
| 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(50%),veh/ln | 0.5 | 1.2 | 0.4 | 5.2 | 14.0 | 3.6 | 2.9 | 3.2 | 7.3 | 3.3 | 3.5 | 4.3 |
| LnGrp Delay(d),s/veh | 34.7 | 2.4 | 2.2 | 55.5 | 15.5 | 8.1 | 52.6 | 52.8 | 77.3 | 58.9 | 59.0 | 71.1 |
| LnGrp LOS | C | A | A | E | B | A | D | D | E | E | E | E |
| Approach Vol, veh/h | | 869 | | | 1804 | | | 357 | | | 300 | |
| Approach Delay, s/veh | | 3.9 | | | 20.9 | | | 64.7 | | | 63.3 | |
| Approach LOS | | A | | | C | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 16.6 | 78.0 | | 15.1 | 31.6 | 62.9 | | 20.4 |
| Change Period (Y+Rc), s | 3.5 | 5.3 | | 4.0 | 5.3 | * 5.3 | | 4.0 |
| Max Green Setting (Gmax), s | 20.5 | 57.7 | | 15.0 | 4.5 | * 74 | | 20.0 |
| Max Q Clear Time (g_c+I1), s | 12.7 | 4.5 | | 10.8 | 3.1 | 30.4 | | 16.0 |
| Green Ext Time (p_c), s | 0.4 | 13.3 | | 0.3 | 1.0 | 27.2 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 25.0 |
| HCM 2010 LOS | C |

Notes

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 120 | 640 | 180 | 1160 | 1390 | 160 | 150 | 670 | 500 | 180 | 1310 | 130 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 0.97 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 130 | 696 | 196 | 1261 | 1511 | 174 | 163 | 728 | 543 | 196 | 1424 | 124 |
| Adj No. of Lanes | 2 | 3 | 1 | 2 | 3 | 0 | 2 | 3 | 1 | 2 | 4 | 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 | 178 | 746 | 229 | 1290 | 2174 | 250 | 184 | 1022 | 902 | 341 | 1575 | 137 |
| Arrive On Green | 0.09 | 0.24 | 0.24 | 0.37 | 0.47 | 0.47 | 0.09 | 0.34 | 0.34 | 0.17 | 0.44 | 0.44 |
| Sat Flow, veh/h | 3442 | 5085 | 1564 | 3442 | 4627 | 532 | 3442 | 5085 | 1537 | 3442 | 6042 | 525 |
| Grp Volume(v), veh/h | 130 | 696 | 196 | 1261 | 1107 | 578 | 163 | 728 | 543 | 196 | 1132 | 416 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1695 | 1564 | 1721 | 1695 | 1769 | 1721 | 1695 | 1537 | 1721 | 1602 | 1761 |
| Q Serve(g_s), s | 5.0 | 18.1 | 16.2 | 48.8 | 34.7 | 34.8 | 6.3 | 16.9 | 18.8 | 7.1 | 29.6 | 29.7 |
| Cycle Q Clear(g_c), s | 5.0 | 18.1 | 16.2 | 48.8 | 34.7 | 34.8 | 6.3 | 16.9 | 18.8 | 7.1 | 29.6 | 29.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.30 | 1.00 | | 1.00 | 1.00 | | 0.30 |
| Lane Grp Cap(c), veh/h | 178 | 746 | 229 | 1290 | 1593 | 831 | 184 | 1022 | 902 | 341 | 1253 | 459 |
| V/C Ratio(X) | 0.73 | 0.93 | 0.85 | 0.98 | 0.69 | 0.70 | 0.89 | 0.71 | 0.60 | 0.58 | 0.90 | 0.91 |
| Avail Cap(c_a), veh/h | 260 | 746 | 229 | 1290 | 1593 | 831 | 184 | 1254 | 973 | 341 | 1253 | 459 |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 0.92 | 0.92 | 0.92 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 60.8 | 50.3 | 49.6 | 41.6 | 28.2 | 28.2 | 61.1 | 41.4 | 5.4 | 53.7 | 36.5 | 36.6 |
| Incr Delay (d2), s/veh | 2.0 | 17.6 | 24.2 | 19.7 | 1.4 | 2.7 | 34.7 | 4.0 | 2.8 | 6.9 | 10.8 | 24.0 |
| 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(50%),veh/ln | 2.4 | 9.6 | 8.5 | 26.7 | 16.5 | 17.5 | 3.9 | 8.2 | 8.3 | 3.7 | 14.2 | 17.3 |
| LnGrp Delay(d),s/veh | 62.7 | 67.9 | 73.8 | 61.4 | 29.6 | 30.9 | 95.8 | 45.4 | 8.2 | 60.6 | 47.3 | 60.6 |
| LnGrp LOS | E | E | E | E | C | C | F | D | A | E | D | E |
| Approach Vol, veh/h | | 1022 | | | 2946 | | | 1434 | | | 1744 | |
| Approach Delay, s/veh | | 68.4 | | | 43.4 | | | 37.0 | | | 52.0 | |
| Approach LOS | | E | | | D | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 15.2 | 26.3 | 11.8 | 41.7 | 11.6 | 69.9 | 19.9 | 33.6 |
| Change Period (Y+Rc), s | 4.6 | 6.5 | 4.6 | 6.5 | 4.6 | 6.5 | 6.5 | * 6.5 |
| Max Green Setting (Gmax), s | 10.6 | 19.8 | 7.2 | 35.2 | 10.2 | 60.2 | 9.1 | * 33 |
| Max Q Clear Time (g_c+I1), s | 10.8 | 20.1 | 8.3 | 31.7 | 7.0 | 36.8 | 9.1 | 20.8 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 2.8 | 0.1 | 20.0 | 0.0 | 6.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 47.8 |
| HCM 2010 LOS | D |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 150 | 40 | 70 | 120 | 30 | 80 | 70 | 960 | 130 | 170 | 2450 | 150 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 103 | 127 | 76 | 82 | 101 | 87 | 76 | 1043 | 141 | 185 | 2663 | 150 |
| Adj No. of Lanes | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 4 | 0 | 2 | 4 | 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 | 154 | 161 | 135 | 126 | 132 | 112 | 640 | 3616 | 484 | 233 | 3113 | 174 |
| Arrive On Green | 0.09 | 0.09 | 0.09 | 0.07 | 0.07 | 0.07 | 0.37 | 1.00 | 1.00 | 0.14 | 1.00 | 1.00 |
| Sat Flow, veh/h | 1774 | 1863 | 1560 | 1774 | 1863 | 1583 | 3442 | 5751 | 770 | 3442 | 6251 | 350 |
| Grp Volume(v), veh/h | 103 | 127 | 76 | 82 | 101 | 87 | 76 | 870 | 314 | 185 | 2044 | 769 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1560 | 1774 | 1863 | 1583 | 1721 | 1602 | 1715 | 1721 | 1602 | 1796 |
| Q Serve(g_s), s | 7.6 | 9.0 | 6.3 | 6.1 | 7.2 | 7.3 | 2.0 | 0.0 | 0.0 | 7.0 | 1.6 | 1.7 |
| Cycle Q Clear(g_c), s | 7.6 | 9.0 | 6.3 | 6.1 | 7.2 | 7.3 | 2.0 | 0.0 | 0.0 | 7.0 | 1.6 | 1.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.45 | 1.00 | | 0.20 |
| Lane Grp Cap(c), veh/h | 154 | 161 | 135 | 126 | 132 | 112 | 640 | 3022 | 1078 | 233 | 2393 | 894 |
| V/C Ratio(X) | 0.67 | 0.79 | 0.56 | 0.65 | 0.76 | 0.77 | 0.12 | 0.29 | 0.29 | 0.79 | 0.85 | 0.86 |
| Avail Cap(c_a), veh/h | 230 | 241 | 202 | 191 | 200 | 170 | 640 | 3022 | 1078 | 344 | 2698 | 1008 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.74 | 0.74 | 0.74 | 0.25 | 0.25 | 0.25 |
| Uniform Delay (d), s/veh | 59.8 | 60.4 | 59.2 | 61.1 | 61.6 | 61.6 | 35.1 | 0.0 | 0.0 | 57.4 | 0.1 | 0.1 |
| Incr Delay (d2), s/veh | 5.0 | 9.7 | 3.6 | 2.1 | 3.8 | 5.3 | 0.0 | 0.2 | 0.5 | 1.1 | 1.1 | 2.9 |
| 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(50%),veh/ln | 3.9 | 5.1 | 2.9 | 3.1 | 3.8 | 3.4 | 0.9 | 0.0 | 0.2 | 3.3 | 0.4 | 0.9 |
| LnGrp Delay(d),s/veh | 64.8 | 70.1 | 62.8 | 63.2 | 65.4 | 66.9 | 35.1 | 0.2 | 0.5 | 58.5 | 1.2 | 3.1 |
| LnGrp LOS | E | E | E | E | E | E | D | A | A | E | A | A |
| Approach Vol, veh/h | | 306 | | | 270 | | | 1260 | | | 2998 | |
| Approach Delay, s/veh | | 66.5 | | | 65.2 | | | 2.4 | | | 5.2 | |
| Approach LOS | | E | | | E | | | A | | | A | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 13.6 | 91.1 | | 16.2 | 31.3 | 73.4 | | 14.1 |
| Change Period (Y+Rc), s | 4.5 | 6.2 | | 4.5 | 6.2 | * 6.2 | | 4.5 |
| Max Green Setting (Gmax), s | 13.5 | 69.8 | | 17.5 | 7.5 | * 76 | | 14.5 |
| Max Q Clear Time (g_c+I1), s | 11.0 | 2.0 | | 11.0 | 4.0 | 3.7 | | 9.3 |
| Green Ext Time (p_c), s | 0.1 | 18.5 | | 0.7 | 2.7 | 63.5 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 11.7 |
| HCM 2010 LOS | B |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 70 | 190 | 150 | 160 | 210 | 250 | 110 | 770 | 160 | 300 | 2210 | 120 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 0.99 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 76 | 207 | 34 | 174 | 228 | 272 | 120 | 837 | 174 | 326 | 2402 | 130 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 3 | 1 | 1 | 3 | 1 |
| 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 | 260 | 42 | 242 | 316 | 276 | 142 | 1124 | 345 | 720 | 2848 | 874 |
| Arrive On Green | 0.05 | 0.09 | 0.09 | 0.14 | 0.18 | 0.18 | 0.13 | 0.37 | 0.37 | 0.81 | 1.00 | 1.00 |
| Sat Flow, veh/h | 1774 | 3044 | 491 | 1774 | 1770 | 1547 | 1774 | 5085 | 1561 | 1774 | 5085 | 1561 |
| Grp Volume(v), veh/h | 76 | 119 | 122 | 174 | 228 | 272 | 120 | 837 | 174 | 326 | 2402 | 130 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1766 | 1774 | 1770 | 1547 | 1774 | 1695 | 1561 | 1774 | 1695 | 1561 |
| Q Serve(g_s), s | 5.7 | 8.9 | 9.2 | 12.7 | 16.4 | 23.7 | 8.9 | 19.3 | 11.7 | 7.4 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 5.7 | 8.9 | 9.2 | 12.7 | 16.4 | 23.7 | 8.9 | 19.3 | 11.7 | 7.4 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.28 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 96 | 151 | 151 | 242 | 316 | 276 | 142 | 1124 | 345 | 720 | 2848 | 874 |
| V/C Ratio(X) | 0.80 | 0.78 | 0.81 | 0.72 | 0.72 | 0.98 | 0.84 | 0.74 | 0.50 | 0.45 | 0.84 | 0.15 |
| Avail Cap(c_a), veh/h | 112 | 198 | 197 | 242 | 316 | 276 | 151 | 1872 | 575 | 720 | 2848 | 874 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.75 | 0.75 | 0.75 | 0.65 | 0.65 | 0.65 |
| Uniform Delay (d), s/veh | 63.1 | 60.5 | 60.6 | 55.8 | 52.3 | 55.3 | 57.7 | 39.3 | 36.9 | 8.2 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 23.9 | 12.6 | 15.4 | 8.6 | 7.4 | 49.7 | 25.7 | 3.4 | 3.9 | 0.3 | 2.2 | 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(50%),veh/ln | 3.4 | 4.9 | 5.1 | 6.8 | 8.7 | 13.9 | 5.3 | 9.4 | 5.4 | 3.4 | 0.6 | 0.1 |
| LnGrp Delay(d),s/veh | 87.0 | 73.1 | 76.0 | 64.4 | 59.7 | 105.0 | 83.4 | 42.7 | 40.8 | 8.5 | 2.2 | 0.2 |
| LnGrp LOS | F | E | E | E | E | F | F | D | D | A | A | A |
| Approach Vol, veh/h | | 317 | | | 674 | | | 1131 | | | 2858 | |
| Approach Delay, s/veh | | 77.6 | | | 79.2 | | | 46.7 | | | 2.8 | |
| Approach LOS | | E | | | E | | | D | | | A | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 60.1 | 35.1 | 23.3 | 16.5 | 14.3 | 80.9 | 10.8 | 29.0 |
| Change Period (Y+Rc), s | 5.3 | * 5.3 | 4.9 | * 4.9 | 3.5 | 5.3 | 3.5 | 4.9 |
| Max Green Setting (Gmax), s | 35.5 | * 50 | 17.5 | * 15 | 11.5 | 73.7 | 8.5 | 24.1 |
| Max Q Clear Time (g_c+I1), s | 19.4 | 21.3 | 14.7 | 11.2 | 10.9 | 2.0 | 7.7 | 25.7 |
| Green Ext Time (p_c), s | 22.8 | 8.5 | 0.8 | 0.4 | 0.0 | 51.6 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 27.9 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 30 | 40 | 50 | 310 | 100 | 260 | 140 | 820 | 150 | 225 | 1810 | 120 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.93 | 1.00 | | 0.99 | 1.00 | | 0.98 | 1.00 | | 0.97 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 33 | 60 | 43 | 223 | 269 | 283 | 152 | 891 | 163 | 245 | 1967 | 130 |
| Adj No. of Lanes | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 3 | 0 | 2 | 3 | 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 | 50 | 99 | 60 | 289 | 304 | 255 | 177 | 1486 | 270 | 1056 | 2758 | 181 |
| Arrive On Green | 0.04 | 0.04 | 0.04 | 0.16 | 0.16 | 0.16 | 0.03 | 0.11 | 0.11 | 0.21 | 0.38 | 0.38 |
| Sat Flow, veh/h | 1226 | 2438 | 1469 | 1774 | 1863 | 1563 | 1774 | 4307 | 784 | 3442 | 4866 | 320 |
| Grp Volume(v), veh/h | 48 | 45 | 43 | 223 | 269 | 283 | 152 | 700 | 354 | 245 | 1367 | 730 |
| Grp Sat Flow(s),veh/h/ln | 1801 | 1863 | 1469 | 1774 | 1863 | 1563 | 1774 | 1695 | 1701 | 1721 | 1695 | 1796 |
| Q Serve(g_s), s | 3.6 | 3.2 | 3.9 | 16.2 | 19.1 | 22.0 | 11.5 | 26.5 | 26.7 | 8.0 | 46.3 | 46.7 |
| Cycle Q Clear(g_c), s | 3.6 | 3.2 | 3.9 | 16.2 | 19.1 | 22.0 | 11.5 | 26.5 | 26.7 | 8.0 | 46.3 | 46.7 |
| Prop In Lane | 0.68 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.46 | 1.00 | | 0.18 |
| Lane Grp Cap(c), veh/h | 73 | 76 | 60 | 289 | 304 | 255 | 177 | 1169 | 587 | 1056 | 1921 | 1018 |
| V/C Ratio(X) | 0.66 | 0.59 | 0.72 | 0.77 | 0.89 | 1.11 | 0.86 | 0.60 | 0.60 | 0.23 | 0.71 | 0.72 |
| Avail Cap(c_a), veh/h | 73 | 76 | 60 | 289 | 304 | 255 | 204 | 1871 | 939 | 1056 | 1921 | 1018 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 0.67 | 0.67 | 0.67 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.69 | 0.69 | 0.69 | 0.44 | 0.44 | 0.44 |
| Uniform Delay (d), s/veh | 63.8 | 63.6 | 64.0 | 54.1 | 55.3 | 56.5 | 64.3 | 50.9 | 51.0 | 40.3 | 32.5 | 32.6 |
| Incr Delay (d2), s/veh | 22.1 | 13.4 | 36.4 | 11.0 | 24.6 | 89.5 | 17.6 | 1.6 | 3.2 | 0.0 | 1.0 | 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(50%),veh/ln | 2.2 | 1.9 | 2.2 | 8.9 | 11.9 | 15.8 | 6.5 | 12.7 | 13.1 | 3.8 | 22.0 | 23.8 |
| LnGrp Delay(d),s/veh | 85.9 | 77.1 | 100.4 | 65.1 | 79.9 | 146.0 | 81.9 | 52.5 | 54.2 | 40.4 | 33.5 | 34.6 |
| LnGrp LOS | F | E | F | E | E | F | F | D | D | D | C | C |
| Approach Vol, veh/h | | 136 | | | 775 | | | 1206 | | | 2342 | |
| Approach Delay, s/veh | | 87.6 | | | 99.8 | | | 56.7 | | | 34.6 | |
| Approach LOS | | F | | | F | | | E | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | 9.0 | 17.0 | 82.0 | | 27.0 | 46.9 | 52.1 |
| Change Period (Y+Rc), s | | 3.5 | 3.5 | 5.5 | | 5.0 | 5.5 | * 5.5 |
| Max Green Setting (Gmax), s | | 5.5 | 15.5 | 74.5 | | 22.0 | 15.5 | * 75 |
| Max Q Clear Time (g_c+I1), s | | 5.9 | 13.5 | 48.7 | | 24.0 | 10.0 | 28.7 |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 23.5 | | 0.0 | 5.3 | 17.8 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 53.5 |
| HCM 2010 LOS | D |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 39.7 |
| Intersection LOS | E |

| Movement | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 20 | 10 | 20 | 0 | 190 | 20 | 210 | 0 | 25 | 330 | 25 | 0 | 140 | 620 | 30 |
| 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 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 22 | 11 | 22 | 0 | 207 | 22 | 228 | 0 | 27 | 359 | 27 | 0 | 152 | 674 | 33 |
| Number of Lanes | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 2 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 2 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 2 |
| HCM Control Delay | 12.1 | 17.1 | 31.9 | 57.3 |
| HCM LOS | B | C | D | F |

| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|---|
| Vol Left, % | 7% | 0% | 67% | 0% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 93% | 0% | 33% | 0% | 0% | 9% | 0% | 95% |
| Vol Right, % | 0% | 100% | 0% | 100% | 0% | 91% | 0% | 5% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 355 | 25 | 30 | 20 | 190 | 230 | 140 | 650 |
| LT Vol | 25 | 0 | 20 | 0 | 190 | 0 | 140 | 0 |
| Through Vol | 330 | 0 | 10 | 0 | 0 | 20 | 0 | 620 |
| RT Vol | 0 | 25 | 0 | 20 | 0 | 210 | 0 | 30 |
| Lane Flow Rate | 386 | 27 | 33 | 22 | 207 | 250 | 152 | 707 |
| Geometry Grp | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.796 | 0.051 | 0.083 | 0.049 | 0.469 | 0.489 | 0.322 | 1 |
| Departure Headway (Hd) | 7.43 | 6.695 | 9.127 | 8.096 | 8.18 | 7.045 | 7.619 | 7.074 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 486 | 534 | 392 | 441 | 440 | 513 | 470 | 516 |
| Service Time | 5.185 | 4.449 | 6.902 | 5.871 | 5.928 | 4.792 | 5.397 | 4.852 |
| HCM Lane V/C Ratio | 0.794 | 0.051 | 0.084 | 0.05 | 0.47 | 0.487 | 0.323 | 1.37 |
| HCM Control Delay | 33.5 | 9.8 | 12.7 | 11.3 | 18 | 16.4 | 14 | 66.6 |
| HCM Lane LOS | D | A | B | B | C | C | B | F |
| HCM 95th-tile Q | 7.3 | 0.2 | 0.3 | 0.2 | 2.4 | 2.7 | 1.4 | 13.7 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 80 | 30 | 80 | 50 | 20 | 40 | 180 | 1030 | 50 | 160 | 1920 | 150 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1900 | 1863 | 1863 | 1900 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 87 | 33 | 87 | 54 | 22 | 43 | 196 | 1120 | 54 | 174 | 2087 | 163 |
| Adj No. of Lanes | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 3 | 0 | 1 | 3 | 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 | 106 | 40 | 127 | 64 | 26 | 51 | 221 | 1443 | 70 | 700 | 2739 | 212 |
| Arrive On Green | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.21 | 0.48 | 0.48 | 0.52 | 0.76 | 0.76 |
| Sat Flow, veh/h | 1303 | 494 | 1548 | 771 | 314 | 614 | 1774 | 4970 | 239 | 1774 | 4805 | 372 |
| Grp Volume(v), veh/h | 120 | 0 | 87 | 119 | 0 | 0 | 196 | 764 | 410 | 174 | 1467 | 783 |
| Grp Sat Flow(s),veh/h/ln | 1798 | 0 | 1548 | 1700 | 0 | 0 | 1774 | 1695 | 1820 | 1774 | 1695 | 1787 |
| Q Serve(g_s), s | 8.9 | 0.0 | 7.4 | 9.3 | 0.0 | 0.0 | 14.5 | 25.1 | 25.2 | 7.2 | 33.3 | 34.3 |
| Cycle Q Clear(g_c), s | 8.9 | 0.0 | 7.4 | 9.3 | 0.0 | 0.0 | 14.5 | 25.1 | 25.2 | 7.2 | 33.3 | 34.3 |
| Prop In Lane | 0.72 | | 1.00 | 0.45 | | 0.36 | 1.00 | | 0.13 | 1.00 | | 0.21 |
| Lane Grp Cap(c), veh/h | 147 | 0 | 127 | 142 | 0 | 0 | 221 | 984 | 528 | 700 | 1932 | 1019 |
| V/C Ratio(X) | 0.82 | 0.00 | 0.69 | 0.84 | 0.00 | 0.00 | 0.89 | 0.78 | 0.78 | 0.25 | 0.76 | 0.77 |
| Avail Cap(c_a), veh/h | 186 | 0 | 161 | 164 | 0 | 0 | 315 | 1700 | 912 | 700 | 1932 | 1019 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.33 | 1.33 | 1.33 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.57 | 0.57 | 0.57 | 0.61 | 0.61 | 0.61 |
| Uniform Delay (d), s/veh | 61.0 | 0.0 | 60.3 | 61.0 | 0.0 | 0.0 | 52.6 | 31.1 | 31.2 | 21.2 | 11.1 | 11.2 |
| Incr Delay (d2), s/veh | 15.8 | 0.0 | 4.8 | 24.8 | 0.0 | 0.0 | 12.2 | 3.5 | 6.4 | 0.1 | 1.8 | 3.5 |
| 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 | 5.0 | 0.0 | 3.3 | 5.4 | 0.0 | 0.0 | 7.8 | 12.1 | 13.5 | 3.5 | 15.8 | 17.6 |
| LnGrp Delay(d),s/veh | 76.8 | 0.0 | 65.1 | 85.8 | 0.0 | 0.0 | 64.8 | 34.7 | 37.6 | 21.3 | 12.8 | 14.6 |
| LnGrp LOS | E | | E | F | | | E | C | D | C | B | B |
| Approach Vol, veh/h | | 207 | | | 119 | | | 1370 | | | 2424 | |
| Approach Delay, s/veh | | 71.9 | | | 85.8 | | | 39.8 | | | 14.0 | |
| Approach LOS | | E | | | F | | | D | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 8.2 | 44.5 | | 16.0 | 20.8 | 81.9 | | 16.2 |
| Change Period (Y+Rc), s | 5.0 | * 5.3 | | 5.0 | 4.0 | 5.0 | | 5.0 |
| Max Green Setting (Gmax), s | 21.0 | * 68 | | 14.0 | 24.0 | 65.0 | | 13.0 |
| Max Q Clear Time (g_c+I1), s | 10.3 | 27.2 | | 10.9 | 16.5 | 36.3 | | 11.3 |
| Green Ext Time (p_c), s | 0.6 | 12.0 | | 0.2 | 0.3 | 23.2 | | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 27.6 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 34.3 |
| Intersection LOS | D |

| Movement | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 10 | 0 | 10 | 0 | 180 | 10 | 190 | 0 | 10 | 290 | 70 | 0 | 270 | 520 | 10 |
| 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 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 11 | 0 | 11 | 0 | 196 | 11 | 207 | 0 | 11 | 315 | 76 | 0 | 293 | 565 | 11 |
| Number of Lanes | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 1 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 1 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 1 |
| HCM Control Delay | 12 | 15.8 | 20.9 | 49.8 |
| HCM LOS | B | C | C | E |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|
| Vol Left, % | 3% | 0% | 50% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 97% | 0% | 0% | 0% | 5% | 0% | 98% |
| Vol Right, % | 0% | 100% | 50% | 0% | 95% | 0% | 2% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 300 | 70 | 20 | 180 | 200 | 270 | 530 |
| LT Vol | 10 | 0 | 10 | 180 | 0 | 270 | 0 |
| Through Vol | 290 | 0 | 0 | 0 | 10 | 0 | 520 |
| RT Vol | 0 | 70 | 10 | 0 | 190 | 0 | 10 |
| Lane Flow Rate | 326 | 76 | 22 | 196 | 217 | 293 | 576 |
| Geometry Grp | 7 | 7 | 6 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.662 | 0.139 | 0.051 | 0.44 | 0.419 | 0.594 | 1 |
| Departure Headway (Hd) | 7.306 | 6.588 | 8.465 | 8.102 | 6.94 | 7.282 | 6.757 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 496 | 543 | 422 | 444 | 520 | 496 | 536 |
| Service Time | 5.059 | 4.342 | 6.536 | 5.842 | 4.679 | 5.043 | 4.519 |
| HCM Lane V/C Ratio | 0.657 | 0.14 | 0.052 | 0.441 | 0.417 | 0.591 | 1.075 |
| HCM Control Delay | 23.3 | 10.4 | 12 | 17.1 | 14.6 | 20.2 | 64.9 |
| HCM Lane LOS | C | B | B | C | B | C | F |
| HCM 95th-tile Q | 4.8 | 0.5 | 0.2 | 2.2 | 2.1 | 3.8 | 14.1 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 40 | 160 | 30 | 390 | 150 | 220 | 30 | 210 | 190 | 390 | 860 | 60 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 0.94 | 1.00 | | 0.97 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1900 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 43 | 174 | 33 | 424 | 163 | 239 | 33 | 228 | 207 | 424 | 935 | 65 |
| Adj No. of Lanes | 0 | 2 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 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 | 66 | 275 | 54 | 472 | 496 | 820 | 42 | 681 | 709 | 456 | 1427 | 99 |
| Arrive On Green | 0.11 | 0.11 | 0.11 | 0.27 | 0.27 | 0.27 | 0.02 | 0.19 | 0.19 | 0.26 | 0.43 | 0.43 |
| Sat Flow, veh/h | 597 | 2508 | 494 | 1774 | 1863 | 1551 | 1774 | 3539 | 1494 | 1774 | 3351 | 233 |
| Grp Volume(v), veh/h | 132 | 0 | 118 | 424 | 163 | 239 | 33 | 228 | 207 | 424 | 494 | 506 |
| Grp Sat Flow(s),veh/h/ln | 1833 | 0 | 1766 | 1774 | 1863 | 1551 | 1774 | 1770 | 1494 | 1774 | 1770 | 1815 |
| Q Serve(g_s), s | 7.0 | 0.0 | 6.5 | 23.5 | 7.2 | 8.9 | 1.9 | 5.7 | 8.9 | 23.8 | 22.7 | 22.7 |
| Cycle Q Clear(g_c), s | 7.0 | 0.0 | 6.5 | 23.5 | 7.2 | 8.9 | 1.9 | 5.7 | 8.9 | 23.8 | 22.7 | 22.7 |
| Prop In Lane | 0.33 | | 0.28 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.13 |
| Lane Grp Cap(c), veh/h | 201 | 0 | 194 | 472 | 496 | 820 | 42 | 681 | 709 | 456 | 753 | 773 |
| V/C Ratio(X) | 0.66 | 0.00 | 0.61 | 0.90 | 0.33 | 0.29 | 0.78 | 0.33 | 0.29 | 0.93 | 0.66 | 0.66 |
| Avail Cap(c_a), veh/h | 485 | 0 | 467 | 540 | 567 | 880 | 104 | 905 | 804 | 573 | 920 | 944 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 43.6 | 0.0 | 43.3 | 36.1 | 30.1 | 13.7 | 49.6 | 35.6 | 17.4 | 37.0 | 23.3 | 23.3 |
| Incr Delay (d2), s/veh | 1.4 | 0.0 | 1.2 | 16.3 | 0.4 | 0.2 | 11.0 | 0.3 | 0.2 | 17.4 | 1.2 | 1.2 |
| 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 | 3.6 | 0.0 | 3.2 | 13.7 | 3.8 | 3.8 | 1.1 | 2.8 | 5.5 | 13.9 | 11.4 | 11.6 |
| LnGrp Delay(d),s/veh | 44.9 | 0.0 | 44.5 | 52.4 | 30.5 | 13.9 | 60.5 | 35.9 | 17.6 | 54.5 | 24.6 | 24.5 |
| LnGrp LOS | D | | D | D | C | B | E | D | B | D | C | C |
| Approach Vol, veh/h | | 250 | | | 826 | | | 468 | | | 1424 | |
| Approach Delay, s/veh | | 44.7 | | | 37.0 | | | 29.5 | | | 33.5 | |
| Approach LOS | | D | | | D | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 30.3 | 24.5 | | 15.2 | 6.4 | 48.4 | | 32.1 |
| Change Period (Y+Rc), s | 4.0 | 4.9 | | 4.0 | 4.0 | 4.9 | | 4.9 |
| Max Green Setting (Gmax), s | 33.3 | 26.1 | | 27.0 | 6.0 | 53.1 | | 31.1 |
| Max Q Clear Time (g_c+I1), s | 25.8 | 10.9 | | 9.0 | 3.9 | 24.7 | | 25.5 |
| Green Ext Time (p_c), s | 0.4 | 7.6 | | 0.7 | 0.0 | 10.3 | | 1.7 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 34.8 |
| HCM 2010 LOS | | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 50 | 540 | 130 | 370 | 590 | 100 | 70 | 140 | 160 | 230 | 610 | 100 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 54 | 587 | 141 | 402 | 641 | 84 | 76 | 152 | 174 | 250 | 663 | 109 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 | 70 | 680 | 163 | 431 | 1396 | 183 | 86 | 683 | 570 | 400 | 683 | 568 |
| Arrive On Green | 0.04 | 0.24 | 0.24 | 0.24 | 0.44 | 0.44 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| Sat Flow, veh/h | 1774 | 2821 | 676 | 1774 | 3139 | 411 | 695 | 1863 | 1556 | 1047 | 1863 | 1551 |
| Grp Volume(v), veh/h | 54 | 368 | 360 | 402 | 361 | 364 | 76 | 152 | 174 | 250 | 663 | 109 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1727 | 1774 | 1770 | 1780 | 695 | 1863 | 1556 | 1047 | 1863 | 1551 |
| Q Serve(g_s), s | 2.9 | 19.1 | 19.2 | 21.2 | 13.6 | 13.7 | 1.6 | 5.4 | 7.6 | 20.7 | 33.5 | 4.6 |
| Cycle Q Clear(g_c), s | 2.9 | 19.1 | 19.2 | 21.2 | 13.6 | 13.7 | 35.1 | 5.4 | 7.6 | 26.1 | 33.5 | 4.6 |
| Prop In Lane | 1.00 | | 0.39 | 1.00 | | 0.23 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 70 | 427 | 417 | 431 | 787 | 792 | 86 | 683 | 570 | 400 | 683 | 568 |
| V/C Ratio(X) | 0.77 | 0.86 | 0.87 | 0.93 | 0.46 | 0.46 | 0.88 | 0.22 | 0.31 | 0.63 | 0.97 | 0.19 |
| Avail Cap(c_a), veh/h | 526 | 501 | 488 | 435 | 787 | 792 | 86 | 683 | 570 | 400 | 683 | 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 45.6 | 34.8 | 34.8 | 35.5 | 18.6 | 18.6 | 47.8 | 20.9 | 21.6 | 29.9 | 29.9 | 20.7 |
| Incr Delay (d2), s/veh | 15.8 | 12.7 | 13.4 | 26.9 | 0.4 | 0.4 | 58.9 | 0.2 | 0.3 | 3.0 | 27.4 | 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 | 1.7 | 10.8 | 10.7 | 13.6 | 6.7 | 6.8 | 3.4 | 2.8 | 3.3 | 6.3 | 22.3 | 2.0 |
| LnGrp Delay(d),s/veh | 61.4 | 47.5 | 48.2 | 62.4 | 19.0 | 19.0 | 106.7 | 21.1 | 21.9 | 33.0 | 57.2 | 20.8 |
| LnGrp LOS | E | D | D | E | B | B | F | C | C | C | E | C |
| Approach Vol, veh/h | | 782 | | | 1127 | | | 402 | | | 1022 | |
| Approach Delay, s/veh | | 48.8 | | | 34.5 | | | 37.6 | | | 47.4 | |
| Approach LOS | | D | | | C | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 26.8 | 29.0 | | 40.0 | 7.3 | 48.5 | | 40.0 |
| Change Period (Y+Rc), s | 3.5 | 5.9 | | 4.9 | 3.5 | 5.9 | | 4.9 |
| Max Green Setting (Gmax), s | 23.3 | 27.1 | | 35.1 | 28.4 | 22.2 | | 35.1 |
| Max Q Clear Time (g_c+I1), s | 23.2 | 21.2 | | 35.5 | 4.9 | 15.7 | | 37.1 |
| Green Ext Time (p_c), s | 0.0 | 1.9 | | 0.0 | 0.1 | 4.2 | | 0.0 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | 42.2 | |
| HCM 2010 LOS | D | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 730 | 490 | 520 | 970 | 0 | 0 | 0 | 0 | 220 | 5 | 210 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | | | | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.96 | 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 |
| Adj Sat Flow, veh/h/ln | 0 | 1863 | 1900 | 1863 | 1863 | 0 | | | | 1900 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 0 | 793 | 417 | 565 | 1054 | 0 | | | | 239 | 5 | 80 |
| Adj No. of Lanes | 0 | 2 | 0 | 1 | 2 | 0 | | | | 0 | 1 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 2 | 2 |
| Cap, veh/h | 0 | 842 | 440 | 635 | 2743 | 0 | | | | 265 | 6 | 241 |
| Arrive On Green | 0.00 | 0.63 | 0.63 | 0.72 | 1.00 | 0.00 | | | | 0.15 | 0.15 | 0.15 |
| Sat Flow, veh/h | 0 | 2309 | 1158 | 1774 | 3632 | 0 | | | | 1739 | 36 | 1583 |
| Grp Volume(v), veh/h | 0 | 632 | 578 | 565 | 1054 | 0 | | | | 244 | 0 | 80 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1770 | 1604 | 1774 | 1770 | 0 | | | | 1776 | 0 | 1583 |
| Q Serve(g_s), s | 0.0 | 46.9 | 47.9 | 36.2 | 0.0 | 0.0 | | | | 19.6 | 0.0 | 6.5 |
| Cycle Q Clear(g_c), s | 0.0 | 46.9 | 47.9 | 36.2 | 0.0 | 0.0 | | | | 19.6 | 0.0 | 6.5 |
| Prop In Lane | 0.00 | | 0.72 | 1.00 | | 0.00 | | | | 0.98 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 672 | 610 | 635 | 2743 | 0 | | | | 271 | 0 | 241 |
| V/C Ratio(X) | 0.00 | 0.94 | 0.95 | 0.89 | 0.38 | 0.00 | | | | 0.90 | 0.00 | 0.33 |
| Avail Cap(c_a), veh/h | 0 | 688 | 624 | 635 | 2743 | 0 | | | | 332 | 0 | 296 |
| HCM Platoon Ratio | 1.00 | 1.67 | 1.67 | 2.00 | 2.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 0.67 | 0.67 | 0.57 | 0.57 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 25.0 | 25.2 | 18.4 | 0.0 | 0.0 | | | | 60.4 | 0.0 | 54.8 |
| Incr Delay (d2), s/veh | 0.0 | 17.1 | 19.5 | 8.8 | 0.2 | 0.0 | | | | 21.1 | 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 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 25.7 | 24.2 | 18.6 | 0.1 | 0.0 | | | | 11.2 | 0.0 | 2.9 |
| LnGrp Delay(d),s/veh | 0.0 | 42.1 | 44.7 | 27.2 | 0.2 | 0.0 | | | | 81.4 | 0.0 | 55.1 |
| LnGrp LOS | | D | D | C | A | | | | | F | | E |
| Approach Vol, veh/h | | 1210 | | | 1619 | | | | | | 324 | |
| Approach Delay, s/veh | | 43.4 | | | 9.6 | | | | | | 74.9 | |
| Approach LOS | | D | | | A | | | | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 57.3 | 60.5 | | 27.2 | | 117.8 | | |
| Change Period (Y+Rc), s | 5.4 | * 5.4 | | 5.1 | | 5.4 | | |
| Max Green Setting (Gmax), s | 46.3 | * 56 | | 27.1 | | 107.4 | | |
| Max Q Clear Time (g_c+I1), s | 38.2 | 49.9 | | 21.6 | | 2.0 | | |
| Green Ext Time (p_c), s | 6.2 | 5.2 | | 0.5 | | 22.6 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 29.3 |
| HCM 2010 LOS | C |

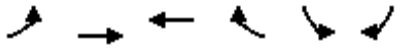
Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 240 | 710 | 0 | 0 | 1140 | 390 | 370 | 0 | 430 | 0 | 0 | 0 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.97 | | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 0 | 0 | 1863 | 1863 | 1900 | 1863 | 1863 | | | |
| Adj Flow Rate, veh/h | 261 | 772 | 0 | 0 | 1239 | 353 | 402 | 0 | 87 | | | |
| Adj No. of Lanes | 1 | 2 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | |
| Percent Heavy Veh, % | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | | | |
| Cap, veh/h | 282 | 2415 | 0 | 0 | 1729 | 773 | 435 | 0 | 378 | | | |
| Arrive On Green | 0.27 | 1.00 | 0.00 | 0.00 | 0.82 | 0.82 | 0.25 | 0.00 | 0.25 | | | |
| Sat Flow, veh/h | 1774 | 3632 | 0 | 0 | 3632 | 1583 | 1774 | 0 | 1541 | | | |
| Grp Volume(v), veh/h | 261 | 772 | 0 | 0 | 1239 | 353 | 402 | 0 | 87 | | | |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 0 | 0 | 1770 | 1583 | 1774 | 0 | 1541 | | | |
| Q Serve(g_s), s | 20.8 | 0.0 | 0.0 | 0.0 | 22.5 | 9.5 | 32.1 | 0.0 | 6.5 | | | |
| Cycle Q Clear(g_c), s | 20.8 | 0.0 | 0.0 | 0.0 | 22.5 | 9.5 | 32.1 | 0.0 | 6.5 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 1.00 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 282 | 2415 | 0 | 0 | 1729 | 773 | 435 | 0 | 378 | | | |
| V/C Ratio(X) | 0.93 | 0.32 | 0.00 | 0.00 | 0.72 | 0.46 | 0.92 | 0.00 | 0.23 | | | |
| Avail Cap(c_a), veh/h | 341 | 2415 | 0 | 0 | 1729 | 773 | 513 | 0 | 445 | | | |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.00 | 1.00 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 0.25 | 0.25 | 0.00 | 0.00 | 0.82 | 0.82 | 1.00 | 0.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 52.4 | 0.0 | 0.0 | 0.0 | 8.9 | 7.7 | 53.4 | 0.0 | 43.8 | | | |
| Incr Delay (d2), s/veh | 9.6 | 0.1 | 0.0 | 0.0 | 2.1 | 1.6 | 20.2 | 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 | | | |
| %ile BackOfQ(50%),veh/ln | 10.9 | 0.0 | 0.0 | 0.0 | 11.1 | 4.4 | 18.2 | 0.0 | 2.8 | | | |
| LnGrp Delay(d),s/veh | 62.0 | 0.1 | 0.0 | 0.0 | 11.1 | 9.3 | 73.6 | 0.0 | 44.0 | | | |
| LnGrp LOS | E | A | | | B | A | E | | D | | | |
| Approach Vol, veh/h | | 1033 | | | 1592 | | | 489 | | | | |
| Approach Delay, s/veh | | 15.7 | | | 10.7 | | | 68.4 | | | | |
| Approach LOS | | B | | | B | | | E | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 104.4 | | | 28.1 | 76.2 | | 40.6 |
| Change Period (Y+Rc), s | | 5.4 | | | 5.1 | 5.4 | | 5.1 |
| Max Green Setting (Gmax), s | | 92.6 | | | 27.9 | 59.6 | | 41.9 |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 22.8 | 24.5 | | 34.1 |
| Green Ext Time (p_c), s | | 15.8 | | | 0.3 | 13.6 | | 1.5 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | 21.4 | |
| HCM 2010 LOS | C | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 240 | 880 | 1070 | 270 | 410 | 480 |
| Number | 5 | 2 | 6 | 16 | 7 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 0.97 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 261 | 957 | 1163 | 260 | 446 | 207 |
| Adj No. of Lanes | 1 | 2 | 3 | 1 | 2 | 1 |
| 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 | 845 | 2739 | 1325 | 402 | 529 | 243 |
| Arrive On Green | 0.80 | 1.00 | 0.44 | 0.44 | 0.15 | 0.15 |
| Sat Flow, veh/h | 1774 | 3632 | 5253 | 1542 | 3442 | 1583 |
| Grp Volume(v), veh/h | 261 | 957 | 1163 | 260 | 446 | 207 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1695 | 1542 | 1721 | 1583 |
| Q Serve(g_s), s | 5.8 | 0.0 | 30.3 | 19.2 | 18.3 | 18.5 |
| Cycle Q Clear(g_c), s | 5.8 | 0.0 | 30.3 | 19.2 | 18.3 | 18.5 |
| Prop In Lane | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 845 | 2739 | 1325 | 402 | 529 | 243 |
| V/C Ratio(X) | 0.31 | 0.35 | 0.88 | 0.65 | 0.84 | 0.85 |
| Avail Cap(c_a), veh/h | 845 | 2739 | 1704 | 517 | 1089 | 501 |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.85 | 0.85 | 0.63 | 0.63 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 8.4 | 0.0 | 38.8 | 35.7 | 59.7 | 59.7 |
| Incr Delay (d2), s/veh | 0.1 | 0.3 | 5.6 | 5.0 | 2.8 | 6.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.8 | 0.1 | 14.9 | 8.7 | 8.9 | 15.8 |
| LnGrp Delay(d),s/veh | 8.5 | 0.3 | 44.4 | 40.8 | 62.5 | 65.9 |
| LnGrp LOS | A | A | D | D | E | E |
| Approach Vol, veh/h | | 1218 | 1423 | | 653 | |
| Approach Delay, s/veh | | 2.1 | 43.8 | | 63.6 | |
| Approach LOS | | A | D | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 117.6 | | 27.4 | 74.4 | 43.2 | | |
| Change Period (Y+Rc), s | | 5.4 | | 5.1 | 5.4 | * 5.4 | | |
| Max Green Setting (Gmax), s | | 88.6 | | 45.9 | 34.9 | * 49 | | |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | 20.5 | 7.8 | 32.3 | | |
| Green Ext Time (p_c), s | | 5.4 | | 1.8 | 5.2 | 5.5 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 32.3 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 120 | 730 | 180 | 200 | 1140 | 100 | 120 | 100 | 150 | 180 | 280 | 180 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 0.97 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 130 | 793 | 196 | 217 | 1239 | 95 | 130 | 109 | 136 | 196 | 304 | 158 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 | 157 | 980 | 577 | 506 | 1734 | 774 | 157 | 205 | 169 | 278 | 342 | 285 |
| Arrive On Green | 0.09 | 0.28 | 0.28 | 0.48 | 0.82 | 0.82 | 0.09 | 0.11 | 0.11 | 0.16 | 0.18 | 0.18 |
| Sat Flow, veh/h | 1774 | 3539 | 1575 | 1774 | 3539 | 1580 | 1774 | 1863 | 1537 | 1774 | 1863 | 1552 |
| Grp Volume(v), veh/h | 130 | 793 | 196 | 217 | 1239 | 95 | 130 | 109 | 136 | 196 | 304 | 158 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1575 | 1774 | 1770 | 1580 | 1774 | 1863 | 1537 | 1774 | 1863 | 1552 |
| Q Serve(g_s), s | 7.9 | 23.0 | 3.5 | 8.9 | 16.9 | 0.7 | 7.9 | 6.1 | 9.5 | 11.5 | 17.5 | 10.2 |
| Cycle Q Clear(g_c), s | 7.9 | 23.0 | 3.5 | 8.9 | 16.9 | 0.7 | 7.9 | 6.1 | 9.5 | 11.5 | 17.5 | 10.2 |
| 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 | 157 | 980 | 577 | 506 | 1734 | 774 | 157 | 205 | 169 | 278 | 342 | 285 |
| V/C Ratio(X) | 0.83 | 0.81 | 0.34 | 0.43 | 0.71 | 0.12 | 0.83 | 0.53 | 0.81 | 0.70 | 0.89 | 0.55 |
| Avail Cap(c_a), veh/h | 185 | 1213 | 680 | 506 | 1734 | 774 | 185 | 320 | 264 | 278 | 388 | 323 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.87 | 0.87 | 0.87 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 49.3 | 37.1 | 10.0 | 22.9 | 6.6 | 1.4 | 49.3 | 46.3 | 47.8 | 43.9 | 43.8 | 40.8 |
| Incr Delay (d2), s/veh | 17.4 | 6.3 | 1.4 | 0.2 | 2.5 | 0.3 | 19.5 | 2.1 | 9.5 | 6.7 | 20.0 | 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(50%),veh/ln | 4.7 | 12.1 | 2.5 | 4.3 | 8.3 | 0.3 | 4.8 | 3.3 | 4.5 | 6.2 | 10.9 | 4.5 |
| LnGrp Delay(d),s/veh | 66.7 | 43.4 | 11.4 | 23.1 | 9.2 | 1.8 | 68.8 | 48.4 | 57.3 | 50.6 | 63.8 | 42.5 |
| LnGrp LOS | E | D | B | C | A | A | E | D | E | D | E | D |
| Approach Vol, veh/h | | 1119 | | | 1551 | | | 375 | | | 658 | |
| Approach Delay, s/veh | | 40.5 | | | 10.7 | | | 58.7 | | | 54.8 | |
| Approach LOS | | D | | | B | | | E | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 36.7 | 35.8 | 13.3 | 24.3 | 13.3 | 59.2 | 21.4 | 16.2 |
| Change Period (Y+Rc), s | 5.3 | * 5.3 | 3.5 | 4.1 | 3.5 | 5.3 | 4.1 | * 4.1 |
| Max Green Setting (Gmax), s | 21.5 | * 38 | 11.5 | 22.9 | 11.5 | 47.7 | 15.5 | * 19 |
| Max Q Clear Time (g_c+I1), s | 10.9 | 25.0 | 9.9 | 19.5 | 9.9 | 18.9 | 13.5 | 11.5 |
| Green Ext Time (p_c), s | 6.9 | 5.5 | 0.0 | 0.7 | 0.0 | 12.6 | 0.6 | 0.6 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 32.4 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 830 | 200 | 580 | 1110 | 210 | 450 |
| Number | 6 | 16 | 5 | 2 | 3 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | 0.98 | 1.00 | | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 902 | 182 | 630 | 1207 | 228 | 489 |
| Adj No. of Lanes | 2 | 0 | 2 | 2 | 1 | 1 |
| 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 | 1339 | 270 | 765 | 2545 | 325 | 1015 |
| Arrive On Green | 0.76 | 0.76 | 0.44 | 1.00 | 0.18 | 0.18 |
| Sat Flow, veh/h | 3016 | 590 | 3442 | 3632 | 1774 | 1583 |
| Grp Volume(v), veh/h | 546 | 538 | 630 | 1207 | 228 | 489 |
| Grp Sat Flow(s),veh/h/ln | 1770 | 1743 | 1721 | 1770 | 1774 | 1583 |
| Q Serve(g_s), s | 13.5 | 13.5 | 14.4 | 0.0 | 10.8 | 14.4 |
| Cycle Q Clear(g_c), s | 13.5 | 13.5 | 14.4 | 0.0 | 10.8 | 14.4 |
| Prop In Lane | | 0.34 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 810 | 798 | 765 | 2545 | 325 | 1015 |
| V/C Ratio(X) | 0.67 | 0.67 | 0.82 | 0.47 | 0.70 | 0.48 |
| Avail Cap(c_a), veh/h | 810 | 798 | 860 | 2545 | 345 | 1033 |
| HCM Platoon Ratio | 1.67 | 1.67 | 2.00 | 2.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.64 | 0.64 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 7.3 | 7.3 | 23.5 | 0.0 | 34.5 | 8.4 |
| Incr Delay (d2), s/veh | 4.4 | 4.5 | 4.7 | 0.4 | 4.7 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.3 | 7.2 | 7.2 | 0.1 | 5.7 | 12.1 |
| LnGrp Delay(d),s/veh | 11.8 | 11.8 | 28.2 | 0.4 | 39.2 | 8.5 |
| LnGrp LOS | B | B | C | A | D | A |
| Approach Vol, veh/h | 1084 | | | 1837 | 717 | |
| Approach Delay, s/veh | 11.8 | | | 9.9 | 18.3 | |
| Approach LOS | B | | | A | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 70.0 | | | 23.5 | 46.5 | | 20.0 |
| Change Period (Y+Rc), s | | 5.3 | | | 3.5 | 5.3 | | 3.5 |
| Max Green Setting (Gmax), s | | 63.7 | | | 22.5 | 37.7 | | 17.5 |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 16.4 | 15.5 | | 16.4 |
| Green Ext Time (p_c), s | | 50.0 | | | 2.4 | 20.4 | | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 12.1 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | WBU | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Volume (veh/h) | 460 | 830 | 5 | 1000 | 120 | 130 | 710 |
| Number | 1 | 6 | | 2 | 12 | 7 | 14 |
| Initial Q (Qb), veh | 0 | 0 | | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | | 0.97 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | | 1863 | 1900 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 500 | 902 | | 1087 | 120 | 141 | 772 |
| Adj No. of Lanes | 2 | 2 | | 2 | 0 | 1 | 2 |
| 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 | 988 | 2662 | | 1302 | 144 | 266 | 1550 |
| Arrive On Green | 0.09 | 0.25 | | 0.68 | 0.68 | 0.15 | 0.15 |
| Sat Flow, veh/h | 3442 | 3632 | | 3298 | 353 | 1774 | 2787 |
| Grp Volume(v), veh/h | 500 | 902 | | 600 | 607 | 141 | 772 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1770 | | 1770 | 1788 | 1774 | 1393 |
| Q Serve(g_s), s | 12.4 | 18.8 | | 22.6 | 22.7 | 6.6 | 13.5 |
| Cycle Q Clear(g_c), s | 12.4 | 18.8 | | 22.6 | 22.7 | 6.6 | 13.5 |
| Prop In Lane | 1.00 | | | | 0.20 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 988 | 2662 | | 719 | 727 | 266 | 1550 |
| V/C Ratio(X) | 0.51 | 0.34 | | 0.83 | 0.84 | 0.53 | 0.50 |
| Avail Cap(c_a), veh/h | 988 | 2662 | | 840 | 849 | 266 | 1550 |
| HCM Platoon Ratio | 0.33 | 0.33 | | 1.67 | 1.67 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.66 | 0.66 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 34.7 | 15.5 | | 12.2 | 12.2 | 35.3 | 12.3 |
| Incr Delay (d2), s/veh | 0.1 | 0.2 | | 11.0 | 11.0 | 1.0 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.9 | 9.4 | | 12.7 | 12.9 | 3.3 | 13.8 |
| LnGrp Delay(d),s/veh | 34.8 | 15.7 | | 23.2 | 23.2 | 36.3 | 12.3 |
| LnGrp LOS | C | B | | C | C | D | B |
| Approach Vol, veh/h | | 1402 | | 1207 | | 913 | |
| Approach Delay, s/veh | | 22.5 | | 23.2 | | 16.1 | |
| Approach LOS | | C | | C | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 31.1 | 41.9 | | 17.0 | | 73.0 | | |
| Change Period (Y+Rc), s | 5.3 | * 5.3 | | 3.5 | | 5.3 | | |
| Max Green Setting (Gmax), s | 21.5 | * 43 | | 13.5 | | 58.7 | | |
| Max Q Clear Time (g_c+I1), s | 14.4 | 24.7 | | 15.5 | | 20.8 | | |
| Green Ext Time (p_c), s | 3.3 | 11.9 | | 0.0 | | 14.3 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 21.1 |
| HCM 2010 LOS | C |

Notes

User approved ignoring U-Turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 280 | 570 | 170 | 290 | 520 | 290 | 190 | 660 | 190 | 700 | 1590 | 490 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 0.99 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 304 | 620 | 185 | 315 | 565 | 233 | 207 | 717 | 207 | 761 | 1728 | 533 |
| Adj No. of Lanes | 2 | 2 | 0 | 2 | 2 | 0 | 1 | 3 | 0 | 2 | 3 | 1 |
| 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 | 344 | 661 | 197 | 359 | 638 | 263 | 255 | 1117 | 318 | 804 | 1865 | 573 |
| Arrive On Green | 0.17 | 0.41 | 0.41 | 0.10 | 0.26 | 0.26 | 0.24 | 0.48 | 0.48 | 0.39 | 0.61 | 0.61 |
| Sat Flow, veh/h | 3442 | 2677 | 798 | 3442 | 2436 | 1002 | 1774 | 3921 | 1117 | 3442 | 5085 | 1561 |
| Grp Volume(v), veh/h | 304 | 409 | 396 | 315 | 410 | 388 | 207 | 619 | 305 | 761 | 1728 | 533 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1770 | 1705 | 1721 | 1770 | 1668 | 1774 | 1695 | 1647 | 1721 | 1695 | 1561 |
| Q Serve(g_s), s | 12.1 | 31.0 | 31.1 | 12.6 | 31.2 | 31.3 | 15.4 | 19.3 | 19.7 | 29.9 | 42.6 | 33.0 |
| Cycle Q Clear(g_c), s | 12.1 | 31.0 | 31.1 | 12.6 | 31.2 | 31.3 | 15.4 | 19.3 | 19.7 | 29.9 | 42.6 | 33.0 |
| Prop In Lane | 1.00 | | 0.47 | 1.00 | | 0.60 | 1.00 | | 0.68 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 344 | 437 | 421 | 359 | 464 | 437 | 255 | 966 | 469 | 804 | 1865 | 573 |
| V/C Ratio(X) | 0.88 | 0.94 | 0.94 | 0.88 | 0.88 | 0.89 | 0.81 | 0.64 | 0.65 | 0.95 | 0.93 | 0.93 |
| Avail Cap(c_a), veh/h | 344 | 455 | 439 | 359 | 464 | 437 | 255 | 966 | 469 | 880 | 1896 | 582 |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.57 | 0.57 | 0.57 | 0.96 | 0.96 | 0.96 | 0.49 | 0.49 | 0.49 |
| Uniform Delay (d), s/veh | 57.5 | 40.1 | 40.1 | 61.8 | 49.6 | 49.7 | 51.4 | 31.3 | 31.4 | 41.9 | 25.4 | 14.9 |
| Incr Delay (d2), s/veh | 21.9 | 26.7 | 27.9 | 13.0 | 11.6 | 12.5 | 16.1 | 3.1 | 6.6 | 10.2 | 5.1 | 14.2 |
| 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 | 6.7 | 18.2 | 17.9 | 6.6 | 16.8 | 16.0 | 8.7 | 9.4 | 9.8 | 15.2 | 20.6 | 16.1 |
| LnGrp Delay(d),s/veh | 79.4 | 66.8 | 68.0 | 74.8 | 61.2 | 62.1 | 67.5 | 34.4 | 38.0 | 52.1 | 30.5 | 29.1 |
| LnGrp LOS | E | E | E | E | E | E | E | C | D | D | C | C |
| Approach Vol, veh/h | | 1109 | | | 1113 | | | 1131 | | | 3022 | |
| Approach Delay, s/veh | | 70.7 | | | 65.4 | | | 41.5 | | | 35.7 | |
| Approach LOS | | E | | | E | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 36.9 | 45.2 | 20.3 | 40.3 | 25.4 | 56.7 | 18.2 | 42.4 |
| Change Period (Y+Rc), s | * 4.2 | 5.3 | 5.7 | * 5.7 | 5.3 | * 5.3 | * 4.2 | 5.7 |
| Max Green Setting (Gmax), s | * 36 | 34.2 | 14.6 | * 36 | 17.8 | * 52 | * 14 | 36.6 |
| Max Q Clear Time (g_c+I1), s | 31.3 | 21.7 | 14.6 | 33.1 | 17.4 | 44.6 | 14.1 | 33.3 |
| Green Ext Time (p_c), s | 0.8 | 5.6 | 0.0 | 1.5 | 0.0 | 6.7 | 0.0 | 1.8 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 48.0 |
| HCM 2010 LOS | D |

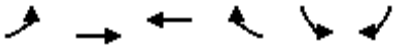
Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 110 | 910 | 5 | 90 | 1100 | 120 | 10 | 10 | 10 | 110 | 5 | 120 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1900 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 120 | 989 | 5 | 98 | 1196 | 120 | 11 | 11 | 11 | 120 | 5 | 130 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 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 | 152 | 1973 | 10 | 126 | 1701 | 170 | 21 | 21 | 21 | 214 | 7 | 182 |
| Arrive On Green | 0.09 | 0.55 | 0.55 | 0.07 | 0.52 | 0.52 | 0.04 | 0.04 | 0.04 | 0.12 | 0.12 | 0.12 |
| Sat Flow, veh/h | 1774 | 3610 | 18 | 1774 | 3242 | 325 | 576 | 576 | 576 | 1774 | 58 | 1506 |
| Grp Volume(v), veh/h | 120 | 485 | 509 | 98 | 651 | 665 | 33 | 0 | 0 | 120 | 0 | 135 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1859 | 1774 | 1770 | 1797 | 1729 | 0 | 0 | 1774 | 0 | 1564 |
| Q Serve(g_s), s | 4.8 | 12.4 | 12.4 | 3.9 | 20.0 | 20.2 | 1.4 | 0.0 | 0.0 | 4.6 | 0.0 | 6.0 |
| Cycle Q Clear(g_c), s | 4.8 | 12.4 | 12.4 | 3.9 | 20.0 | 20.2 | 1.4 | 0.0 | 0.0 | 4.6 | 0.0 | 6.0 |
| Prop In Lane | 1.00 | | 0.01 | 1.00 | | 0.18 | 0.33 | | 0.33 | 1.00 | | 0.96 |
| Lane Grp Cap(c), veh/h | 152 | 967 | 1016 | 126 | 928 | 943 | 63 | 0 | 0 | 214 | 0 | 189 |
| V/C Ratio(X) | 0.79 | 0.50 | 0.50 | 0.78 | 0.70 | 0.70 | 0.52 | 0.00 | 0.00 | 0.56 | 0.00 | 0.72 |
| Avail Cap(c_a), veh/h | 208 | 1020 | 1072 | 196 | 996 | 1011 | 598 | 0 | 0 | 589 | 0 | 519 |
| 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 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 32.4 | 10.2 | 10.2 | 33.1 | 12.9 | 13.0 | 34.2 | 0.0 | 0.0 | 30.0 | 0.0 | 30.6 |
| Incr Delay (d2), s/veh | 8.8 | 0.6 | 0.5 | 3.9 | 2.3 | 2.4 | 2.4 | 0.0 | 0.0 | 0.9 | 0.0 | 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(50%),veh/ln | 2.7 | 6.1 | 6.4 | 2.1 | 10.2 | 10.4 | 0.7 | 0.0 | 0.0 | 2.3 | 0.0 | 2.7 |
| LnGrp Delay(d),s/veh | 41.3 | 10.8 | 10.8 | 37.0 | 15.3 | 15.3 | 36.7 | 0.0 | 0.0 | 30.9 | 0.0 | 32.5 |
| LnGrp LOS | D | B | B | D | B | B | D | | | C | | C |
| Approach Vol, veh/h | | 1114 | | | 1414 | | | 33 | | | 255 | |
| Approach Delay, s/veh | | 14.1 | | | 16.8 | | | 36.7 | | | 31.7 | |
| Approach LOS | | B | | | B | | | D | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 8.1 | 44.8 | | 12.7 | 9.7 | 43.2 | | 6.7 |
| Change Period (Y+Rc), s | 3.0 | 5.3 | | 4.0 | 3.5 | 5.3 | | 4.0 |
| Max Green Setting (Gmax), s | 8.0 | 41.7 | | 24.0 | 8.5 | 40.7 | | 25.0 |
| Max Q Clear Time (g_c+I1), s | 5.9 | 14.4 | | 8.0 | 6.8 | 22.2 | | 3.4 |
| Green Ext Time (p_c), s | 0.0 | 21.9 | | 0.6 | 0.0 | 15.8 | | 0.1 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 17.3 |
| HCM 2010 LOS | | B |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 240 | 870 | 560 | 100 | 400 | 430 |
| Number | 5 | 2 | 6 | 16 | 7 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 0.98 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 261 | 946 | 609 | 83 | 435 | 467 |
| Adj No. of Lanes | 1 | 2 | 2 | 0 | 1 | 1 |
| 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 | 292 | 1934 | 1049 | 143 | 571 | 510 |
| Arrive On Green | 0.16 | 0.55 | 0.34 | 0.34 | 0.32 | 0.32 |
| Sat Flow, veh/h | 1774 | 3632 | 3215 | 424 | 1774 | 1583 |
| Grp Volume(v), veh/h | 261 | 946 | 345 | 347 | 435 | 467 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1770 | 1776 | 1774 | 1583 |
| Q Serve(g_s), s | 11.0 | 12.6 | 12.2 | 12.3 | 16.7 | 21.6 |
| Cycle Q Clear(g_c), s | 11.0 | 12.6 | 12.2 | 12.3 | 16.7 | 21.6 |
| Prop In Lane | 1.00 | | | 0.24 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 292 | 1934 | 595 | 597 | 571 | 510 |
| V/C Ratio(X) | 0.89 | 0.49 | 0.58 | 0.58 | 0.76 | 0.92 |
| Avail Cap(c_a), veh/h | 292 | 2048 | 652 | 654 | 607 | 541 |
| 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 | 31.1 | 10.7 | 20.8 | 20.8 | 23.2 | 24.8 |
| Incr Delay (d2), s/veh | 27.7 | 0.4 | 2.0 | 2.1 | 5.3 | 19.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.6 | 6.2 | 6.3 | 6.3 | 9.1 | 2.8 |
| LnGrp Delay(d),s/veh | 58.8 | 11.1 | 22.8 | 22.9 | 28.5 | 44.6 |
| LnGrp LOS | E | B | C | C | C | D |
| Approach Vol, veh/h | | 1207 | 692 | | 902 | |
| Approach Delay, s/veh | | 21.4 | 22.9 | | 36.8 | |
| Approach LOS | | C | C | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 48.1 | | 28.0 | 16.0 | 32.1 | | |
| Change Period (Y+Rc), s | | 6.5 | | 3.5 | 3.5 | 6.5 | | |
| Max Green Setting (Gmax), s | | 44.0 | | 26.0 | 12.5 | 28.0 | | |
| Max Q Clear Time (g_c+I1), s | | 14.6 | | 23.6 | 13.0 | 14.3 | | |
| Green Ext Time (p_c), s | | 20.9 | | 0.9 | 0.0 | 11.3 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 26.7 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 140 | 1040 | 150 | 140 | 520 | 100 | 250 | 290 | 150 | 320 | 270 | 230 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 0.99 | 1.00 | | 0.95 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 152 | 1130 | 151 | 152 | 565 | 92 | 272 | 315 | 141 | 348 | 293 | 202 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 | 179 | 1173 | 156 | 130 | 1067 | 173 | 296 | 394 | 317 | 370 | 472 | 399 |
| Arrive On Green | 0.10 | 0.37 | 0.37 | 0.07 | 0.35 | 0.35 | 0.17 | 0.21 | 0.21 | 0.21 | 0.25 | 0.25 |
| Sat Flow, veh/h | 1774 | 3135 | 418 | 1774 | 3043 | 494 | 1774 | 1863 | 1498 | 1774 | 1863 | 1578 |
| Grp Volume(v), veh/h | 152 | 637 | 644 | 152 | 328 | 329 | 272 | 315 | 141 | 348 | 293 | 202 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1783 | 1774 | 1770 | 1768 | 1774 | 1863 | 1498 | 1774 | 1863 | 1578 |
| Q Serve(g_s), s | 11.5 | 48.0 | 48.3 | 10.0 | 20.1 | 20.3 | 20.6 | 21.9 | 11.2 | 26.3 | 19.0 | 15.0 |
| Cycle Q Clear(g_c), s | 11.5 | 48.0 | 48.3 | 10.0 | 20.1 | 20.3 | 20.6 | 21.9 | 11.2 | 26.3 | 19.0 | 15.0 |
| Prop In Lane | 1.00 | | 0.23 | 1.00 | | 0.28 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 179 | 662 | 667 | 130 | 620 | 620 | 296 | 394 | 317 | 370 | 472 | 399 |
| V/C Ratio(X) | 0.85 | 0.96 | 0.97 | 1.17 | 0.53 | 0.53 | 0.92 | 0.80 | 0.45 | 0.94 | 0.62 | 0.51 |
| Avail Cap(c_a), veh/h | 254 | 667 | 672 | 130 | 620 | 620 | 345 | 423 | 340 | 384 | 472 | 399 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 60.3 | 41.7 | 41.8 | 63.2 | 35.3 | 35.3 | 55.9 | 51.0 | 46.8 | 53.1 | 45.1 | 43.6 |
| Incr Delay (d2), s/veh | 19.9 | 26.0 | 26.7 | 131.2 | 1.6 | 1.6 | 25.2 | 11.7 | 2.1 | 30.2 | 3.6 | 2.1 |
| 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 | 6.6 | 28.1 | 28.7 | 9.6 | 10.1 | 10.2 | 12.2 | 12.6 | 4.8 | 16.1 | 10.2 | 6.7 |
| LnGrp Delay(d),s/veh | 80.2 | 67.7 | 68.5 | 194.4 | 36.9 | 37.0 | 81.1 | 62.7 | 48.9 | 83.3 | 48.8 | 45.8 |
| LnGrp LOS | F | E | E | F | D | D | F | E | D | F | D | D |
| Approach Vol, veh/h | | 1433 | | | 809 | | | 728 | | | 843 | |
| Approach Delay, s/veh | | 69.4 | | | 66.5 | | | 66.9 | | | 62.3 | |
| Approach LOS | | E | | | E | | | E | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 14.0 | 56.7 | 26.2 | 39.4 | 17.2 | 53.5 | 31.9 | 33.7 |
| Change Period (Y+Rc), s | 4.0 | 5.7 | 3.5 | 4.9 | 3.5 | 5.7 | 3.5 | 4.9 |
| Max Green Setting (Gmax), s | 10.0 | 51.4 | 26.5 | 34.0 | 19.5 | 42.4 | 29.5 | 31.0 |
| Max Q Clear Time (g_c+I1), s | 12.0 | 50.3 | 22.6 | 21.0 | 13.5 | 22.3 | 28.3 | 23.9 |
| Green Ext Time (p_c), s | 0.0 | 0.7 | 0.2 | 6.8 | 0.3 | 17.1 | 0.1 | 3.7 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 66.7 |
| HCM 2010 LOS | E |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 36.3 |
| Intersection LOS | E |

| Movement | WBU | WBL | WBR | NBU | NBT | NBR | SBU | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 190 | 170 | 0 | 150 | 20 | 0 | 240 | 600 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 207 | 185 | 0 | 163 | 22 | 0 | 261 | 652 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |

| Approach | WB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 2 | 1 |
| Conflicting Approach Left | NB | | WB |
| Conflicting Lanes Left | 1 | 0 | 1 |
| Conflicting Approach Right | SB | WB | |
| Conflicting Lanes Right | 2 | 1 | 0 |
| HCM Control Delay | 19.6 | 12.2 | 48.3 |
| HCM LOS | C | B | E |

| Lane | NBLn1 | WBLn1 | SBLn1 | SBLn2 |
|---|---|---|---|---|
| Vol Left, % | 0% | 53% | 100% | 0% |
| Vol Thru, % | 88% | 0% | 0% | 100% |
| Vol Right, % | 12% | 47% | 0% | 0% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 170 | 360 | 240 | 600 |
| LT Vol | 0 | 190 | 240 | 0 |
| Through Vol | 150 | 0 | 0 | 600 |
| RT Vol | 20 | 170 | 0 | 0 |
| Lane Flow Rate | 185 | 391 | 261 | 652 |
| Geometry Grp | 5 | 2 | 7 | 7 |
| Degree of Util (X) | 0.322 | 0.653 | 0.483 | 1 |
| Departure Headway (Hd) | 6.275 | 6.006 | 6.659 | 6.151 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 577 | 603 | 545 | 593 |
| Service Time | 4.275 | 4.027 | 4.365 | 3.856 |
| HCM Lane V/C Ratio | 0.321 | 0.648 | 0.479 | 1.099 |
| HCM Control Delay | 12.2 | 19.6 | 15.4 | 61.5 |
| HCM Lane LOS | B | C | C | F |
| HCM 95th-tile Q | 1.4 | 4.8 | 2.6 | 14.8 |

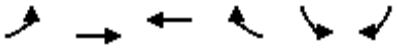
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 490 | 180 | 440 | 650 | 0 | 0 | 0 | 0 | 80 | 10 | 210 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | | | | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 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 |
| Adj Sat Flow, veh/h/ln | 0 | 1863 | 1863 | 1863 | 1863 | 0 | | | | 1900 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 0 | 533 | 196 | 478 | 707 | 0 | | | | 87 | 11 | 228 |
| Adj No. of Lanes | 0 | 1 | 1 | 1 | 2 | 0 | | | | 0 | 1 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 2 | 2 |
| Cap, veh/h | 0 | 637 | 530 | 520 | 2466 | 0 | | | | 268 | 34 | 268 |
| Arrive On Green | 0.00 | 0.34 | 0.34 | 0.29 | 0.70 | 0.00 | | | | 0.17 | 0.17 | 0.17 |
| Sat Flow, veh/h | 0 | 1863 | 1548 | 1774 | 3632 | 0 | | | | 1583 | 200 | 1583 |
| Grp Volume(v), veh/h | 0 | 533 | 196 | 478 | 707 | 0 | | | | 98 | 0 | 228 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1863 | 1548 | 1774 | 1770 | 0 | | | | 1784 | 0 | 1583 |
| Q Serve(g_s), s | 0.0 | 20.1 | 7.3 | 19.9 | 5.8 | 0.0 | | | | 3.7 | 0.0 | 10.7 |
| Cycle Q Clear(g_c), s | 0.0 | 20.1 | 7.3 | 19.9 | 5.8 | 0.0 | | | | 3.7 | 0.0 | 10.7 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 0.89 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 637 | 530 | 520 | 2466 | 0 | | | | 302 | 0 | 268 |
| V/C Ratio(X) | 0.00 | 0.84 | 0.37 | 0.92 | 0.29 | 0.00 | | | | 0.32 | 0.00 | 0.85 |
| Avail Cap(c_a), veh/h | 0 | 752 | 625 | 658 | 2961 | 0 | | | | 374 | 0 | 332 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 23.1 | 18.9 | 26.1 | 4.4 | 0.0 | | | | 27.8 | 0.0 | 30.7 |
| Incr Delay (d2), s/veh | 0.0 | 6.2 | 0.2 | 14.0 | 0.0 | 0.0 | | | | 0.2 | 0.0 | 13.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 11.3 | 3.1 | 11.7 | 2.8 | 0.0 | | | | 1.8 | 0.0 | 5.6 |
| LnGrp Delay(d),s/veh | 0.0 | 29.3 | 19.1 | 40.1 | 4.4 | 0.0 | | | | 28.1 | 0.0 | 44.2 |
| LnGrp LOS | | C | B | D | A | | | | | C | | D |
| Approach Vol, veh/h | | 729 | | | 1185 | | | | | | 326 | |
| Approach Delay, s/veh | | 26.6 | | | 18.8 | | | | | | 39.3 | |
| Approach LOS | | C | | | B | | | | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 27.1 | 31.2 | | 18.0 | | 58.2 | | |
| Change Period (Y+Rc), s | * 4.7 | 5.1 | | 5.1 | | 5.1 | | |
| Max Green Setting (Gmax), s | * 23 | 30.8 | | 16.0 | | 63.8 | | |
| Max Q Clear Time (g_c+I1), s | 21.9 | 22.1 | | 12.7 | | 7.8 | | |
| Green Ext Time (p_c), s | 0.5 | 4.0 | | 0.3 | | 6.8 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 24.3 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 170 | 390 | 1090 | 360 | 0 | 0 |
| Number | 5 | 2 | 6 | 16 | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 0.97 | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | | |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | | |
| Adj Flow Rate, veh/h | 185 | 424 | 1185 | 391 | | |
| Adj No. of Lanes | 1 | 1 | 2 | 1 | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | | |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | | |
| Cap, veh/h | 314 | 1546 | 1787 | 774 | | |
| Arrive On Green | 0.18 | 0.83 | 0.50 | 0.50 | | |
| Sat Flow, veh/h | 1774 | 1863 | 3632 | 1532 | | |
| Grp Volume(v), veh/h | 185 | 424 | 1185 | 391 | | |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1770 | 1532 | | |
| Q Serve(g_s), s | 3.0 | 1.6 | 7.9 | 5.4 | | |
| Cycle Q Clear(g_c), s | 3.0 | 1.6 | 7.9 | 5.4 | | |
| Prop In Lane | 1.00 | | | 1.00 | | |
| Lane Grp Cap(c), veh/h | 314 | 1546 | 1787 | 774 | | |
| V/C Ratio(X) | 0.59 | 0.27 | 0.66 | 0.51 | | |
| Avail Cap(c_a), veh/h | 541 | 2028 | 2250 | 974 | | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | | |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | | |
| Uniform Delay (d), s/veh | 12.0 | 0.6 | 5.9 | 5.2 | | |
| Incr Delay (d2), s/veh | 0.7 | 0.0 | 0.3 | 0.2 | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | | |
| %ile BackOfQ(50%),veh/ln | 1.5 | 0.7 | 3.8 | 2.2 | | |
| LnGrp Delay(d),s/veh | 12.7 | 0.6 | 6.1 | 5.4 | | |
| LnGrp LOS | B | A | A | A | | |
| Approach Vol, veh/h | | 609 | 1576 | | | |
| Approach Delay, s/veh | | 4.3 | 5.9 | | | |
| Approach LOS | | A | A | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 31.8 | | | 10.3 | 21.4 | | |
| Change Period (Y+Rc), s | | 5.4 | | | * 4.7 | 5.4 | | |
| Max Green Setting (Gmax), s | | 34.6 | | | * 9.7 | 20.2 | | |
| Max Q Clear Time (g_c+I1), s | | 3.6 | | | 5.0 | 9.9 | | |
| Green Ext Time (p_c), s | | 10.3 | | | 0.1 | 6.0 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 5.5 |
| HCM 2010 LOS | A |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 70 | 330 | 0 | 0 | 890 | 70 | 290 | 100 | 160 | 60 | 0 | 300 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 | | 0.97 | 1.00 | | 0.99 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 0 | 0 | 1863 | 1900 | 1863 | 1863 | 1863 | 1900 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 76 | 359 | 0 | 0 | 967 | 76 | 223 | 258 | 152 | 65 | 0 | 326 |
| Adj No. of Lanes | 1 | 1 | 0 | 0 | 3 | 0 | 1 | 1 | 1 | 0 | 1 | 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 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 126 | 684 | 0 | 0 | 1140 | 89 | 309 | 324 | 272 | 70 | 0 | 351 |
| Arrive On Green | 0.07 | 0.37 | 0.00 | 0.00 | 0.24 | 0.24 | 0.17 | 0.17 | 0.17 | 0.26 | 0.00 | 0.26 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 0 | 4964 | 376 | 1774 | 1863 | 1562 | 265 | 0 | 1329 |
| Grp Volume(v), veh/h | 76 | 359 | 0 | 0 | 683 | 360 | 223 | 258 | 152 | 391 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 0 | 1695 | 1782 | 1774 | 1863 | 1562 | 1595 | 0 | 0 |
| Q Serve(g_s), s | 3.3 | 12.1 | 0.0 | 0.0 | 15.4 | 15.5 | 9.5 | 10.7 | 7.1 | 19.2 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 3.3 | 12.1 | 0.0 | 0.0 | 15.4 | 15.5 | 9.5 | 10.7 | 7.1 | 19.2 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 0.21 | 1.00 | | 1.00 | 0.17 | | 0.83 |
| Lane Grp Cap(c), veh/h | 126 | 684 | 0 | 0 | 806 | 424 | 309 | 324 | 272 | 422 | 0 | 0 |
| V/C Ratio(X) | 0.60 | 0.52 | 0.00 | 0.00 | 0.85 | 0.85 | 0.72 | 0.80 | 0.56 | 0.93 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 157 | 740 | 0 | 0 | 849 | 446 | 356 | 373 | 313 | 425 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 36.2 | 19.9 | 0.0 | 0.0 | 29.2 | 29.2 | 31.3 | 31.8 | 30.4 | 28.8 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.7 | 0.2 | 0.0 | 0.0 | 7.2 | 13.1 | 7.0 | 11.1 | 2.6 | 25.9 | 0.0 | 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(50%),veh/ln | 1.7 | 6.2 | 0.0 | 0.0 | 8.0 | 9.1 | 5.2 | 6.4 | 3.3 | 11.4 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 37.9 | 20.1 | 0.0 | 0.0 | 36.4 | 42.3 | 38.3 | 42.9 | 32.9 | 54.7 | 0.0 | 0.0 |
| LnGrp LOS | D | C | | | D | D | D | D | C | D | | |
| Approach Vol, veh/h | | 435 | | | 1043 | | | 633 | | | 391 | |
| Approach Delay, s/veh | | 23.2 | | | 38.4 | | | 38.9 | | | 54.7 | |
| Approach LOS | | C | | | D | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 34.9 | | 26.3 | 10.4 | 24.5 | | 19.1 |
| Change Period (Y+Rc), s | | 5.4 | | 5.1 | * 4.7 | 5.4 | | 5.1 |
| Max Green Setting (Gmax), s | | 31.9 | | 21.4 | * 7.1 | 20.1 | | 16.1 |
| Max Q Clear Time (g_c+I1), s | | 14.1 | | 21.2 | 5.3 | 17.5 | | 12.7 |
| Green Ext Time (p_c), s | | 5.9 | | 0.0 | 0.0 | 1.6 | | 1.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 38.5 |
| HCM 2010 LOS | D |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 65 | 385 | 85 | 210 | 730 | 120 | 100 | 70 | 120 | 40 | 90 | 50 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.97 | 0.98 | | 0.95 | 0.97 | | 0.96 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1900 | 1863 | 1900 | 1900 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 71 | 418 | 92 | 228 | 793 | 130 | 109 | 76 | 89 | 43 | 98 | 54 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 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 | 91 | 692 | 152 | 268 | 886 | 145 | 182 | 115 | 113 | 109 | 222 | 106 |
| Arrive On Green | 0.05 | 0.47 | 0.47 | 0.15 | 0.57 | 0.57 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| Sat Flow, veh/h | 1774 | 1472 | 324 | 1774 | 1554 | 255 | 518 | 492 | 486 | 238 | 950 | 455 |
| Grp Volume(v), veh/h | 71 | 0 | 510 | 228 | 0 | 923 | 274 | 0 | 0 | 195 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 0 | 1796 | 1774 | 0 | 1808 | 1496 | 0 | 0 | 1643 | 0 | 0 |
| Q Serve(g_s), s | 3.3 | 0.0 | 17.3 | 10.3 | 0.0 | 37.0 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 3.3 | 0.0 | 17.3 | 10.3 | 0.0 | 37.0 | 13.9 | 0.0 | 0.0 | 8.1 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.18 | 1.00 | | 0.14 | 0.40 | | 0.32 | 0.22 | | 0.28 |
| Lane Grp Cap(c), veh/h | 91 | 0 | 845 | 268 | 0 | 1031 | 410 | 0 | 0 | 436 | 0 | 0 |
| V/C Ratio(X) | 0.78 | 0.00 | 0.60 | 0.85 | 0.00 | 0.90 | 0.67 | 0.00 | 0.00 | 0.45 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 97 | 0 | 859 | 333 | 0 | 1106 | 475 | 0 | 0 | 507 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 38.7 | 0.0 | 16.2 | 34.2 | 0.0 | 15.6 | 29.4 | 0.0 | 0.0 | 27.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 31.2 | 0.0 | 1.3 | 15.8 | 0.0 | 9.4 | 3.2 | 0.0 | 0.0 | 0.9 | 0.0 | 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(50%),veh/ln | 2.4 | 0.0 | 8.8 | 6.2 | 0.0 | 20.9 | 6.2 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 70.0 | 0.0 | 17.5 | 49.9 | 0.0 | 25.0 | 32.7 | 0.0 | 0.0 | 28.2 | 0.0 | 0.0 |
| LnGrp LOS | E | | B | D | | C | C | | | C | | |
| Approach Vol, veh/h | | 581 | | | 1151 | | | 274 | | | 195 | |
| Approach Delay, s/veh | | 23.9 | | | 29.9 | | | 32.7 | | | 28.2 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 16.0 | 43.4 | | 23.3 | 7.7 | 51.6 | | 23.3 |
| Change Period (Y+Rc), s | 3.5 | 4.5 | | 4.0 | 3.5 | 4.5 | | 4.0 |
| Max Green Setting (Gmax), s | 15.5 | 39.5 | | 23.0 | 4.5 | 50.5 | | 23.0 |
| Max Q Clear Time (g_c+I1), s | 12.3 | 19.3 | | 10.1 | 5.3 | 39.0 | | 15.9 |
| Green Ext Time (p_c), s | 0.2 | 12.2 | | 2.9 | 0.0 | 8.1 | | 2.0 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | 28.5 | |
| HCM 2010 LOS | C | |

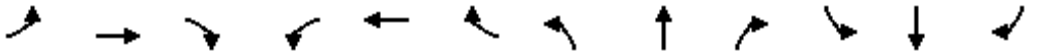
| Intersection | |
|---|---|
| Int Delay, s/veh | 15.4 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Vol, veh/h | 190 | 470 | 770 | 160 | 40 | 230 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | - | - | - | 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 | 207 | 511 | 837 | 174 | 43 | 250 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1011 | 0 | - | 0 | 1848 | 924 |
| Stage 1 | - | - | - | - | 924 | - |
| Stage 2 | - | - | - | - | 924 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 686 | - | - | - | 82 | 327 |
| Stage 1 | - | - | - | - | 387 | - |
| Stage 2 | - | - | - | - | 387 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 686 | - | - | - | 57 | 327 |
| Mov Cap-2 Maneuver | - | - | - | - | 170 | - |
| Stage 1 | - | - | - | - | 387 | - |
| Stage 2 | - | - | - | - | 270 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 3.6 | 0 | 97.6 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 686 | - | - | - | 288 |
| HCM Lane V/C Ratio | 0.301 | - | - | - | 1.019 |
| HCM Control Delay (s) | 12.5 | - | - | - | 97.6 |
| HCM Lane LOS | B | - | - | - | F |
| HCM 95th %tile Q(veh) | 1.3 | - | - | - | 10.8 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 5 | 360 | 75 | 400 | 730 | 10 | 65 | 5 | 140 | 10 | 10 | 10 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 0.99 | | 0.99 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1900 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 5 | 391 | 82 | 435 | 793 | 11 | 71 | 5 | 125 | 11 | 11 | 11 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 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 | 429 | 1021 | 214 | 654 | 1259 | 17 | 157 | 24 | 156 | 317 | 139 | 139 |
| Arrive On Green | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| Sat Flow, veh/h | 674 | 1487 | 312 | 917 | 1833 | 25 | 435 | 145 | 954 | 1251 | 853 | 853 |
| Grp Volume(v), veh/h | 5 | 0 | 473 | 435 | 0 | 804 | 201 | 0 | 0 | 11 | 0 | 22 |
| Grp Sat Flow(s),veh/h/ln | 674 | 0 | 1799 | 917 | 0 | 1858 | 1534 | 0 | 0 | 1251 | 0 | 1706 |
| Q Serve(g_s), s | 0.2 | 0.0 | 6.3 | 21.8 | 0.0 | 13.6 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| Cycle Q Clear(g_c), s | 13.8 | 0.0 | 6.3 | 28.1 | 0.0 | 13.6 | 7.1 | 0.0 | 0.0 | 0.5 | 0.0 | 0.6 |
| Prop In Lane | 1.00 | | 0.17 | 1.00 | | 0.01 | 0.35 | | 0.62 | 1.00 | | 0.50 |
| Lane Grp Cap(c), veh/h | 429 | 0 | 1235 | 654 | 0 | 1276 | 337 | 0 | 0 | 317 | 0 | 279 |
| V/C Ratio(X) | 0.01 | 0.00 | 0.38 | 0.67 | 0.00 | 0.63 | 0.60 | 0.00 | 0.00 | 0.03 | 0.00 | 0.08 |
| Avail Cap(c_a), veh/h | 441 | 0 | 1268 | 671 | 0 | 1310 | 528 | 0 | 0 | 476 | 0 | 496 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 8.7 | 0.0 | 3.8 | 9.8 | 0.0 | 4.9 | 22.8 | 0.0 | 0.0 | 20.0 | 0.0 | 20.1 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.4 | 3.3 | 0.0 | 1.4 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 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(50%),veh/ln | 0.0 | 0.0 | 3.2 | 6.0 | 0.0 | 7.2 | 3.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.3 |
| LnGrp Delay(d),s/veh | 8.7 | 0.0 | 4.2 | 13.1 | 0.0 | 6.3 | 23.4 | 0.0 | 0.0 | 20.1 | 0.0 | 20.2 |
| LnGrp LOS | A | | A | B | | A | C | | | C | | C |
| Approach Vol, veh/h | | 478 | | | 1239 | | | 201 | | | 33 | |
| Approach Delay, s/veh | | 4.2 | | | 8.7 | | | 23.4 | | | 20.1 | |
| Approach LOS | | A | | | A | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 44.0 | | 12.8 | | 44.0 | | 12.8 |
| Change Period (Y+Rc), s | | 5.0 | | 3.5 | | 5.0 | | 3.5 |
| Max Green Setting (Gmax), s | | 40.0 | | 16.5 | | 40.0 | | 16.5 |
| Max Q Clear Time (g_c+I1), s | | 15.8 | | 2.6 | | 30.1 | | 9.1 |
| Green Ext Time (p_c), s | | 19.7 | | 0.7 | | 8.8 | | 0.5 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 9.3 |
| HCM 2010 LOS | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 340 | 160 | 200 | 740 | 1220 | 860 |
| Number | 7 | 14 | 5 | 2 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | 1.00 | | | 0.95 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 370 | 174 | 217 | 804 | 1326 | 935 |
| Adj No. of Lanes | 2 | 1 | 1 | 3 | 2 | 1 |
| 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 | 601 | 277 | 259 | 3392 | 1666 | 983 |
| Arrive On Green | 0.17 | 0.17 | 0.15 | 0.67 | 0.47 | 0.47 |
| Sat Flow, veh/h | 3442 | 1583 | 1774 | 5253 | 3632 | 1502 |
| Grp Volume(v), veh/h | 370 | 174 | 217 | 804 | 1326 | 935 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1583 | 1774 | 1695 | 1770 | 1502 |
| Q Serve(g_s), s | 6.9 | 7.1 | 8.3 | 4.3 | 22.0 | 32.7 |
| Cycle Q Clear(g_c), s | 6.9 | 7.1 | 8.3 | 4.3 | 22.0 | 32.7 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 601 | 277 | 259 | 3392 | 1666 | 983 |
| V/C Ratio(X) | 0.62 | 0.63 | 0.84 | 0.24 | 0.80 | 0.95 |
| Avail Cap(c_a), veh/h | 1635 | 752 | 268 | 3392 | 1666 | 983 |
| 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 | 26.5 | 26.6 | 28.9 | 4.6 | 15.6 | 10.2 |
| Incr Delay (d2), s/veh | 1.5 | 3.3 | 19.9 | 0.0 | 2.9 | 18.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.4 | 6.4 | 5.5 | 2.0 | 11.3 | 22.6 |
| LnGrp Delay(d),s/veh | 28.0 | 29.9 | 48.8 | 4.6 | 18.4 | 28.2 |
| LnGrp LOS | C | C | D | A | B | C |
| Approach Vol, veh/h | 544 | | | 1021 | 2261 | |
| Approach Delay, s/veh | 28.6 | | | 14.0 | 22.5 | |
| Approach LOS | C | | | B | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 52.3 | | 17.1 | 13.6 | 38.7 | | |
| Change Period (Y+Rc), s | | 6.0 | | 5.0 | 3.5 | * 6 | | |
| Max Green Setting (Gmax), s | | 46.0 | | 33.0 | 10.5 | * 33 | | |
| Max Q Clear Time (g_c+I1), s | | 6.3 | | 9.1 | 10.3 | 34.7 | | |
| Green Ext Time (p_c), s | | 33.1 | | 3.1 | 0.0 | 0.0 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 21.1 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 190 | 90 | 270 | 240 | 200 | 640 |
| Number | 7 | 14 | 2 | 12 | 1 | 6 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | 1.00 | | 0.96 | 1.00 | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 207 | 98 | 293 | 261 | 217 | 696 |
| Adj No. of Lanes | 1 | 1 | 1 | 0 | 1 | 1 |
| 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 | 281 | 251 | 382 | 340 | 274 | 1227 |
| Arrive On Green | 0.16 | 0.16 | 0.43 | 0.43 | 0.15 | 0.66 |
| Sat Flow, veh/h | 1774 | 1583 | 891 | 793 | 1774 | 1863 |
| Grp Volume(v), veh/h | 207 | 98 | 0 | 554 | 217 | 696 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1583 | 0 | 1684 | 1774 | 1863 |
| Q Serve(g_s), s | 5.2 | 2.6 | 0.0 | 13.0 | 5.5 | 9.5 |
| Cycle Q Clear(g_c), s | 5.2 | 2.6 | 0.0 | 13.0 | 5.5 | 9.5 |
| Prop In Lane | 1.00 | 1.00 | | 0.47 | 1.00 | |
| Lane Grp Cap(c), veh/h | 281 | 251 | 0 | 722 | 274 | 1227 |
| V/C Ratio(X) | 0.74 | 0.39 | 0.00 | 0.77 | 0.79 | 0.57 |
| Avail Cap(c_a), veh/h | 612 | 546 | 0 | 816 | 363 | 1425 |
| HCM Platoon Ratio | 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 |
| Uniform Delay (d), s/veh | 18.6 | 17.5 | 0.0 | 11.3 | 18.9 | 4.3 |
| Incr Delay (d2), s/veh | 1.4 | 0.4 | 0.0 | 3.7 | 9.3 | 0.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.6 | 1.1 | 0.0 | 6.7 | 3.4 | 4.8 |
| LnGrp Delay(d),s/veh | 20.0 | 17.9 | 0.0 | 14.9 | 28.2 | 4.9 |
| LnGrp LOS | C | B | | B | C | A |
| Approach Vol, veh/h | 305 | | 554 | | | 913 |
| Approach Delay, s/veh | 19.3 | | 14.9 | | | 10.4 |
| Approach LOS | B | | B | | | B |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 10.7 | 24.4 | | 11.3 | | 35.1 | | |
| Change Period (Y+Rc), s | 3.5 | 4.5 | | 4.0 | | 4.5 | | |
| Max Green Setting (Gmax), s | 9.5 | 22.5 | | 16.0 | | 35.5 | | |
| Max Q Clear Time (g_c+I1), s | 7.5 | 15.0 | | 7.2 | | 11.5 | | |
| Green Ext Time (p_c), s | 0.2 | 4.9 | | 0.3 | | 10.7 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 13.4 |
| HCM 2010 LOS | B |

| Intersection | |
|---|---|
| Int Delay, s/veh | 35.6 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 410 | 530 | 530 | 320 | 0 | 0 | 0 | 0 | 50 | 0 | 130 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop |
| RT Channelized | - | - | Free | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 0 | - | - | - | - | - | - | 0 | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 446 | 576 | 576 | 348 | 0 | 0 | 0 | 0 | 54 | 0 | 141 |

| Major/Minor | Major1 | | | Major2 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 348 | 0 | - | 446 | 0 | 0 | 1946 | 1946 | 348 |
| Stage 1 | - | - | - | - | - | - | 1500 | 1500 | - |
| Stage 2 | - | - | - | - | - | - | 446 | 446 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 6.42 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 5.42 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 5.42 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1211 | - | 0 | 1114 | - | - | 71 | 65 | 695 |
| Stage 1 | - | - | 0 | - | - | - | 204 | 185 | - |
| Stage 2 | - | - | 0 | - | - | - | 645 | 574 | - |
| Platoon blocked, % | | - | | | - | - | | | |
| Mov Cap-1 Maneuver | 1211 | - | - | 1114 | - | - | ~ 25 | 0 | 695 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | ~ 25 | 0 | - |
| Stage 1 | - | - | - | - | - | - | 73 | 0 | - |
| Stage 2 | - | - | - | - | - | - | 645 | 0 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 7.3 | 250.6 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1211 | - | 1114 | - | - | 25 | 695 |
| HCM Lane V/C Ratio | - | - | 0.517 | - | - | 2.174 | 0.203 |
| HCM Control Delay (s) | 0 | - | 11.6 | 0 | -$ | 872.1 | 11.5 |
| HCM Lane LOS | A | - | B | A | - | F | B |
| HCM 95th %tile Q(veh) | 0 | - | 3.1 | - | - | 6.7 | 0.8 |

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 45.5 |
| Intersection LOS | E |

| Movement | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 260 | 200 | 0 | 0 | 0 | 710 | 160 | 0 | 140 | 0 | 160 |
| 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 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 283 | 217 | 0 | 0 | 0 | 772 | 174 | 0 | 152 | 0 | 174 |
| Number of Lanes | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |

| Approach | EB | WB | NB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 2 | 1 | 0 |
| Conflicting Approach Left | | NB | EB |
| Conflicting Lanes Left | 0 | 2 | 1 |
| Conflicting Approach Right | NB | | WB |
| Conflicting Lanes Right | 2 | 0 | 2 |
| HCM Control Delay | 50.1 | 53.9 | 13.9 |
| HCM LOS | F | F | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | WBLn2 |
|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 57% | 0% | 0% |
| Vol Thru, % | 0% | 0% | 43% | 100% | 0% |
| Vol Right, % | 0% | 100% | 0% | 0% | 100% |
| Sign Control | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 140 | 160 | 460 | 710 | 160 |
| LT Vol | 140 | 0 | 260 | 0 | 0 |
| Through Vol | 0 | 0 | 200 | 710 | 0 |
| RT Vol | 0 | 160 | 0 | 0 | 160 |
| Lane Flow Rate | 152 | 174 | 500 | 772 | 174 |
| Geometry Grp | 7 | 7 | 6 | 7 | 7 |
| Degree of Util (X) | 0.343 | 0.333 | 0.934 | 1 | 0.281 |
| Departure Headway (Hd) | 8.103 | 6.902 | 6.722 | 6.527 | 5.812 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes |
| Cap | 446 | 523 | 540 | 563 | 619 |
| Service Time | 5.824 | 4.623 | 4.739 | 4.262 | 3.547 |
| HCM Lane V/C Ratio | 0.341 | 0.333 | 0.926 | 1.371 | 0.281 |
| HCM Control Delay | 15 | 13 | 50.1 | 63.6 | 10.8 |
| HCM Lane LOS | B | B | F | F | B |
| HCM 95th-tile Q | 1.5 | 1.4 | 11.7 | 14.3 | 1.1 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | |
| Intersection LOS | |

| Movement | SBU | SBL | SBT | SBR |
|---|---|---|---|---|
| Vol, veh/h | 0 | 0 | 0 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 0 |
| Number of Lanes | 0 | 0 | 0 | 0 |

| Approach | |
|---|---|
| Opposing Approach | |
| Opposing Lanes | |
| Conflicting Approach Left | |
| Conflicting Lanes Left | |
| Conflicting Approach Right | |
| Conflicting Lanes Right | |
| HCM Control Delay | |
| HCM LOS | |

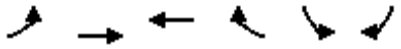
| Lane |
|---|

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 54.5 |
| Intersection LOS | F |

| Movement | EBU | EBL | EBT | WBU | WBT | WBR | SBU | SBL | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 530 | 260 | 0 | 680 | 1500 | 0 | 40 | 10 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 576 | 283 | 0 | 739 | 1630 | 0 | 43 | 11 |
| Number of Lanes | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |

| Approach | EB | WB | SB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 2 | 2 | 0 |
| Conflicting Approach Left | SB | | WB |
| Conflicting Lanes Left | 2 | 0 | 2 |
| Conflicting Approach Right | | SB | EB |
| Conflicting Lanes Right | 0 | 2 | 2 |
| HCM Control Delay | 49 | 57.5 | 12.3 |
| HCM LOS | E | F | B |

| Lane | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 0% | 0% | 100% | 0% |
| Vol Thru, % | 0% | 100% | 100% | 0% | 0% | 0% |
| Vol Right, % | 0% | 0% | 0% | 100% | 0% | 100% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 530 | 260 | 680 | 1500 | 40 | 10 |
| LT Vol | 530 | 0 | 0 | 0 | 40 | 0 |
| Through Vol | 0 | 260 | 680 | 0 | 0 | 0 |
| RT Vol | 0 | 0 | 0 | 1500 | 0 | 10 |
| Lane Flow Rate | 576 | 283 | 739 | 1630 | 43 | 11 |
| Geometry Grp | 7 | 7 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 1 | 0.504 | 1 | 1 | 0.107 | 0.023 |
| Departure Headway (Hd) | 6.914 | 6.415 | 5.826 | 5.128 | 8.882 | 7.683 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 530 | 562 | 621 | 717 | 404 | 466 |
| Service Time | 4.634 | 4.134 | 3.595 | 2.897 | 6.632 | 5.432 |
| HCM Lane V/C Ratio | 1.087 | 0.504 | 1.19 | 2.273 | 0.106 | 0.024 |
| HCM Control Delay | 65.5 | 15.5 | 60.1 | 56.3 | 12.7 | 10.6 |
| HCM Lane LOS | F | C | F | F | B | B |
| HCM 95th-tile Q | 14 | 2.8 | 15.1 | 16.1 | 0.4 | 0.1 |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 50 | 250 | 1940 | 340 | 880 | 230 |
| Number | 5 | 2 | 6 | 16 | 7 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 0.98 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 54 | 272 | 2109 | 370 | 957 | 250 |
| Adj No. of Lanes | 1 | 1 | 2 | 1 | 2 | 1 |
| 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 | 63 | 1219 | 2081 | 911 | 938 | 432 |
| Arrive On Green | 0.04 | 0.65 | 0.59 | 0.59 | 0.27 | 0.27 |
| Sat Flow, veh/h | 1774 | 1863 | 3632 | 1550 | 3442 | 1583 |
| Grp Volume(v), veh/h | 54 | 272 | 2109 | 370 | 957 | 250 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1770 | 1550 | 1721 | 1583 |
| Q Serve(g_s), s | 4.5 | 8.9 | 88.2 | 19.4 | 40.9 | 20.5 |
| Cycle Q Clear(g_c), s | 4.5 | 8.9 | 88.2 | 19.4 | 40.9 | 20.5 |
| Prop In Lane | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 63 | 1219 | 2081 | 911 | 938 | 432 |
| V/C Ratio(X) | 0.86 | 0.22 | 1.01 | 0.41 | 1.02 | 0.58 |
| Avail Cap(c_a), veh/h | 63 | 1219 | 2081 | 911 | 938 | 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 | 72.0 | 10.5 | 30.9 | 16.7 | 54.5 | 47.1 |
| Incr Delay (d2), s/veh | 65.1 | 0.0 | 23.1 | 0.1 | 34.5 | 1.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.4 | 4.5 | 49.5 | 8.4 | 23.9 | 18.1 |
| LnGrp Delay(d),s/veh | 137.1 | 10.5 | 54.0 | 16.8 | 89.0 | 48.4 |
| LnGrp LOS | F | B | F | B | F | D |
| Approach Vol, veh/h | | 326 | 2479 | | 1207 | |
| Approach Delay, s/veh | | 31.5 | 48.5 | | 80.6 | |
| Approach LOS | | C | D | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 104.0 | | 46.0 | 10.0 | 94.0 | | |
| Change Period (Y+Rc), s | | 5.8 | | 5.1 | * 4.7 | 5.8 | | |
| Max Green Setting (Gmax), s | | 98.2 | | 40.9 | * 5.3 | 88.2 | | |
| Max Q Clear Time (g_c+I1), s | | 10.9 | | 42.9 | 6.5 | 90.2 | | |
| Green Ext Time (p_c), s | | 25.9 | | 0.0 | 0.0 | 0.0 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 56.7 |
| HCM 2010 LOS | E |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 30 | 10 | 10 | 500 | 10 | 300 | 30 | 730 | 390 | 240 | 1070 | 40 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| 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 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1900 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 33 | 11 | 11 | 440 | 155 | 326 | 33 | 793 | 0 | 261 | 1163 | 43 |
| Adj No. of Lanes | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 2 | 1 |
| 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 | 47 | 16 | 56 | 542 | 162 | 341 | 42 | 1068 | 478 | 294 | 1534 | 671 |
| Arrive On Green | 0.04 | 0.04 | 0.04 | 0.31 | 0.31 | 0.31 | 0.02 | 0.30 | 0.00 | 0.17 | 0.43 | 0.43 |
| Sat Flow, veh/h | 1347 | 449 | 1583 | 1774 | 531 | 1117 | 1774 | 3539 | 1583 | 1774 | 3539 | 1549 |
| Grp Volume(v), veh/h | 44 | 0 | 11 | 440 | 0 | 481 | 33 | 793 | 0 | 261 | 1163 | 43 |
| Grp Sat Flow(s),veh/h/ln | 1795 | 0 | 1583 | 1774 | 0 | 1649 | 1774 | 1770 | 1583 | 1774 | 1770 | 1549 |
| Q Serve(g_s), s | 2.5 | 0.0 | 0.7 | 23.2 | 0.0 | 29.0 | 1.9 | 20.5 | 0.0 | 14.6 | 28.1 | 1.6 |
| Cycle Q Clear(g_c), s | 2.5 | 0.0 | 0.7 | 23.2 | 0.0 | 29.0 | 1.9 | 20.5 | 0.0 | 14.6 | 28.1 | 1.6 |
| Prop In Lane | 0.75 | | 1.00 | 1.00 | | 0.68 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 63 | 0 | 56 | 542 | 0 | 504 | 42 | 1068 | 478 | 294 | 1534 | 671 |
| V/C Ratio(X) | 0.70 | 0.00 | 0.20 | 0.81 | 0.00 | 0.96 | 0.78 | 0.74 | 0.00 | 0.89 | 0.76 | 0.06 |
| Avail Cap(c_a), veh/h | 283 | 0 | 250 | 542 | 0 | 504 | 280 | 1249 | 559 | 402 | 1534 | 671 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 48.4 | 0.0 | 47.6 | 32.5 | 0.0 | 34.6 | 49.3 | 31.9 | 0.0 | 41.4 | 24.3 | 16.8 |
| Incr Delay (d2), s/veh | 5.0 | 0.0 | 0.6 | 8.5 | 0.0 | 28.8 | 10.9 | 2.2 | 0.0 | 13.7 | 3.2 | 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 | 1.3 | 0.0 | 0.3 | 12.6 | 0.0 | 17.3 | 1.0 | 10.3 | 0.0 | 8.3 | 14.4 | 0.7 |
| LnGrp Delay(d),s/veh | 53.5 | 0.0 | 48.2 | 41.1 | 0.0 | 63.3 | 60.1 | 34.1 | 0.0 | 55.1 | 27.5 | 16.9 |
| LnGrp LOS | D | | D | D | | E | E | C | | E | C | B |
| Approach Vol, veh/h | | 55 | | | 921 | | | 826 | | | 1467 | |
| Approach Delay, s/veh | | 52.4 | | | 52.7 | | | 35.1 | | | 32.1 | |
| Approach LOS | | D | | | D | | | D | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 10.8 | 37.1 | | 8.1 | 7.4 | 50.5 | | 35.5 |
| Change Period (Y+Rc), s | 4.0 | * 6.5 | | 4.5 | 5.0 | 6.5 | | 4.5 |
| Max Green Setting (Gmax), s | 23.3 | * 36 | | 16.0 | 16.0 | 41.5 | | 31.0 |
| Max Q Clear Time (g_c+I1), s | 16.6 | 22.5 | | 4.5 | 3.9 | 30.1 | | 31.0 |
| Green Ext Time (p_c), s | 0.2 | 8.2 | | 0.1 | 0.0 | 10.4 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 39.0 |
| HCM 2010 LOS | D |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 10 | 20 | 10 | 240 | 0 | 210 | 10 | 980 | 380 | 200 | 670 | 55 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.94 | 1.00 | | 1.00 | 1.00 | | 0.97 | 1.00 | | 0.95 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 0 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 11 | 22 | 11 | 261 | 0 | 228 | 11 | 1065 | 413 | 217 | 728 | 60 |
| Adj No. of Lanes | 1 | 1 | 1 | 2 | 0 | 1 | 1 | 2 | 1 | 2 | 2 | 1 |
| 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 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 202 | 212 | 169 | 0 | 0 | 0 | 20 | 1709 | 743 | 329 | 2008 | 855 |
| Arrive On Green | 0.11 | 0.11 | 0.11 | 0.00 | 0.00 | 0.00 | 0.01 | 0.48 | 0.48 | 0.10 | 0.57 | 0.57 |
| Sat Flow, veh/h | 1774 | 1863 | 1486 | | 0 | | 1774 | 3539 | 1539 | 3442 | 3539 | 1507 |
| Grp Volume(v), veh/h | 11 | 22 | 11 | | 0.0 | | 11 | 1065 | 413 | 217 | 728 | 60 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1486 | | | | 1774 | 1770 | 1539 | 1721 | 1770 | 1507 |
| Q Serve(g_s), s | 0.3 | 0.6 | 0.4 | | | | 0.3 | 11.9 | 10.2 | 3.3 | 6.0 | 1.0 |
| Cycle Q Clear(g_c), s | 0.3 | 0.6 | 0.4 | | | | 0.3 | 11.9 | 10.2 | 3.3 | 6.0 | 1.0 |
| Prop In Lane | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 202 | 212 | 169 | | | | 20 | 1709 | 743 | 329 | 2008 | 855 |
| V/C Ratio(X) | 0.05 | 0.10 | 0.06 | | | | 0.55 | 0.62 | 0.56 | 0.66 | 0.36 | 0.07 |
| Avail Cap(c_a), veh/h | 1124 | 1180 | 942 | | | | 132 | 2025 | 880 | 468 | 2242 | 955 |
| HCM Platoon Ratio | 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 21.2 | 21.3 | 21.2 | | | | 26.4 | 10.3 | 9.8 | 23.4 | 6.3 | 5.2 |
| Incr Delay (d2), s/veh | 0.2 | 0.4 | 0.3 | | | | 8.5 | 0.4 | 0.7 | 0.8 | 0.1 | 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 |
| %ile BackOfQ(50%),veh/ln | 0.2 | 0.3 | 0.2 | | | | 0.2 | 5.9 | 4.4 | 1.6 | 3.0 | 0.4 |
| LnGrp Delay(d),s/veh | 21.4 | 21.7 | 21.5 | | | | 34.9 | 10.7 | 10.5 | 24.3 | 6.4 | 5.3 |
| LnGrp LOS | C | C | C | | | | C | B | B | C | A | A |
| Approach Vol, veh/h | | 44 | | | | | | 1489 | | | 1005 | |
| Approach Delay, s/veh | | 21.6 | | | | | | 10.8 | | | 10.2 | |
| Approach LOS | | C | | | | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | 9.6 | 32.4 | | 11.6 | 5.1 | 36.9 | | |
| Change Period (Y+Rc), s | 4.5 | 6.5 | | 5.5 | 4.5 | 6.5 | | |
| Max Green Setting (Gmax), s | 7.3 | 30.7 | | 34.0 | 4.0 | 34.0 | | |
| Max Q Clear Time (g_c+I1), s | 5.3 | 13.9 | | 2.6 | 2.3 | 8.0 | | |
| Green Ext Time (p_c), s | 0.1 | 11.6 | | 0.2 | 0.0 | 15.6 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 10.8 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 850 | 230 | 770 | 900 | 0 | 0 | 0 | 0 | 340 | 5 | 220 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | | | | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 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 |
| Adj Sat Flow, veh/h/ln | 0 | 1863 | 1863 | 1863 | 1863 | 0 | | | | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 0 | 924 | 250 | 837 | 978 | 0 | | | | 374 | 0 | 239 |
| Adj No. of Lanes | 0 | 2 | 1 | 2 | 2 | 0 | | | | 2 | 0 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 2 | 2 |
| Cap, veh/h | 0 | 1153 | 498 | 942 | 2365 | 0 | | | | 649 | 0 | 290 |
| Arrive On Green | 0.00 | 0.33 | 0.33 | 0.27 | 0.67 | 0.00 | | | | 0.18 | 0.00 | 0.18 |
| Sat Flow, veh/h | 0 | 3632 | 1530 | 3442 | 3632 | 0 | | | | 3548 | 0 | 1583 |
| Grp Volume(v), veh/h | 0 | 924 | 250 | 837 | 978 | 0 | | | | 374 | 0 | 239 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1770 | 1530 | 1721 | 1770 | 0 | | | | 1774 | 0 | 1583 |
| Q Serve(g_s), s | 0.0 | 16.3 | 9.0 | 16.0 | 8.7 | 0.0 | | | | 6.6 | 0.0 | 10.0 |
| Cycle Q Clear(g_c), s | 0.0 | 16.3 | 9.0 | 16.0 | 8.7 | 0.0 | | | | 6.6 | 0.0 | 10.0 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 1153 | 498 | 942 | 2365 | 0 | | | | 649 | 0 | 290 |
| V/C Ratio(X) | 0.00 | 0.80 | 0.50 | 0.89 | 0.41 | 0.00 | | | | 0.58 | 0.00 | 0.82 |
| Avail Cap(c_a), veh/h | 0 | 1178 | 509 | 1070 | 2520 | 0 | | | | 828 | 0 | 370 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 21.1 | 18.6 | 23.9 | 5.2 | 0.0 | | | | 25.6 | 0.0 | 26.9 |
| Incr Delay (d2), s/veh | 0.0 | 3.7 | 0.3 | 7.9 | 0.2 | 0.0 | | | | 0.3 | 0.0 | 9.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 8.5 | 3.9 | 8.6 | 4.3 | 0.0 | | | | 3.2 | 0.0 | 5.1 |
| LnGrp Delay(d),s/veh | 0.0 | 24.7 | 18.9 | 31.8 | 5.5 | 0.0 | | | | 25.9 | 0.0 | 36.1 |
| LnGrp LOS | | C | B | C | A | | | | | C | | D |
| Approach Vol, veh/h | | 1174 | | | 1815 | | | | | | 613 | |
| Approach Delay, s/veh | | 23.5 | | | 17.6 | | | | | | 29.9 | |
| Approach LOS | | C | | | B | | | | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 23.5 | 27.4 | | 17.6 | | 50.9 | | |
| Change Period (Y+Rc), s | 4.7 | 5.1 | | 5.1 | | 5.1 | | |
| Max Green Setting (Gmax), s | 21.1 | 22.8 | | 16.0 | | 48.8 | | |
| Max Q Clear Time (g_c+I1), s | 18.0 | 18.3 | | 12.0 | | 10.7 | | |
| Green Ext Time (p_c), s | 0.8 | 4.0 | | 0.6 | | 23.7 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 21.6 |
| HCM 2010 LOS | C |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 190 | 1000 | 0 | 0 | 1240 | 290 | 430 | 5 | 860 | 0 | 0 | 0 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.97 | 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 | | | |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 0 | 0 | 1863 | 1863 | 1900 | 1863 | 1863 | | | |
| Adj Flow Rate, veh/h | 207 | 1087 | 0 | 0 | 1348 | 293 | 467 | 5 | 924 | | | |
| Adj No. of Lanes | 1 | 2 | 0 | 0 | 3 | 1 | 0 | 1 | 2 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | |
| Percent Heavy Veh, % | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | | | |
| Cap, veh/h | 245 | 1966 | 0 | 0 | 1800 | 541 | 540 | 6 | 857 | | | |
| Arrive On Green | 0.14 | 0.56 | 0.00 | 0.00 | 0.35 | 0.35 | 0.31 | 0.31 | 0.31 | | | |
| Sat Flow, veh/h | 1774 | 3632 | 0 | 0 | 5253 | 1528 | 1756 | 19 | 2787 | | | |
| Grp Volume(v), veh/h | 207 | 1087 | 0 | 0 | 1348 | 293 | 472 | 0 | 924 | | | |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 0 | 0 | 1695 | 1528 | 1775 | 0 | 1393 | | | |
| Q Serve(g_s), s | 8.5 | 14.7 | 0.0 | 0.0 | 17.3 | 11.4 | 18.7 | 0.0 | 22.9 | | | |
| Cycle Q Clear(g_c), s | 8.5 | 14.7 | 0.0 | 0.0 | 17.3 | 11.4 | 18.7 | 0.0 | 22.9 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.99 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 245 | 1966 | 0 | 0 | 1800 | 541 | 546 | 0 | 857 | | | |
| V/C Ratio(X) | 0.84 | 0.55 | 0.00 | 0.00 | 0.75 | 0.54 | 0.86 | 0.00 | 1.08 | | | |
| Avail Cap(c_a), veh/h | 245 | 1992 | 0 | 0 | 1837 | 552 | 546 | 0 | 857 | | | |
| HCM Platoon Ratio | 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 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 31.3 | 10.6 | 0.0 | 0.0 | 21.1 | 19.2 | 24.3 | 0.0 | 25.8 | | | |
| Incr Delay (d2), s/veh | 21.5 | 0.6 | 0.0 | 0.0 | 1.5 | 0.5 | 13.0 | 0.0 | 54.0 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 5.6 | 7.3 | 0.0 | 0.0 | 8.4 | 4.9 | 11.0 | 0.0 | 15.1 | | | |
| LnGrp Delay(d),s/veh | 52.8 | 11.2 | 0.0 | 0.0 | 22.6 | 19.8 | 37.3 | 0.0 | 79.7 | | | |
| LnGrp LOS | D | B | | | C | B | D | | F | | | |
| Approach Vol, veh/h | | 1294 | | | 1641 | | | 1396 | | | | |
| Approach Delay, s/veh | | 17.9 | | | 22.1 | | | 65.4 | | | | |
| Approach LOS | | B | | | C | | | E | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 46.4 | | | 15.0 | 31.4 | | 28.0 |
| Change Period (Y+Rc), s | | 5.1 | | | * 4.7 | 5.1 | | 5.1 |
| Max Green Setting (Gmax), s | | 41.9 | | | * 10 | 26.9 | | 22.9 |
| Max Q Clear Time (g_c+I1), s | | 16.7 | | | 10.5 | 19.3 | | 24.9 |
| Green Ext Time (p_c), s | | 20.9 | | | 0.0 | 7.0 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 34.8 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 270 | 480 | 270 | 30 | 380 | 110 | 300 | 230 | 30 | 130 | 350 | 440 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 293 | 522 | 293 | 33 | 413 | 120 | 326 | 250 | 25 | 141 | 380 | 128 |
| Adj No. of Lanes | 2 | 1 | 2 | 1 | 2 | 0 | 2 | 2 | 0 | 1 | 2 | 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 | 373 | 632 | 1255 | 46 | 714 | 205 | 407 | 800 | 79 | 176 | 592 | 197 |
| Arrive On Green | 0.11 | 0.34 | 0.34 | 0.03 | 0.26 | 0.26 | 0.12 | 0.25 | 0.25 | 0.10 | 0.23 | 0.23 |
| Sat Flow, veh/h | 3442 | 1863 | 2728 | 1774 | 2714 | 781 | 3442 | 3253 | 323 | 1774 | 2611 | 868 |
| Grp Volume(v), veh/h | 293 | 522 | 293 | 33 | 268 | 265 | 326 | 135 | 140 | 141 | 256 | 252 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1863 | 1364 | 1774 | 1770 | 1725 | 1721 | 1770 | 1806 | 1774 | 1770 | 1710 |
| Q Serve(g_s), s | 6.7 | 20.9 | 2.9 | 1.5 | 10.7 | 10.9 | 7.5 | 5.1 | 5.1 | 6.3 | 10.6 | 10.8 |
| Cycle Q Clear(g_c), s | 6.7 | 20.9 | 2.9 | 1.5 | 10.7 | 10.9 | 7.5 | 5.1 | 5.1 | 6.3 | 10.6 | 10.8 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.45 | 1.00 | | 0.18 | 1.00 | | 0.51 |
| Lane Grp Cap(c), veh/h | 373 | 632 | 1255 | 46 | 465 | 454 | 407 | 435 | 444 | 176 | 401 | 388 |
| V/C Ratio(X) | 0.78 | 0.83 | 0.23 | 0.72 | 0.58 | 0.58 | 0.80 | 0.31 | 0.32 | 0.80 | 0.64 | 0.65 |
| Avail Cap(c_a), veh/h | 403 | 811 | 1516 | 92 | 655 | 638 | 446 | 670 | 683 | 258 | 698 | 674 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 35.2 | 24.6 | 4.6 | 39.2 | 26.0 | 26.0 | 34.8 | 25.0 | 25.0 | 35.8 | 28.3 | 28.4 |
| Incr Delay (d2), s/veh | 9.2 | 6.3 | 0.1 | 14.4 | 1.6 | 1.7 | 8.9 | 0.5 | 0.5 | 9.0 | 2.0 | 2.2 |
| 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 | 3.7 | 11.8 | 1.4 | 0.9 | 5.4 | 5.4 | 4.0 | 2.5 | 2.6 | 3.5 | 5.4 | 5.3 |
| LnGrp Delay(d),s/veh | 44.4 | 30.9 | 4.7 | 53.7 | 27.6 | 27.7 | 43.8 | 25.5 | 25.5 | 44.7 | 30.4 | 30.7 |
| LnGrp LOS | D | C | A | D | C | C | D | C | C | D | C | C |
| Approach Vol, veh/h | | 1108 | | | 566 | | | 601 | | | 649 | |
| Approach Delay, s/veh | | 27.5 | | | 29.2 | | | 35.4 | | | 33.6 | |
| Approach LOS | | C | | | C | | | D | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 13.5 | 25.9 | 8.1 | 33.5 | 15.1 | 24.4 | 14.3 | 27.3 |
| Change Period (Y+Rc), s | 5.5 | 6.0 | 6.0 | * 6 | 5.5 | 6.0 | 5.5 | 6.0 |
| Max Green Setting (Gmax), s | 11.8 | 30.7 | 4.2 | * 35 | 10.5 | 32.0 | 9.5 | 30.0 |
| Max Q Clear Time (g_c+I1), s | 8.3 | 7.1 | 3.5 | 22.9 | 9.5 | 12.8 | 8.7 | 12.9 |
| Green Ext Time (p_c), s | 0.1 | 6.0 | 0.3 | 4.7 | 0.1 | 5.6 | 0.1 | 4.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 30.8 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 350 | 285 | 680 | 370 | 250 | 520 |
| Number | 7 | 14 | 2 | 12 | 1 | 6 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 380 | 0 | 739 | 0 | 272 | 565 |
| Adj No. of Lanes | 1 | 1 | 2 | 1 | 1 | 2 |
| 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 | 452 | 403 | 1101 | 493 | 323 | 1995 |
| Arrive On Green | 0.25 | 0.00 | 0.31 | 0.00 | 0.18 | 0.56 |
| Sat Flow, veh/h | 1774 | 1583 | 3632 | 1583 | 1774 | 3632 |
| Grp Volume(v), veh/h | 380 | 0 | 739 | 0 | 272 | 565 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1583 | 1770 | 1583 | 1774 | 1770 |
| Q Serve(g_s), s | 11.5 | 0.0 | 10.3 | 0.0 | 8.4 | 4.7 |
| Cycle Q Clear(g_c), s | 11.5 | 0.0 | 10.3 | 0.0 | 8.4 | 4.7 |
| Prop In Lane | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Lane Grp Cap(c), veh/h | 452 | 403 | 1101 | 493 | 323 | 1995 |
| V/C Ratio(X) | 0.84 | 0.00 | 0.67 | 0.00 | 0.84 | 0.28 |
| Avail Cap(c_a), veh/h | 844 | 753 | 1354 | 606 | 375 | 2352 |
| 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 | 20.1 | 0.0 | 17.0 | 0.0 | 22.4 | 6.4 |
| Incr Delay (d2), s/veh | 4.3 | 0.0 | 1.0 | 0.0 | 12.5 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.1 | 0.0 | 5.2 | 0.0 | 5.2 | 2.3 |
| LnGrp Delay(d),s/veh | 24.3 | 0.0 | 18.0 | 0.0 | 34.9 | 6.5 |
| LnGrp LOS | C | | B | | C | A |
| Approach Vol, veh/h | 380 | | 739 | | | 837 |
| Approach Delay, s/veh | 24.3 | | 18.0 | | | 15.7 |
| Approach LOS | C | | B | | | B |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 14.3 | 23.0 | | 19.5 | | 37.3 | | |
| Change Period (Y+Rc), s | 4.0 | 5.3 | | 5.0 | | 5.3 | | |
| Max Green Setting (Gmax), s | 12.3 | 21.7 | | 27.0 | | 37.7 | | |
| Max Q Clear Time (g_c+I1), s | 10.4 | 12.3 | | 13.5 | | 6.7 | | |
| Green Ext Time (p_c), s | 0.1 | 5.3 | | 1.0 | | 10.1 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 18.2 |
| HCM 2010 LOS | B |

| Intersection | |
|---|---|
| Int Delay, s/veh | 26 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Vol, veh/h | 540 | 80 | 250 | 560 | 75 | 180 |
| Conflicting Peds, #/hr | 0 | 9 | 9 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | 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 | 587 | 87 | 272 | 609 | 82 | 196 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 674 | 0 | 1782 | 639 |
| Stage 1 | - | - | - | - | 630 | - |
| Stage 2 | - | - | - | - | 1152 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 917 | - | 90 | 476 |
| Stage 1 | - | - | - | - | 531 | - |
| Stage 2 | - | - | - | - | 301 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 910 | - | ~ 49 | 472 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 49 | - |
| Stage 1 | - | - | - | - | 531 | - |
| Stage 2 | - | - | - | - | 164 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 3.3 | 161.4 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 49 | 472 | - | - | 910 | - |
| HCM Lane V/C Ratio | 1.664 | 0.415 | - | - | 0.299 | - |
| HCM Control Delay (s) | $ 505.8 | 17.9 | - | - | 10.6 | 0 |
| HCM Lane LOS | F | C | - | - | B | A |
| HCM 95th %tile Q(veh) | 7.9 | 2 | - | - | 1.3 | - |

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 660 | 230 | 800 | 570 | 0 | 0 | 0 | 0 | 550 | 5 | 190 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | | | | 7 | 4 | 14 |
| Initial Q (Qb), veh | 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 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 0 | 1863 | 1900 | 1863 | 1863 | 0 | | | | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 0 | 717 | 250 | 870 | 620 | 0 | | | | 602 | 0 | 207 |
| Adj No. of Lanes | 0 | 2 | 0 | 2 | 2 | 0 | | | | 2 | 0 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 2 | 2 |
| Cap, veh/h | 0 | 778 | 271 | 1085 | 2410 | 0 | | | | 694 | 0 | 310 |
| Arrive On Green | 0.00 | 0.30 | 0.30 | 0.32 | 0.68 | 0.00 | | | | 0.20 | 0.00 | 0.20 |
| Sat Flow, veh/h | 0 | 2669 | 898 | 3442 | 3632 | 0 | | | | 3548 | 0 | 1583 |
| Grp Volume(v), veh/h | 0 | 493 | 474 | 870 | 620 | 0 | | | | 602 | 0 | 207 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1770 | 1704 | 1721 | 1770 | 0 | | | | 1774 | 0 | 1583 |
| Q Serve(g_s), s | 0.0 | 22.9 | 22.9 | 19.7 | 5.8 | 0.0 | | | | 14.0 | 0.0 | 10.3 |
| Cycle Q Clear(g_c), s | 0.0 | 22.9 | 22.9 | 19.7 | 5.8 | 0.0 | | | | 14.0 | 0.0 | 10.3 |
| Prop In Lane | 0.00 | | 0.53 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 534 | 515 | 1085 | 2410 | 0 | | | | 694 | 0 | 310 |
| V/C Ratio(X) | 0.00 | 0.92 | 0.92 | 0.80 | 0.26 | 0.00 | | | | 0.87 | 0.00 | 0.67 |
| Avail Cap(c_a), veh/h | 0 | 554 | 533 | 1085 | 2410 | 0 | | | | 789 | 0 | 352 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 28.7 | 28.7 | 26.7 | 5.2 | 0.0 | | | | 33.1 | 0.0 | 31.6 |
| Incr Delay (d2), s/veh | 0.0 | 23.7 | 24.4 | 4.1 | 0.3 | 0.0 | | | | 8.4 | 0.0 | 2.8 |
| Initial Q Delay(d3),s/veh | 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 | 14.6 | 14.2 | 9.9 | 2.8 | 0.0 | | | | 7.7 | 0.0 | 4.7 |
| LnGrp Delay(d),s/veh | 0.0 | 52.4 | 53.1 | 30.7 | 5.5 | 0.0 | | | | 41.5 | 0.0 | 34.4 |
| LnGrp LOS | | D | D | C | A | | | | | D | | C |
| Approach Vol, veh/h | | 967 | | | 1490 | | | | | | 809 | |
| Approach Delay, s/veh | | 52.7 | | | 20.2 | | | | | | 39.7 | |
| Approach LOS | | D | | | C | | | | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 32.2 | 31.1 | | 21.7 | | 63.3 | | |
| Change Period (Y+Rc), s | 5.4 | * 5.4 | | 5.1 | | 5.4 | | |
| Max Green Setting (Gmax), s | 24.3 | * 27 | | 18.9 | | 55.6 | | |
| Max Q Clear Time (g_c+I1), s | 21.7 | 24.9 | | 16.0 | | 7.8 | | |
| Green Ext Time (p_c), s | 1.4 | 0.8 | | 0.7 | | 5.3 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 34.7 |
| HCM 2010 LOS | C |

Notes

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 210 | 1000 | 0 | 0 | 1220 | 470 | 150 | 5 | 900 | 0 | 0 | 0 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 0.97 | 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 | | | |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 0 | 0 | 1863 | 1863 | 1900 | 1863 | 1863 | | | |
| Adj Flow Rate, veh/h | 228 | 1087 | 0 | 0 | 1326 | 511 | 163 | 5 | 707 | | | |
| Adj No. of Lanes | 1 | 2 | 0 | 0 | 3 | 1 | 0 | 1 | 2 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | |
| Percent Heavy Veh, % | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | | | |
| Cap, veh/h | 265 | 2057 | 0 | 0 | 1916 | 581 | 493 | 15 | 797 | | | |
| Arrive On Green | 0.15 | 0.58 | 0.00 | 0.00 | 0.12 | 0.12 | 0.29 | 0.29 | 0.29 | | | |
| Sat Flow, veh/h | 1774 | 3632 | 0 | 0 | 5253 | 1542 | 1724 | 53 | 2787 | | | |
| Grp Volume(v), veh/h | 228 | 1087 | 0 | 0 | 1326 | 511 | 168 | 0 | 707 | | | |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 0 | 0 | 1695 | 1542 | 1777 | 0 | 1393 | | | |
| Q Serve(g_s), s | 10.7 | 15.8 | 0.0 | 0.0 | 21.2 | 27.7 | 6.3 | 0.0 | 20.6 | | | |
| Cycle Q Clear(g_c), s | 10.7 | 15.8 | 0.0 | 0.0 | 21.2 | 27.7 | 6.3 | 0.0 | 20.6 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 0.97 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 265 | 2057 | 0 | 0 | 1916 | 581 | 508 | 0 | 797 | | | |
| V/C Ratio(X) | 0.86 | 0.53 | 0.00 | 0.00 | 0.69 | 0.88 | 0.33 | 0.00 | 0.89 | | | |
| Avail Cap(c_a), veh/h | 278 | 2057 | 0 | 0 | 1916 | 581 | 625 | 0 | 980 | | | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 0.00 | 0.95 | 0.95 | 1.00 | 0.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 35.3 | 10.8 | 0.0 | 0.0 | 32.5 | 35.3 | 23.9 | 0.0 | 29.0 | | | |
| Incr Delay (d2), s/veh | 23.3 | 1.0 | 0.0 | 0.0 | 2.0 | 16.4 | 0.1 | 0.0 | 7.6 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 6.9 | 7.8 | 0.0 | 0.0 | 10.3 | 14.5 | 3.1 | 0.0 | 8.8 | | | |
| LnGrp Delay(d),s/veh | 58.6 | 11.7 | 0.0 | 0.0 | 34.5 | 51.7 | 24.1 | 0.0 | 36.6 | | | |
| LnGrp LOS | E | B | | | C | D | C | | D | | | |
| Approach Vol, veh/h | | 1315 | | | 1837 | | | 875 | | | | |
| Approach Delay, s/veh | | 19.9 | | | 39.3 | | | 34.2 | | | | |
| Approach LOS | | B | | | D | | | C | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 55.6 | | | 17.4 | 38.2 | | 29.4 |
| Change Period (Y+Rc), s | | * 6.2 | | | * 4.7 | 6.2 | | 5.1 |
| Max Green Setting (Gmax), s | | * 44 | | | * 13 | 25.8 | | 29.9 |
| Max Q Clear Time (g_c+I1), s | | 17.8 | | | 12.7 | 29.7 | | 22.6 |
| Green Ext Time (p_c), s | | 16.4 | | | 0.1 | 0.0 | | 1.7 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 31.8 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 1800 | 100 | 65 | 1550 | 90 | 70 |
| Number | 2 | 12 | 1 | 6 | 3 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | 0.97 | 1.00 | | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 1957 | 100 | 71 | 1685 | 98 | 76 |
| Adj No. of Lanes | 2 | 0 | 1 | 4 | 1 | 1 |
| 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 | 1885 | 95 | 144 | 4591 | 246 | 220 |
| Arrive On Green | 0.37 | 0.37 | 0.08 | 0.72 | 0.14 | 0.14 |
| Sat Flow, veh/h | 3516 | 173 | 1774 | 6669 | 1774 | 1583 |
| Grp Volume(v), veh/h | 1002 | 1055 | 71 | 1685 | 98 | 76 |
| Grp Sat Flow(s),veh/h/ln | 1770 | 1826 | 1774 | 1602 | 1774 | 1583 |
| Q Serve(g_s), s | 46.8 | 46.8 | 3.3 | 8.6 | 4.3 | 3.7 |
| Cycle Q Clear(g_c), s | 46.8 | 46.8 | 3.3 | 8.6 | 4.3 | 3.7 |
| Prop In Lane | | 0.09 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 974 | 1006 | 144 | 4591 | 246 | 220 |
| V/C Ratio(X) | 1.03 | 1.05 | 0.49 | 0.37 | 0.40 | 0.35 |
| Avail Cap(c_a), veh/h | 974 | 1006 | 190 | 4591 | 253 | 225 |
| HCM Platoon Ratio | 0.67 | 0.67 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.57 | 0.57 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 26.8 | 26.8 | 37.4 | 4.6 | 33.4 | 33.1 |
| Incr Delay (d2), s/veh | 29.5 | 35.6 | 1.0 | 0.2 | 0.4 | 0.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 30.8 | 33.5 | 1.6 | 3.8 | 2.1 | 1.6 |
| LnGrp Delay(d),s/veh | 56.3 | 62.4 | 38.4 | 4.9 | 33.7 | 33.5 |
| LnGrp LOS | F | F | D | A | C | C |
| Approach Vol, veh/h | 2057 | | | 1756 | 174 | |
| Approach Delay, s/veh | 59.4 | | | 6.2 | 33.6 | |
| Approach LOS | E | | | A | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 14.1 | 54.0 | | | | 68.1 | | 16.9 |
| Change Period (Y+Rc), s | 7.2 | * 7.2 | | | | 7.2 | | 5.1 |
| Max Green Setting (Gmax), s | 9.1 | * 47 | | | | 60.6 | | 12.1 |
| Max Q Clear Time (g_c+I1), s | 5.3 | 48.8 | | | | 10.6 | | 6.3 |
| Green Ext Time (p_c), s | 3.0 | 0.0 | | | | 42.4 | | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 34.9 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 1745 | 125 | 200 | 1490 | 90 | 160 |
| Number | 4 | 14 | 3 | 8 | 5 | 12 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 1897 | 136 | 217 | 1620 | 98 | 174 |
| Adj No. of Lanes | 2 | 0 | 1 | 2 | 1 | 1 |
| 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 | 2030 | 144 | 227 | 2746 | 231 | 206 |
| Arrive On Green | 0.61 | 0.61 | 0.13 | 0.78 | 0.13 | 0.13 |
| Sat Flow, veh/h | 3446 | 238 | 1774 | 3632 | 1774 | 1583 |
| Grp Volume(v), veh/h | 990 | 1043 | 217 | 1620 | 98 | 174 |
| Grp Sat Flow(s),veh/h/ln | 1770 | 1821 | 1774 | 1770 | 1774 | 1583 |
| Q Serve(g_s), s | 58.8 | 62.0 | 14.3 | 22.2 | 6.0 | 12.6 |
| Cycle Q Clear(g_c), s | 58.8 | 62.0 | 14.3 | 22.2 | 6.0 | 12.6 |
| Prop In Lane | | 0.13 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 1071 | 1102 | 227 | 2746 | 231 | 206 |
| V/C Ratio(X) | 0.92 | 0.95 | 0.96 | 0.59 | 0.42 | 0.84 |
| Avail Cap(c_a), veh/h | 1071 | 1102 | 227 | 2746 | 424 | 378 |
| 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 | 20.7 | 21.4 | 50.8 | 5.4 | 46.9 | 49.8 |
| Incr Delay (d2), s/veh | 13.5 | 16.2 | 47.1 | 0.5 | 1.2 | 9.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 32.4 | 35.6 | 10.0 | 10.8 | 3.0 | 6.0 |
| LnGrp Delay(d),s/veh | 34.3 | 37.5 | 97.9 | 6.0 | 48.2 | 58.8 |
| LnGrp LOS | C | D | F | A | D | E |
| Approach Vol, veh/h | 2033 | | | 1837 | 272 | |
| Approach Delay, s/veh | 35.9 | | | 16.8 | 55.0 | |
| Approach LOS | D | | | B | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | 3 | 4 | | | | 8 |
| Phs Duration (G+Y+Rc), s | | 20.3 | 20.0 | 77.0 | | | | 97.0 |
| Change Period (Y+Rc), s | | 5.0 | 5.0 | 6.0 | | | | 6.0 |
| Max Green Setting (Gmax), s | | 28.0 | 15.0 | 71.0 | | | | 91.0 |
| Max Q Clear Time (g_c+I1), s | | 14.6 | 16.3 | 64.0 | | | | 24.2 |
| Green Ext Time (p_c), s | | 0.7 | 0.0 | 7.0 | | | | 66.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 28.7 |
| HCM 2010 LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 840 | 800 | 360 | 210 | 520 | 200 | 380 | 1250 | 100 | 290 | 1110 | 840 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 913 | 870 | 295 | 228 | 565 | 174 | 413 | 1359 | 95 | 315 | 1207 | 754 |
| Adj No. of Lanes | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 3 | 0 | 2 | 3 | 1 |
| 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 | 988 | 1085 | 477 | 249 | 566 | 250 | 436 | 1424 | 100 | 383 | 1476 | 907 |
| Arrive On Green | 0.29 | 0.31 | 0.31 | 0.14 | 0.16 | 0.16 | 0.21 | 0.49 | 0.49 | 0.19 | 0.48 | 0.48 |
| Sat Flow, veh/h | 3442 | 3539 | 1555 | 1774 | 3539 | 1560 | 3442 | 4854 | 339 | 3442 | 5085 | 1559 |
| Grp Volume(v), veh/h | 913 | 870 | 295 | 228 | 565 | 174 | 413 | 949 | 505 | 315 | 1207 | 754 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1770 | 1555 | 1774 | 1770 | 1560 | 1721 | 1695 | 1803 | 1721 | 1695 | 1559 |
| Q Serve(g_s), s | 38.6 | 33.9 | 24.4 | 19.0 | 23.9 | 12.2 | 17.7 | 40.2 | 40.2 | 13.2 | 30.4 | 43.5 |
| Cycle Q Clear(g_c), s | 38.6 | 33.9 | 24.4 | 19.0 | 23.9 | 12.2 | 17.7 | 40.2 | 40.2 | 13.2 | 30.4 | 43.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.19 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 988 | 1085 | 477 | 249 | 566 | 250 | 436 | 995 | 529 | 383 | 1476 | 907 |
| V/C Ratio(X) | 0.92 | 0.80 | 0.62 | 0.91 | 1.00 | 0.70 | 0.95 | 0.95 | 0.95 | 0.82 | 0.82 | 0.83 |
| Avail Cap(c_a), veh/h | 1055 | 1102 | 484 | 278 | 566 | 250 | 436 | 1003 | 534 | 383 | 1476 | 907 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 51.9 | 47.8 | 44.5 | 63.6 | 63.0 | 35.5 | 58.6 | 37.3 | 37.3 | 59.6 | 35.3 | 22.6 |
| Incr Delay (d2), s/veh | 13.0 | 4.2 | 2.1 | 29.2 | 37.2 | 8.2 | 29.8 | 19.4 | 29.3 | 12.5 | 5.2 | 8.8 |
| 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 | 20.2 | 17.2 | 10.8 | 11.3 | 14.6 | 5.9 | 10.2 | 21.4 | 24.2 | 6.9 | 14.9 | 30.0 |
| LnGrp Delay(d),s/veh | 64.9 | 52.0 | 46.6 | 92.8 | 100.2 | 43.7 | 88.4 | 56.7 | 66.6 | 72.1 | 40.4 | 31.3 |
| LnGrp LOS | E | D | D | F | F | D | F | E | E | E | D | C |
| Approach Vol, veh/h | | 2078 | | | 967 | | | 1867 | | | 2276 | |
| Approach Delay, s/veh | | 56.9 | | | 88.3 | | | 66.4 | | | 41.8 | |
| Approach LOS | | E | | | F | | | E | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 22.7 | 50.0 | 25.3 | 52.0 | 23.2 | 49.5 | 47.3 | 30.0 |
| Change Period (Y+Rc), s | 6.0 | * 6 | * 4.2 | * 6 | * 4.2 | 6.0 | * 4.2 | 6.0 |
| Max Green Setting (Gmax), s | 15.3 | * 44 | * 24 | * 47 | * 19 | 40.6 | * 46 | 24.0 |
| Max Q Clear Time (g_c+I1), s | 15.2 | 42.2 | 21.0 | 35.9 | 19.7 | 45.5 | 40.6 | 25.9 |
| Green Ext Time (p_c), s | 0.0 | 1.8 | 0.1 | 6.7 | 0.0 | 0.0 | 2.5 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 58.8 |
| HCM 2010 LOS | E |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 30 | 70 | 30 | 250 | 70 | 240 | 60 | 840 | 270 | 340 | 730 | 40 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.93 | 1.00 | | 1.00 | 1.00 | | 0.97 | 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 |
| Adj Sat Flow, veh/h/ln | 1900 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 33 | 76 | 33 | 272 | 76 | 261 | 65 | 913 | 293 | 370 | 793 | 43 |
| Adj No. of Lanes | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 2 | 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 | 40 | 93 | 40 | 410 | 85 | 294 | 83 | 991 | 798 | 355 | 1390 | 75 |
| Arrive On Green | 0.10 | 0.10 | 0.10 | 0.23 | 0.23 | 0.23 | 0.05 | 0.28 | 0.28 | 0.20 | 0.41 | 0.41 |
| Sat Flow, veh/h | 404 | 930 | 404 | 1774 | 370 | 1269 | 1774 | 3539 | 1541 | 1774 | 3414 | 185 |
| Grp Volume(v), veh/h | 142 | 0 | 0 | 272 | 0 | 337 | 65 | 913 | 293 | 370 | 411 | 425 |
| Grp Sat Flow(s),veh/h/ln | 1738 | 0 | 0 | 1774 | 0 | 1639 | 1774 | 1770 | 1541 | 1774 | 1770 | 1830 |
| Q Serve(g_s), s | 7.8 | 0.0 | 0.0 | 13.6 | 0.0 | 19.4 | 3.5 | 24.4 | 11.2 | 19.5 | 17.5 | 17.5 |
| Cycle Q Clear(g_c), s | 7.8 | 0.0 | 0.0 | 13.6 | 0.0 | 19.4 | 3.5 | 24.4 | 11.2 | 19.5 | 17.5 | 17.5 |
| Prop In Lane | 0.23 | | 0.23 | 1.00 | | 0.77 | 1.00 | | 1.00 | 1.00 | | 0.10 |
| Lane Grp Cap(c), veh/h | 174 | 0 | 0 | 410 | 0 | 379 | 83 | 991 | 798 | 355 | 721 | 745 |
| V/C Ratio(X) | 0.82 | 0.00 | 0.00 | 0.66 | 0.00 | 0.89 | 0.78 | 0.92 | 0.37 | 1.04 | 0.57 | 0.57 |
| Avail Cap(c_a), veh/h | 285 | 0 | 0 | 509 | 0 | 470 | 109 | 1020 | 810 | 355 | 721 | 745 |
| 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 | 0.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 43.0 | 0.0 | 0.0 | 34.0 | 0.0 | 36.3 | 46.0 | 34.1 | 14.4 | 39.0 | 22.3 | 22.3 |
| Incr Delay (d2), s/veh | 3.5 | 0.0 | 0.0 | 1.2 | 0.0 | 14.2 | 16.7 | 12.7 | 0.1 | 59.5 | 0.7 | 0.7 |
| 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(50%),veh/ln | 3.9 | 0.0 | 0.0 | 6.8 | 0.0 | 10.3 | 2.1 | 13.7 | 7.0 | 15.3 | 8.7 | 9.0 |
| LnGrp Delay(d),s/veh | 46.5 | 0.0 | 0.0 | 35.3 | 0.0 | 50.4 | 62.7 | 46.8 | 14.5 | 98.5 | 23.0 | 23.0 |
| LnGrp LOS | D | | | D | | D | E | D | B | F | C | C |
| Approach Vol, veh/h | | 142 | | | 609 | | | 1271 | | | 1206 | |
| Approach Delay, s/veh | | 46.5 | | | 43.7 | | | 40.1 | | | 46.2 | |
| Approach LOS | | D | | | D | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 23.0 | 32.6 | | 14.3 | 10.6 | 45.0 | | 27.7 |
| Change Period (Y+Rc), s | 3.5 | 5.3 | | 4.5 | 6.0 | 5.3 | | 5.1 |
| Max Green Setting (Gmax), s | 19.5 | 28.1 | | 16.0 | 6.0 | 39.1 | | 28.0 |
| Max Q Clear Time (g_c+I1), s | 21.5 | 26.4 | | 9.8 | 5.5 | 19.5 | | 21.4 |
| Green Ext Time (p_c), s | 0.0 | 0.9 | | 0.2 | 0.0 | 8.7 | | 1.2 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | 43.3 | |
| HCM 2010 LOS | D | |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 90 | 490 | 100 | 90 | 420 | 50 | 80 | 190 | 140 | 40 | 180 | 60 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 98 | 533 | 109 | 98 | 457 | 54 | 87 | 207 | 77 | 43 | 196 | 65 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 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 | 549 | 813 | 166 | 371 | 1220 | 144 | 312 | 357 | 133 | 295 | 368 | 122 |
| Arrive On Green | 0.09 | 0.54 | 0.54 | 0.38 | 0.38 | 0.38 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| Sat Flow, veh/h | 1774 | 1500 | 307 | 782 | 3190 | 375 | 1107 | 1295 | 482 | 1090 | 1336 | 443 |
| Grp Volume(v), veh/h | 98 | 0 | 642 | 98 | 253 | 258 | 87 | 0 | 284 | 43 | 0 | 261 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 0 | 1806 | 782 | 1770 | 1796 | 1107 | 0 | 1777 | 1090 | 0 | 1779 |
| Q Serve(g_s), s | 1.4 | 0.0 | 12.6 | 5.1 | 5.1 | 5.2 | 3.6 | 0.0 | 6.9 | 1.8 | 0.0 | 6.2 |
| Cycle Q Clear(g_c), s | 1.4 | 0.0 | 12.6 | 9.7 | 5.1 | 5.2 | 9.8 | 0.0 | 6.9 | 8.6 | 0.0 | 6.2 |
| Prop In Lane | 1.00 | | 0.17 | 1.00 | | 0.21 | 1.00 | | 0.27 | 1.00 | | 0.25 |
| Lane Grp Cap(c), veh/h | 549 | 0 | 979 | 371 | 677 | 687 | 312 | 0 | 490 | 295 | 0 | 490 |
| V/C Ratio(X) | 0.18 | 0.00 | 0.66 | 0.26 | 0.37 | 0.38 | 0.28 | 0.00 | 0.58 | 0.15 | 0.00 | 0.53 |
| Avail Cap(c_a), veh/h | 622 | 0 | 1187 | 429 | 808 | 820 | 519 | 0 | 823 | 499 | 0 | 823 |
| 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 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 6.9 | 0.0 | 8.1 | 14.4 | 11.1 | 11.1 | 19.5 | 0.0 | 15.6 | 19.3 | 0.0 | 15.3 |
| Incr Delay (d2), s/veh | 0.1 | 0.0 | 1.3 | 0.5 | 0.5 | 0.5 | 0.2 | 0.0 | 0.4 | 0.1 | 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 | 0.7 | 0.0 | 6.4 | 1.1 | 2.5 | 2.6 | 1.1 | 0.0 | 3.4 | 0.5 | 0.0 | 3.1 |
| LnGrp Delay(d),s/veh | 6.9 | 0.0 | 9.4 | 14.9 | 11.6 | 11.6 | 19.7 | 0.0 | 16.0 | 19.4 | 0.0 | 15.7 |
| LnGrp LOS | A | | A | B | B | B | B | | B | B | | B |
| Approach Vol, veh/h | | 740 | | | 609 | | | 371 | | | 304 | |
| Approach Delay, s/veh | | 9.1 | | | 12.1 | | | 16.9 | | | 16.2 | |
| Approach LOS | | A | | | B | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 31.0 | | 18.9 | 8.0 | 23.1 | | 18.9 |
| Change Period (Y+Rc), s | | 4.0 | | 5.1 | 3.5 | 4.0 | | 5.1 |
| Max Green Setting (Gmax), s | | 32.8 | | 23.1 | 6.5 | 22.8 | | 23.1 |
| Max Q Clear Time (g_c+I1), s | | 14.6 | | 10.6 | 3.4 | 11.7 | | 11.8 |
| Green Ext Time (p_c), s | | 10.6 | | 2.0 | 0.0 | 7.4 | | 1.9 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 12.5 |
| HCM 2010 LOS | | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 30 | 580 | 90 | 140 | 670 | 110 | 30 | 30 | 200 | 140 | 30 | 30 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 | | 0.96 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 33 | 630 | 98 | 152 | 728 | 120 | 33 | 33 | 174 | 152 | 33 | 33 |
| Adj No. of Lanes | 1 | 2 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 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 | 128 | 928 | 144 | 451 | 1278 | 552 | 476 | 75 | 394 | 347 | 247 | 247 |
| Arrive On Green | 0.07 | 0.30 | 0.30 | 0.13 | 0.36 | 0.36 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 |
| Sat Flow, veh/h | 1774 | 3071 | 477 | 3442 | 3539 | 1527 | 1325 | 259 | 1364 | 1170 | 854 | 854 |
| Grp Volume(v), veh/h | 33 | 363 | 365 | 152 | 728 | 120 | 33 | 0 | 207 | 152 | 0 | 66 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1779 | 1721 | 1770 | 1527 | 1325 | 0 | 1622 | 1170 | 0 | 1708 |
| Q Serve(g_s), s | 1.0 | 9.9 | 9.9 | 2.2 | 9.1 | 3.0 | 1.0 | 0.0 | 5.7 | 6.7 | 0.0 | 1.6 |
| Cycle Q Clear(g_c), s | 1.0 | 9.9 | 9.9 | 2.2 | 9.1 | 3.0 | 2.6 | 0.0 | 5.7 | 12.4 | 0.0 | 1.6 |
| Prop In Lane | 1.00 | | 0.27 | 1.00 | | 1.00 | 1.00 | | 0.84 | 1.00 | | 0.50 |
| Lane Grp Cap(c), veh/h | 128 | 535 | 537 | 451 | 1278 | 552 | 476 | 0 | 469 | 347 | 0 | 493 |
| V/C Ratio(X) | 0.26 | 0.68 | 0.68 | 0.34 | 0.57 | 0.22 | 0.07 | 0.00 | 0.44 | 0.44 | 0.00 | 0.13 |
| Avail Cap(c_a), veh/h | 322 | 697 | 701 | 500 | 1278 | 552 | 935 | 0 | 1031 | 753 | 0 | 1086 |
| 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 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 24.2 | 16.9 | 16.9 | 21.7 | 14.1 | 12.2 | 15.4 | 0.0 | 16.0 | 21.0 | 0.0 | 14.5 |
| Incr Delay (d2), s/veh | 0.4 | 0.8 | 0.8 | 0.2 | 0.4 | 0.1 | 0.0 | 0.0 | 0.2 | 0.3 | 0.0 | 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(50%),veh/ln | 0.5 | 5.0 | 5.0 | 1.1 | 4.5 | 1.3 | 0.4 | 0.0 | 2.6 | 2.2 | 0.0 | 0.7 |
| LnGrp Delay(d),s/veh | 24.6 | 17.7 | 17.7 | 21.9 | 14.5 | 12.3 | 15.5 | 0.0 | 16.2 | 21.3 | 0.0 | 14.5 |
| LnGrp LOS | C | B | B | C | B | B | B | | B | C | | B |
| Approach Vol, veh/h | | 761 | | | 1000 | | | 240 | | | 218 | |
| Approach Delay, s/veh | | 18.0 | | | 15.4 | | | 16.1 | | | 19.3 | |
| Approach LOS | | B | | | B | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 12.3 | 21.7 | | 21.0 | 9.1 | 25.0 | | 21.0 |
| Change Period (Y+Rc), s | 5.1 | 5.1 | | 5.1 | 5.1 | 5.1 | | 5.1 |
| Max Green Setting (Gmax), s | 8.3 | 21.7 | | 35.0 | 10.0 | 19.7 | | 35.0 |
| Max Q Clear Time (g_c+I1), s | 4.2 | 11.9 | | 14.4 | 3.0 | 11.1 | | 7.7 |
| Green Ext Time (p_c), s | 0.1 | 4.7 | | 1.4 | 0.0 | 4.5 | | 1.5 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 16.7 |
| HCM 2010 LOS | | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 700 | 220 | 500 | 700 | 0 | 0 | 0 | 0 | 370 | 0 | 220 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | | | | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 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 |
| Adj Sat Flow, veh/h/ln | 0 | 1863 | 1863 | 1863 | 1863 | 0 | | | | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 0 | 761 | 239 | 543 | 761 | 0 | | | | 402 | 0 | 239 |
| Adj No. of Lanes | 0 | 2 | 1 | 2 | 2 | 0 | | | | 2 | 0 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 2 | 2 |
| Cap, veh/h | 0 | 1171 | 520 | 679 | 2191 | 0 | | | | 707 | 0 | 316 |
| Arrive On Green | 0.00 | 0.33 | 0.33 | 0.20 | 0.62 | 0.00 | | | | 0.20 | 0.00 | 0.20 |
| Sat Flow, veh/h | 0 | 3632 | 1572 | 3442 | 3632 | 0 | | | | 3548 | 0 | 1583 |
| Grp Volume(v), veh/h | 0 | 761 | 239 | 543 | 761 | 0 | | | | 402 | 0 | 239 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1770 | 1572 | 1721 | 1770 | 0 | | | | 1774 | 0 | 1583 |
| Q Serve(g_s), s | 0.0 | 10.3 | 6.7 | 8.4 | 5.9 | 0.0 | | | | 5.7 | 0.0 | 8.0 |
| Cycle Q Clear(g_c), s | 0.0 | 10.3 | 6.7 | 8.4 | 5.9 | 0.0 | | | | 5.7 | 0.0 | 8.0 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 1171 | 520 | 679 | 2191 | 0 | | | | 707 | 0 | 316 |
| V/C Ratio(X) | 0.00 | 0.65 | 0.46 | 0.80 | 0.35 | 0.00 | | | | 0.57 | 0.00 | 0.76 |
| Avail Cap(c_a), veh/h | 0 | 1500 | 666 | 975 | 2824 | 0 | | | | 2212 | 0 | 987 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 16.0 | 14.8 | 21.5 | 5.2 | 0.0 | | | | 20.3 | 0.0 | 21.2 |
| Incr Delay (d2), s/veh | 0.0 | 0.3 | 0.2 | 1.9 | 0.0 | 0.0 | | | | 0.3 | 0.0 | 1.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 5.0 | 3.0 | 4.2 | 2.8 | 0.0 | | | | 2.8 | 0.0 | 3.6 |
| LnGrp Delay(d),s/veh | 0.0 | 16.3 | 15.1 | 23.4 | 5.2 | 0.0 | | | | 20.6 | 0.0 | 22.6 |
| LnGrp LOS | | B | B | C | A | | | | | C | | C |
| Approach Vol, veh/h | | 1000 | | | 1304 | | | | | | 641 | |
| Approach Delay, s/veh | | 16.0 | | | 12.8 | | | | | | 21.3 | |
| Approach LOS | | B | | | B | | | | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 16.2 | 23.7 | | 16.3 | | 39.9 | | |
| Change Period (Y+Rc), s | 5.1 | 5.1 | | 5.1 | | 5.1 | | |
| Max Green Setting (Gmax), s | 15.8 | 23.8 | | 35.0 | | 44.8 | | |
| Max Q Clear Time (g_c+I1), s | 10.4 | 12.3 | | 10.0 | | 7.9 | | |
| Green Ext Time (p_c), s | 0.6 | 6.1 | | 1.2 | | 9.9 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 15.7 |
| HCM 2010 LOS | B |

Notes

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 220 | 850 | 0 | 0 | 990 | 580 | 200 | 75 | 715 | 0 | 0 | 0 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.98 | | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 0 | 0 | 1863 | 1900 | 1863 | 1863 | 1863 | | | |
| Adj Flow Rate, veh/h | 239 | 924 | 0 | 0 | 1076 | 630 | 150 | 176 | 777 | | | |
| Adj No. of Lanes | 1 | 2 | 0 | 0 | 3 | 0 | 1 | 1 | 2 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | |
| Percent Heavy Veh, % | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | | | |
| Cap, veh/h | 275 | 2265 | 0 | 0 | 1452 | 678 | 432 | 453 | 754 | | | |
| Arrive On Green | 0.16 | 0.64 | 0.00 | 0.00 | 0.43 | 0.43 | 0.24 | 0.24 | 0.24 | | | |
| Sat Flow, veh/h | 1774 | 3632 | 0 | 0 | 3558 | 1583 | 1774 | 1863 | 3099 | | | |
| Grp Volume(v), veh/h | 239 | 924 | 0 | 0 | 1076 | 630 | 150 | 176 | 777 | | | |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 0 | 0 | 1695 | 1583 | 1774 | 1863 | 1549 | | | |
| Q Serve(g_s), s | 11.8 | 11.4 | 0.0 | 0.0 | 23.9 | 34.0 | 6.3 | 7.1 | 21.9 | | | |
| Cycle Q Clear(g_c), s | 11.8 | 11.4 | 0.0 | 0.0 | 23.9 | 34.0 | 6.3 | 7.1 | 21.9 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 1.00 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 275 | 2265 | 0 | 0 | 1452 | 678 | 432 | 453 | 754 | | | |
| V/C Ratio(X) | 0.87 | 0.41 | 0.00 | 0.00 | 0.74 | 0.93 | 0.35 | 0.39 | 1.03 | | | |
| Avail Cap(c_a), veh/h | 365 | 2265 | 0 | 0 | 1452 | 678 | 432 | 453 | 754 | | | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 0.69 | 0.69 | 0.00 | 0.00 | 0.54 | 0.54 | 1.00 | 1.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 37.1 | 7.9 | 0.0 | 0.0 | 21.6 | 24.4 | 28.1 | 28.5 | 34.0 | | | |
| Incr Delay (d2), s/veh | 9.4 | 0.4 | 0.0 | 0.0 | 1.9 | 13.3 | 0.2 | 0.2 | 40.8 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 6.5 | 5.6 | 0.0 | 0.0 | 11.4 | 17.2 | 3.1 | 3.7 | 13.6 | | | |
| LnGrp Delay(d),s/veh | 46.5 | 8.3 | 0.0 | 0.0 | 23.4 | 37.7 | 28.3 | 28.7 | 74.9 | | | |
| LnGrp LOS | D | A | | | C | D | C | C | F | | | |
| Approach Vol, veh/h | | 1163 | | | 1706 | | | 1103 | | | | |
| Approach Delay, s/veh | | 16.1 | | | 28.7 | | | 61.2 | | | | |
| Approach LOS | | B | | | C | | | E | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 63.0 | | | 19.1 | 43.9 | | 27.0 |
| Change Period (Y+Rc), s | | 5.4 | | | 5.1 | 5.4 | | 5.1 |
| Max Green Setting (Gmax), s | | 57.6 | | | 18.5 | 34.0 | | 21.9 |
| Max Q Clear Time (g_c+I1), s | | 13.4 | | | 13.8 | 36.0 | | 23.9 |
| Green Ext Time (p_c), s | | 22.4 | | | 0.2 | 0.0 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 34.0 |
| HCM 2010 LOS | C |

Notes

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 80 | 1390 | 250 | 190 | 1160 | 60 | 210 | 160 | 260 | 50 | 140 | 40 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 87 | 1511 | 257 | 207 | 1261 | 60 | 228 | 174 | 283 | 54 | 152 | 43 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 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 | 107 | 1467 | 245 | 195 | 1834 | 87 | 207 | 163 | 266 | 65 | 245 | 69 |
| Arrive On Green | 0.06 | 0.48 | 0.48 | 0.11 | 0.53 | 0.53 | 0.12 | 0.26 | 0.26 | 0.04 | 0.18 | 0.18 |
| Sat Flow, veh/h | 1774 | 3036 | 507 | 1774 | 3440 | 164 | 1774 | 639 | 1040 | 1774 | 1398 | 395 |
| Grp Volume(v), veh/h | 87 | 869 | 899 | 207 | 648 | 673 | 228 | 0 | 457 | 54 | 0 | 195 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1773 | 1774 | 1770 | 1834 | 1774 | 0 | 1679 | 1774 | 0 | 1793 |
| Q Serve(g_s), s | 7.3 | 72.5 | 72.5 | 16.5 | 40.5 | 40.6 | 17.5 | 0.0 | 38.3 | 4.5 | 0.0 | 15.1 |
| Cycle Q Clear(g_c), s | 7.3 | 72.5 | 72.5 | 16.5 | 40.5 | 40.6 | 17.5 | 0.0 | 38.3 | 4.5 | 0.0 | 15.1 |
| Prop In Lane | 1.00 | | 0.29 | 1.00 | | 0.09 | 1.00 | | 0.62 | 1.00 | | 0.22 |
| Lane Grp Cap(c), veh/h | 107 | 855 | 857 | 195 | 943 | 978 | 207 | 0 | 429 | 65 | 0 | 314 |
| V/C Ratio(X) | 0.81 | 1.02 | 1.05 | 1.06 | 0.69 | 0.69 | 1.10 | 0.00 | 1.07 | 0.83 | 0.00 | 0.62 |
| Avail Cap(c_a), veh/h | 148 | 855 | 857 | 195 | 943 | 978 | 207 | 0 | 429 | 65 | 0 | 323 |
| 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 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 69.6 | 38.8 | 38.8 | 66.8 | 25.8 | 25.8 | 66.3 | 0.0 | 55.9 | 71.8 | 0.0 | 57.2 |
| Incr Delay (d2), s/veh | 15.1 | 34.7 | 44.5 | 81.4 | 2.0 | 1.9 | 92.4 | 0.0 | 62.1 | 54.3 | 0.0 | 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(50%),veh/ln | 4.0 | 43.7 | 46.1 | 12.5 | 20.3 | 21.1 | 13.9 | 0.0 | 25.1 | 3.2 | 0.0 | 7.7 |
| LnGrp Delay(d),s/veh | 84.7 | 73.5 | 83.2 | 148.2 | 27.8 | 27.7 | 158.6 | 0.0 | 117.9 | 126.1 | 0.0 | 59.7 |
| LnGrp LOS | F | F | F | F | C | C | F | | F | F | | E |
| Approach Vol, veh/h | | 1855 | | | 1528 | | | 685 | | | 249 | |
| Approach Delay, s/veh | | 78.7 | | | 44.1 | | | 131.5 | | | 74.1 | |
| Approach LOS | | E | | | D | | | F | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 20.0 | 77.8 | 21.0 | 31.2 | 12.5 | 85.3 | 9.0 | 43.2 |
| Change Period (Y+Rc), s | 3.5 | 5.3 | 3.5 | * 4.9 | 3.5 | 5.3 | 3.5 | 4.9 |
| Max Green Setting (Gmax), s | 16.5 | 72.5 | 17.5 | * 27 | 12.5 | 76.5 | 5.5 | 38.3 |
| Max Q Clear Time (g_c+I1), s | 18.5 | 74.5 | 19.5 | 17.1 | 9.3 | 42.6 | 6.5 | 40.3 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.0 | 2.1 | 0.0 | 26.9 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 74.6 |
| HCM 2010 LOS | E |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 80 | 1710 | 110 | 220 | 1080 | 100 | 130 | 80 | 330 | 80 | 70 | 60 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 | | 0.98 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 87 | 1859 | 113 | 239 | 1174 | 98 | 141 | 87 | 158 | 87 | 76 | 65 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 | 108 | 1936 | 117 | 258 | 2167 | 181 | 222 | 319 | 265 | 201 | 319 | 269 |
| Arrive On Green | 0.06 | 0.57 | 0.57 | 0.15 | 0.66 | 0.66 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Sat Flow, veh/h | 1774 | 3392 | 204 | 1774 | 3308 | 276 | 1238 | 1863 | 1552 | 1127 | 1863 | 1575 |
| Grp Volume(v), veh/h | 87 | 961 | 1011 | 239 | 627 | 645 | 141 | 87 | 158 | 87 | 76 | 65 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1827 | 1774 | 1770 | 1814 | 1238 | 1863 | 1552 | 1127 | 1863 | 1575 |
| Q Serve(g_s), s | 6.5 | 68.3 | 71.3 | 17.8 | 25.4 | 25.5 | 14.9 | 5.4 | 12.6 | 9.8 | 4.7 | 4.8 |
| Cycle Q Clear(g_c), s | 6.5 | 68.3 | 71.3 | 17.8 | 25.4 | 25.5 | 19.6 | 5.4 | 12.6 | 15.2 | 4.7 | 4.8 |
| Prop In Lane | 1.00 | | 0.11 | 1.00 | | 0.15 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 108 | 1010 | 1043 | 258 | 1159 | 1189 | 222 | 319 | 265 | 201 | 319 | 269 |
| V/C Ratio(X) | 0.80 | 0.95 | 0.97 | 0.93 | 0.54 | 0.54 | 0.64 | 0.27 | 0.60 | 0.43 | 0.24 | 0.24 |
| Avail Cap(c_a), veh/h | 192 | 1034 | 1067 | 258 | 1159 | 1189 | 260 | 377 | 314 | 236 | 377 | 319 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 62.1 | 27.0 | 27.6 | 56.5 | 12.3 | 12.4 | 56.5 | 48.3 | 51.3 | 54.9 | 48.0 | 48.0 |
| Incr Delay (d2), s/veh | 5.1 | 17.6 | 20.6 | 36.1 | 0.6 | 0.6 | 2.2 | 0.2 | 0.9 | 0.6 | 0.1 | 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 | 3.3 | 38.0 | 41.6 | 11.4 | 12.6 | 12.9 | 5.2 | 2.8 | 5.5 | 3.1 | 2.4 | 2.1 |
| LnGrp Delay(d),s/veh | 67.2 | 44.6 | 48.2 | 92.6 | 12.9 | 12.9 | 58.7 | 48.5 | 52.1 | 55.5 | 48.1 | 48.2 |
| LnGrp LOS | E | D | D | F | B | B | E | D | D | E | D | D |
| Approach Vol, veh/h | | 2059 | | | 1511 | | | 386 | | | 228 | |
| Approach Delay, s/veh | | 47.3 | | | 25.5 | | | 53.7 | | | 51.0 | |
| Approach LOS | | D | | | C | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 23.0 | 83.2 | | 27.8 | 11.7 | 94.5 | | 27.8 |
| Change Period (Y+Rc), s | 3.5 | 6.7 | | 4.9 | 3.5 | 6.7 | | 4.9 |
| Max Green Setting (Gmax), s | 19.5 | 78.3 | | 27.1 | 14.5 | 83.3 | | 27.1 |
| Max Q Clear Time (g_c+I1), s | 19.8 | 73.3 | | 17.2 | 8.5 | 27.5 | | 21.6 |
| Green Ext Time (p_c), s | 0.0 | 3.2 | | 1.1 | 0.0 | 53.4 | | 0.8 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 40.2 |
| HCM 2010 LOS | | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 400 | 1370 | 360 | 100 | 1040 | 170 | 310 | 140 | 80 | 110 | 120 | 340 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 435 | 1489 | 331 | 109 | 1130 | 157 | 337 | 152 | 74 | 120 | 130 | 305 |
| Adj No. of Lanes | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 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 | 482 | 1600 | 346 | 249 | 1564 | 217 | 385 | 205 | 95 | 487 | 207 | 185 |
| Arrive On Green | 0.23 | 0.92 | 0.92 | 0.14 | 1.00 | 1.00 | 0.11 | 0.09 | 0.09 | 0.14 | 0.12 | 0.12 |
| Sat Flow, veh/h | 3442 | 2896 | 626 | 3442 | 3123 | 433 | 3442 | 2349 | 1091 | 3442 | 1770 | 1583 |
| Grp Volume(v), veh/h | 435 | 894 | 926 | 109 | 639 | 648 | 337 | 113 | 113 | 120 | 130 | 305 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1770 | 1752 | 1721 | 1770 | 1786 | 1721 | 1770 | 1670 | 1721 | 1770 | 1583 |
| Q Serve(g_s), s | 16.6 | 33.7 | 47.3 | 3.9 | 0.0 | 0.0 | 13.0 | 8.4 | 9.0 | 4.2 | 9.5 | 15.8 |
| Cycle Q Clear(g_c), s | 16.6 | 33.7 | 47.3 | 3.9 | 0.0 | 0.0 | 13.0 | 8.4 | 9.0 | 4.2 | 9.5 | 15.8 |
| Prop In Lane | 1.00 | | 0.36 | 1.00 | | 0.24 | 1.00 | | 0.65 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 482 | 978 | 968 | 249 | 886 | 895 | 385 | 154 | 146 | 487 | 207 | 185 |
| V/C Ratio(X) | 0.90 | 0.91 | 0.96 | 0.44 | 0.72 | 0.72 | 0.88 | 0.73 | 0.78 | 0.25 | 0.63 | 1.65 |
| Avail Cap(c_a), veh/h | 523 | 1051 | 1041 | 249 | 886 | 895 | 395 | 286 | 270 | 487 | 207 | 185 |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.70 | 0.70 | 0.70 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 50.8 | 3.6 | 4.2 | 55.2 | 0.0 | 0.0 | 59.0 | 60.1 | 60.3 | 51.5 | 56.8 | 59.6 |
| Incr Delay (d2), s/veh | 18.0 | 14.3 | 20.3 | 0.9 | 3.6 | 3.6 | 19.0 | 6.5 | 8.6 | 0.3 | 5.9 | 313.6 |
| 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(50%),veh/ln | 9.1 | 17.9 | 25.1 | 1.9 | 0.9 | 0.9 | 7.2 | 4.4 | 4.5 | 2.0 | 5.0 | 23.0 |
| LnGrp Delay(d),s/veh | 68.8 | 18.0 | 24.4 | 56.1 | 3.6 | 3.6 | 78.0 | 66.5 | 68.9 | 51.8 | 62.7 | 373.2 |
| LnGrp LOS | E | B | C | E | A | A | E | E | E | D | E | F |
| Approach Vol, veh/h | | 2255 | | | 1396 | | | 563 | | | 555 | |
| Approach Delay, s/veh | | 30.4 | | | 7.7 | | | 73.9 | | | 231.0 | |
| Approach LOS | | C | | | A | | | E | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 18.2 | 77.1 | 18.6 | 21.1 | 22.4 | 72.9 | 22.6 | 17.1 |
| Change Period (Y+Rc), s | 5.7 | * 5.7 | 3.5 | 5.3 | 3.5 | 5.7 | 3.5 | 5.3 |
| Max Green Setting (Gmax), s | 5.5 | * 80 | 15.5 | 15.8 | 20.5 | 65.2 | 9.5 | 21.8 |
| Max Q Clear Time (g_c+I1), s | 15.9 | 49.3 | 15.0 | 17.8 | 18.6 | 2.0 | 6.2 | 11.0 |
| Green Ext Time (p_c), s | 0.0 | 19.0 | 0.1 | 0.0 | 0.4 | 13.9 | 0.6 | 0.8 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 52.2 |
| HCM 2010 LOS | D |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 120 | 1130 | 280 | 330 | 800 | 270 | 380 | 100 | 400 | 200 | 70 | 150 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 130 | 1228 | 103 | 359 | 870 | 250 | 261 | 322 | 359 | 146 | 175 | 141 |
| Adj No. of Lanes | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 | 724 | 1541 | 678 | 404 | 1164 | 692 | 381 | 400 | 333 | 191 | 201 | 167 |
| Arrive On Green | 0.42 | 0.87 | 0.87 | 0.20 | 0.55 | 0.55 | 0.21 | 0.21 | 0.21 | 0.11 | 0.11 | 0.11 |
| Sat Flow, veh/h | 3442 | 3539 | 1558 | 3442 | 3539 | 1583 | 1774 | 1863 | 1550 | 1774 | 1863 | 1550 |
| Grp Volume(v), veh/h | 130 | 1228 | 103 | 359 | 870 | 250 | 261 | 322 | 359 | 146 | 175 | 141 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1770 | 1558 | 1721 | 1770 | 1583 | 1774 | 1863 | 1550 | 1774 | 1863 | 1550 |
| Q Serve(g_s), s | 3.2 | 19.8 | 1.3 | 13.7 | 25.4 | 10.9 | 18.3 | 22.2 | 29.0 | 10.8 | 12.5 | 12.0 |
| Cycle Q Clear(g_c), s | 3.2 | 19.8 | 1.3 | 13.7 | 25.4 | 10.9 | 18.3 | 22.2 | 29.0 | 10.8 | 12.5 | 12.0 |
| 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 | 724 | 1541 | 678 | 404 | 1164 | 692 | 381 | 400 | 333 | 191 | 201 | 167 |
| V/C Ratio(X) | 0.18 | 0.80 | 0.15 | 0.89 | 0.75 | 0.36 | 0.68 | 0.80 | 1.08 | 0.76 | 0.87 | 0.84 |
| Avail Cap(c_a), veh/h | 724 | 1541 | 678 | 446 | 1696 | 930 | 381 | 400 | 333 | 197 | 207 | 172 |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.38 | 0.38 | 0.38 | 0.64 | 0.64 | 0.64 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 31.8 | 6.2 | 5.0 | 53.4 | 26.1 | 16.4 | 48.8 | 50.3 | 53.0 | 58.5 | 59.3 | 59.1 |
| Incr Delay (d2), s/veh | 0.0 | 1.7 | 0.2 | 11.7 | 2.9 | 0.9 | 4.2 | 10.6 | 71.7 | 14.0 | 28.8 | 27.6 |
| 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(50%),veh/ln | 1.5 | 9.0 | 0.6 | 7.1 | 12.7 | 5.8 | 9.4 | 12.5 | 19.0 | 6.1 | 8.0 | 6.4 |
| LnGrp Delay(d),s/veh | 31.8 | 7.9 | 5.2 | 65.1 | 29.0 | 17.4 | 53.0 | 60.9 | 124.7 | 72.5 | 88.1 | 86.7 |
| LnGrp LOS | C | A | A | E | C | B | D | E | F | E | F | F |
| Approach Vol, veh/h | | 1461 | | | 1479 | | | 942 | | | 462 | |
| Approach Delay, s/veh | | 9.9 | | | 35.8 | | | 83.0 | | | 82.8 | |
| Approach LOS | | A | | | D | | | F | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 19.4 | 64.1 | | 18.6 | 33.7 | 49.7 | | 33.0 |
| Change Period (Y+Rc), s | 3.5 | 5.3 | | 4.0 | 5.3 | * 5.3 | | 4.0 |
| Max Green Setting (Gmax), s | 17.5 | 56.7 | | 15.0 | 9.5 | * 65 | | 29.0 |
| Max Q Clear Time (g_c+I1), s | 15.7 | 21.8 | | 14.5 | 5.2 | 27.4 | | 31.0 |
| Green Ext Time (p_c), s | 0.2 | 21.9 | | 0.1 | 3.8 | 17.1 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 42.3 |
| HCM 2010 LOS | D |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 330 | 1170 | 230 | 920 | 810 | 200 | 400 | 1580 | 830 | 240 | 730 | 190 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 359 | 1272 | 250 | 1000 | 880 | 217 | 435 | 1717 | 902 | 261 | 793 | 154 |
| Adj No. of Lanes | 2 | 3 | 1 | 2 | 3 | 0 | 2 | 3 | 1 | 2 | 4 | 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 | 408 | 1074 | 328 | 801 | 1383 | 339 | 1540 | 2947 | 1266 | 265 | 1063 | 202 |
| Arrive On Green | 0.20 | 0.35 | 0.35 | 0.23 | 0.34 | 0.34 | 0.75 | 0.97 | 0.97 | 0.13 | 0.33 | 0.33 |
| Sat Flow, veh/h | 3442 | 5085 | 1552 | 3442 | 4076 | 1000 | 3442 | 5085 | 1549 | 3442 | 5451 | 1035 |
| Grp Volume(v), veh/h | 359 | 1272 | 250 | 1000 | 731 | 366 | 435 | 1717 | 902 | 261 | 697 | 250 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1695 | 1552 | 1721 | 1695 | 1686 | 1721 | 1695 | 1549 | 1721 | 1602 | 1680 |
| Q Serve(g_s), s | 13.7 | 28.5 | 19.3 | 31.4 | 24.5 | 24.7 | 5.5 | 3.4 | 24.0 | 10.2 | 17.4 | 18.0 |
| Cycle Q Clear(g_c), s | 13.7 | 28.5 | 19.3 | 31.4 | 24.5 | 24.7 | 5.5 | 3.4 | 24.0 | 10.2 | 17.4 | 18.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.59 | 1.00 | | 1.00 | 1.00 | | 0.62 |
| Lane Grp Cap(c), veh/h | 408 | 1074 | 328 | 801 | 1150 | 572 | 1540 | 2947 | 1266 | 265 | 937 | 328 |
| V/C Ratio(X) | 0.88 | 1.18 | 0.76 | 1.25 | 0.64 | 0.64 | 0.28 | 0.58 | 0.71 | 0.98 | 0.74 | 0.76 |
| Avail Cap(c_a), veh/h | 510 | 1074 | 328 | 801 | 1150 | 572 | 1540 | 2947 | 1266 | 265 | 1371 | 479 |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 0.51 | 0.51 | 0.51 | 1.00 | 1.00 | 1.00 | 0.63 | 0.63 | 0.63 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.2 | 43.7 | 40.7 | 51.8 | 37.6 | 37.6 | 10.1 | 1.0 | 0.5 | 58.7 | 42.5 | 42.7 |
| Incr Delay (d2), s/veh | 6.8 | 88.4 | 5.6 | 122.5 | 1.3 | 2.6 | 0.0 | 0.5 | 2.2 | 51.4 | 5.3 | 15.5 |
| 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 | 6.9 | 22.0 | 8.7 | 28.5 | 11.7 | 11.9 | 2.5 | 1.2 | 1.4 | 6.7 | 8.1 | 9.7 |
| LnGrp Delay(d),s/veh | 60.0 | 132.1 | 46.3 | 174.3 | 38.8 | 40.2 | 10.1 | 1.5 | 2.7 | 110.2 | 47.9 | 58.2 |
| LnGrp LOS | E | F | D | F | D | D | B | A | A | F | D | E |
| Approach Vol, veh/h | | 1881 | | | 2097 | | | 3054 | | | 1208 | |
| Approach Delay, s/veh | | 106.9 | | | 103.7 | | | 3.1 | | | 63.5 | |
| Approach LOS | | F | | | F | | | A | | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 37.9 | 35.0 | 66.9 | 32.8 | 20.6 | 52.3 | 15.0 | 84.7 |
| Change Period (Y+Rc), s | 6.5 | * 6.5 | 6.5 | * 6.5 | 4.6 | 6.5 | 4.6 | 6.5 |
| Max Green Setting (Gmax), s | 31.4 | * 29 | 14.4 | * 39 | 20.0 | 39.9 | 10.4 | 42.5 |
| Max Q Clear Time (g_c+I1), s | 33.4 | 30.5 | 7.5 | 20.0 | 15.7 | 26.7 | 12.2 | 26.0 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 6.5 | 6.3 | 0.3 | 8.6 | 0.0 | 14.5 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 61.2 |
| HCM 2010 LOS | E |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 410 | 65 | 200 | 140 | 70 | 140 | 300 | 1990 | 60 | 180 | 1470 | 250 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.98 | 1.00 | | 0.98 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 497 | 0 | 217 | 114 | 129 | 152 | 326 | 2163 | 65 | 196 | 1598 | 232 |
| Adj No. of Lanes | 2 | 0 | 1 | 1 | 1 | 1 | 2 | 4 | 0 | 2 | 4 | 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 | 589 | 0 | 257 | 198 | 207 | 174 | 373 | 2566 | 77 | 571 | 2669 | 387 |
| Arrive On Green | 0.17 | 0.00 | 0.17 | 0.11 | 0.11 | 0.11 | 0.22 | 0.80 | 0.80 | 0.33 | 0.94 | 0.94 |
| Sat Flow, veh/h | 3548 | 0 | 1548 | 1774 | 1863 | 1558 | 3442 | 6441 | 194 | 3442 | 5696 | 827 |
| Grp Volume(v), veh/h | 497 | 0 | 217 | 114 | 129 | 152 | 326 | 1614 | 614 | 196 | 1348 | 482 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 0 | 1548 | 1774 | 1863 | 1558 | 1721 | 1602 | 1829 | 1721 | 1602 | 1717 |
| Q Serve(g_s), s | 18.3 | 0.0 | 18.4 | 8.2 | 8.9 | 13.0 | 12.4 | 28.0 | 28.1 | 5.8 | 5.4 | 5.4 |
| Cycle Q Clear(g_c), s | 18.3 | 0.0 | 18.4 | 8.2 | 8.9 | 13.0 | 12.4 | 28.0 | 28.1 | 5.8 | 5.4 | 5.4 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.11 | 1.00 | | 0.48 |
| Lane Grp Cap(c), veh/h | 589 | 0 | 257 | 198 | 207 | 174 | 373 | 1915 | 729 | 571 | 2252 | 804 |
| V/C Ratio(X) | 0.84 | 0.00 | 0.84 | 0.58 | 0.62 | 0.88 | 0.87 | 0.84 | 0.84 | 0.34 | 0.60 | 0.60 |
| Avail Cap(c_a), veh/h | 802 | 0 | 350 | 204 | 214 | 179 | 472 | 2058 | 783 | 571 | 2252 | 804 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.30 | 0.30 | 0.30 | 0.24 | 0.24 | 0.24 |
| Uniform Delay (d), s/veh | 54.6 | 0.0 | 54.6 | 57.0 | 57.3 | 59.1 | 52.0 | 11.1 | 11.1 | 39.6 | 2.4 | 2.4 |
| Incr Delay (d2), s/veh | 6.2 | 0.0 | 13.0 | 2.3 | 3.8 | 33.2 | 4.0 | 1.5 | 3.7 | 0.0 | 0.3 | 0.8 |
| 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 | 9.5 | 0.0 | 8.8 | 4.2 | 4.8 | 7.2 | 6.0 | 12.0 | 14.2 | 2.7 | 1.9 | 2.2 |
| LnGrp Delay(d),s/veh | 60.8 | 0.0 | 67.6 | 59.3 | 61.0 | 92.3 | 56.0 | 12.6 | 14.8 | 39.6 | 2.7 | 3.2 |
| LnGrp LOS | E | | E | E | E | F | E | B | B | D | A | A |
| Approach Vol, veh/h | | 714 | | | 395 | | | 2554 | | | 2026 | |
| Approach Delay, s/veh | | 62.9 | | | 72.6 | | | 18.6 | | | 6.4 | |
| Approach LOS | | E | | | E | | | B | | | A | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 28.6 | 60.0 | | 26.9 | 19.1 | 69.5 | | 19.5 |
| Change Period (Y+Rc), s | 6.2 | * 6.2 | | 4.5 | 4.5 | 6.2 | | 4.5 |
| Max Green Setting (Gmax), s | 11.5 | * 58 | | 30.5 | 18.5 | 50.8 | | 15.5 |
| Max Q Clear Time (g_c+I1), s | 17.8 | 30.1 | | 20.4 | 14.4 | 7.4 | | 15.0 |
| Green Ext Time (p_c), s | 2.3 | 23.7 | | 2.0 | 0.3 | 29.1 | | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 23.6 |
| HCM 2010 LOS | C |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 130 | 210 | 270 | 190 | 260 | 320 | 250 | 1820 | 160 | 320 | 1420 | 140 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| 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 | | 0.99 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 141 | 228 | 58 | 207 | 283 | 348 | 272 | 1978 | 174 | 348 | 1543 | 152 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 3 | 1 | 1 | 3 | 1 |
| 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 | 151 | 335 | 83 | 217 | 277 | 247 | 463 | 2173 | 667 | 361 | 1816 | 565 |
| Arrive On Green | 0.09 | 0.12 | 0.12 | 0.12 | 0.16 | 0.16 | 0.52 | 0.85 | 0.85 | 0.34 | 0.60 | 0.60 |
| Sat Flow, veh/h | 1774 | 2809 | 700 | 1774 | 1770 | 1583 | 1774 | 5085 | 1560 | 1774 | 5085 | 1583 |
| Grp Volume(v), veh/h | 141 | 142 | 144 | 207 | 283 | 348 | 272 | 1978 | 174 | 348 | 1543 | 152 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1739 | 1774 | 1770 | 1583 | 1774 | 1695 | 1560 | 1774 | 1695 | 1583 |
| Q Serve(g_s), s | 10.7 | 10.4 | 10.7 | 15.7 | 21.1 | 21.1 | 14.3 | 34.3 | 2.8 | 26.0 | 33.5 | 4.8 |
| Cycle Q Clear(g_c), s | 10.7 | 10.4 | 10.7 | 15.7 | 21.1 | 21.1 | 14.3 | 34.3 | 2.8 | 26.0 | 33.5 | 4.8 |
| Prop In Lane | 1.00 | | 0.40 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 151 | 211 | 207 | 217 | 277 | 247 | 463 | 2173 | 667 | 361 | 1816 | 565 |
| V/C Ratio(X) | 0.93 | 0.67 | 0.70 | 0.95 | 1.02 | 1.41 | 0.59 | 0.91 | 0.26 | 0.96 | 0.85 | 0.27 |
| Avail Cap(c_a), veh/h | 151 | 211 | 207 | 217 | 277 | 247 | 463 | 2173 | 667 | 361 | 2098 | 653 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.55 | 0.55 | 0.55 | 0.72 | 0.72 | 0.72 |
| Uniform Delay (d), s/veh | 61.4 | 56.9 | 57.1 | 58.9 | 57.0 | 57.0 | 27.3 | 8.1 | 5.8 | 44.0 | 24.3 | 11.0 |
| Incr Delay (d2), s/veh | 52.8 | 7.5 | 9.1 | 47.9 | 60.2 | 205.2 | 1.1 | 4.2 | 0.5 | 30.8 | 3.8 | 0.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.5 | 5.5 | 5.7 | 10.6 | 14.9 | 23.3 | 7.0 | 15.7 | 1.2 | 15.7 | 16.1 | 2.2 |
| LnGrp Delay(d),s/veh | 114.2 | 64.4 | 66.1 | 106.8 | 117.2 | 262.2 | 28.4 | 12.3 | 6.3 | 74.8 | 28.1 | 11.9 |
| LnGrp LOS | F | E | E | F | F | F | C | B | A | E | C | B |
| Approach Vol, veh/h | | 427 | | | 838 | | | 2424 | | | 2043 | |
| Approach Delay, s/veh | | 81.4 | | | 174.8 | | | 13.7 | | | 34.9 | |
| Approach LOS | | F | | | F | | | B | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 31.0 | 63.0 | 20.0 | 21.0 | 40.5 | 53.5 | 15.0 | 26.0 |
| Change Period (Y+Rc), s | 3.5 | 5.3 | 3.5 | 4.9 | 5.3 | * 5.3 | 3.5 | 4.9 |
| Max Green Setting (Gmax), s | 27.5 | 57.7 | 16.5 | 16.1 | 29.5 | * 56 | 11.5 | 21.1 |
| Max Q Clear Time (g_c+I1), s | 23.0 | 36.3 | 17.7 | 12.7 | 16.3 | 35.5 | 12.7 | 23.1 |
| Green Ext Time (p_c), s | 0.0 | 17.5 | 0.0 | 1.6 | 11.5 | 12.7 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 49.8 |
| HCM 2010 LOS | D |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 50 | 90 | 90 | 310 | 100 | 250 | 190 | 1470 | 300 | 400 | 1770 | 100 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.96 | 1.00 | | 0.98 | 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 |
| Adj Sat Flow, veh/h/ln | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 54 | 138 | 71 | 223 | 269 | 272 | 207 | 1598 | 326 | 435 | 1924 | 109 |
| Adj No. of Lanes | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 3 | 0 | 2 | 3 | 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 | 68 | 187 | 106 | 315 | 331 | 275 | 229 | 1871 | 379 | 576 | 2433 | 137 |
| Arrive On Green | 0.07 | 0.07 | 0.07 | 0.18 | 0.18 | 0.18 | 0.22 | 0.74 | 0.74 | 0.28 | 0.83 | 0.83 |
| Sat Flow, veh/h | 980 | 2696 | 1526 | 1774 | 1863 | 1549 | 1774 | 4242 | 860 | 3442 | 4926 | 278 |
| Grp Volume(v), veh/h | 100 | 92 | 71 | 223 | 269 | 272 | 207 | 1275 | 649 | 435 | 1323 | 710 |
| Grp Sat Flow(s),veh/h/ln | 1814 | 1863 | 1526 | 1774 | 1863 | 1549 | 1774 | 1695 | 1711 | 1721 | 1695 | 1814 |
| Q Serve(g_s), s | 7.3 | 6.5 | 6.1 | 16.0 | 18.7 | 23.7 | 15.3 | 36.0 | 36.8 | 15.6 | 26.4 | 26.7 |
| Cycle Q Clear(g_c), s | 7.3 | 6.5 | 6.1 | 16.0 | 18.7 | 23.7 | 15.3 | 36.0 | 36.8 | 15.6 | 26.4 | 26.7 |
| Prop In Lane | 0.54 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.50 | 1.00 | | 0.15 |
| Lane Grp Cap(c), veh/h | 126 | 129 | 106 | 315 | 331 | 275 | 229 | 1495 | 755 | 576 | 1675 | 896 |
| V/C Ratio(X) | 0.79 | 0.71 | 0.67 | 0.71 | 0.81 | 0.99 | 0.90 | 0.85 | 0.86 | 0.76 | 0.79 | 0.79 |
| Avail Cap(c_a), veh/h | 128 | 131 | 107 | 315 | 331 | 275 | 283 | 1570 | 792 | 576 | 1675 | 896 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.49 | 0.49 | 0.49 | 0.51 | 0.51 | 0.51 |
| Uniform Delay (d), s/veh | 61.9 | 61.5 | 61.3 | 52.2 | 53.3 | 55.4 | 52.1 | 14.7 | 14.8 | 46.1 | 8.3 | 8.3 |
| Incr Delay (d2), s/veh | 29.4 | 17.9 | 16.6 | 6.1 | 13.3 | 50.7 | 13.8 | 3.3 | 6.5 | 2.7 | 2.0 | 3.8 |
| 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 | 4.7 | 4.0 | 3.1 | 8.3 | 10.9 | 14.0 | 8.4 | 16.9 | 18.2 | 7.6 | 12.4 | 13.7 |
| LnGrp Delay(d),s/veh | 91.3 | 79.4 | 77.9 | 58.3 | 66.6 | 106.0 | 66.0 | 17.9 | 21.3 | 48.8 | 10.3 | 12.1 |
| LnGrp LOS | F | E | E | E | E | F | E | B | C | D | B | B |
| Approach Vol, veh/h | | 263 | | | 764 | | | 2131 | | | 2468 | |
| Approach Delay, s/veh | | 83.5 | | | 78.2 | | | 23.6 | | | 17.6 | |
| Approach LOS | | F | | | E | | | C | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | | 12.9 | 20.9 | 72.2 | | 29.0 | 28.1 | 65.0 |
| Change Period (Y+Rc), s | | 3.5 | 3.5 | 5.5 | | 5.0 | 5.5 | * 5.5 |
| Max Green Setting (Gmax), s | | 9.5 | 21.5 | 62.5 | | 24.0 | 21.5 | * 63 |
| Max Q Clear Time (g_c+I1), s | | 9.3 | 17.3 | 28.7 | | 25.7 | 17.6 | 38.8 |
| Green Ext Time (p_c), s | | 0.0 | 0.1 | 29.8 | | 0.0 | 1.3 | 20.8 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 31.2 |
| HCM 2010 LOS | C |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 40.4 |
| Intersection LOS | E |

| Movement | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 10 | 10 | 20 | 0 | 170 | 10 | 120 | 0 | 10 | 560 | 140 | 0 | 160 | 420 | 10 |
| 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 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 11 | 11 | 22 | 0 | 185 | 11 | 130 | 0 | 11 | 609 | 152 | 0 | 174 | 457 | 11 |
| Number of Lanes | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 2 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 2 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 2 |
| HCM Control Delay | 11.9 | 15.5 | 55.5 | 36.9 |
| HCM LOS | B | C | F | E |

| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|---|
| Vol Left, % | 2% | 0% | 50% | 0% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 98% | 0% | 50% | 0% | 0% | 8% | 0% | 98% |
| Vol Right, % | 0% | 100% | 0% | 100% | 0% | 92% | 0% | 2% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 570 | 140 | 20 | 20 | 170 | 130 | 160 | 430 |
| LT Vol | 10 | 0 | 10 | 0 | 170 | 0 | 160 | 0 |
| Through Vol | 560 | 0 | 10 | 0 | 0 | 10 | 0 | 420 |
| RT Vol | 0 | 140 | 0 | 20 | 0 | 120 | 0 | 10 |
| Lane Flow Rate | 620 | 152 | 22 | 22 | 185 | 141 | 174 | 467 |
| Geometry Grp | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 1 | 0.267 | 0.055 | 0.049 | 0.431 | 0.285 | 0.361 | 0.902 |
| Departure Headway (Hd) | 7.038 | 6.314 | 9.078 | 8.131 | 8.394 | 7.251 | 7.466 | 6.95 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 514 | 568 | 395 | 440 | 431 | 496 | 482 | 523 |
| Service Time | 4.791 | 4.066 | 6.833 | 5.885 | 6.133 | 4.99 | 5.201 | 4.685 |
| HCM Lane V/C Ratio | 1.206 | 0.268 | 0.056 | 0.05 | 0.429 | 0.284 | 0.361 | 0.893 |
| HCM Control Delay | 66.3 | 11.4 | 12.4 | 11.3 | 17.4 | 12.9 | 14.4 | 45.3 |
| HCM Lane LOS | F | B | B | B | C | B | B | E |
| HCM 95th-tile Q | 13.8 | 1.1 | 0.2 | 0.2 | 2.1 | 1.2 | 1.6 | 10.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 240 | 15 | 150 | 70 | 30 | 60 | 340 | 1670 | 120 | 170 | 1540 | 170 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.99 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1900 | 1863 | 1863 | 1900 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 261 | 16 | 103 | 76 | 33 | 65 | 370 | 1815 | 130 | 185 | 1674 | 185 |
| Adj No. of Lanes | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 3 | 0 | 1 | 3 | 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 | 273 | 17 | 255 | 66 | 29 | 56 | 370 | 2365 | 169 | 208 | 1805 | 199 |
| Arrive On Green | 0.16 | 0.16 | 0.16 | 0.09 | 0.09 | 0.09 | 0.35 | 0.82 | 0.82 | 0.20 | 0.65 | 0.65 |
| Sat Flow, veh/h | 1676 | 103 | 1566 | 742 | 322 | 634 | 1774 | 4845 | 346 | 1774 | 4638 | 511 |
| Grp Volume(v), veh/h | 277 | 0 | 103 | 174 | 0 | 0 | 370 | 1269 | 676 | 185 | 1222 | 637 |
| Grp Sat Flow(s),veh/h/ln | 1779 | 0 | 1566 | 1698 | 0 | 0 | 1774 | 1695 | 1801 | 1774 | 1695 | 1758 |
| Q Serve(g_s), s | 20.8 | 0.0 | 8.0 | 12.0 | 0.0 | 0.0 | 28.2 | 24.9 | 25.1 | 13.7 | 42.8 | 43.3 |
| Cycle Q Clear(g_c), s | 20.8 | 0.0 | 8.0 | 12.0 | 0.0 | 0.0 | 28.2 | 24.9 | 25.1 | 13.7 | 42.8 | 43.3 |
| Prop In Lane | 0.94 | | 1.00 | 0.44 | | 0.37 | 1.00 | | 0.19 | 1.00 | | 0.29 |
| Lane Grp Cap(c), veh/h | 290 | 0 | 255 | 151 | 0 | 0 | 370 | 1655 | 879 | 208 | 1319 | 684 |
| V/C Ratio(X) | 0.96 | 0.00 | 0.40 | 1.15 | 0.00 | 0.00 | 1.00 | 0.77 | 0.77 | 0.89 | 0.93 | 0.93 |
| Avail Cap(c_a), veh/h | 290 | 0 | 255 | 151 | 0 | 0 | 370 | 1655 | 879 | 237 | 1356 | 703 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.09 | 0.09 | 0.09 | 0.52 | 0.52 | 0.52 |
| Uniform Delay (d), s/veh | 56.0 | 0.0 | 50.6 | 61.5 | 0.0 | 0.0 | 44.0 | 8.7 | 8.7 | 53.5 | 21.9 | 22.0 |
| Incr Delay (d2), s/veh | 40.5 | 0.0 | 0.4 | 120.2 | 0.0 | 0.0 | 14.0 | 0.3 | 0.6 | 17.8 | 7.3 | 12.9 |
| 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(50%),veh/ln | 13.5 | 0.0 | 3.5 | 10.7 | 0.0 | 0.0 | 15.1 | 11.2 | 12.0 | 7.7 | 20.8 | 23.1 |
| LnGrp Delay(d),s/veh | 96.5 | 0.0 | 51.0 | 181.7 | 0.0 | 0.0 | 58.0 | 9.0 | 9.3 | 71.2 | 29.2 | 34.9 |
| LnGrp LOS | F | | D | F | | | E | A | A | E | C | C |
| Approach Vol, veh/h | | 380 | | | 174 | | | 2315 | | | 2044 | |
| Approach Delay, s/veh | | 84.2 | | | 181.7 | | | 16.9 | | | 34.8 | |
| Approach LOS | | F | | | F | | | B | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 19.8 | 71.2 | | 27.0 | 33.5 | 57.5 | | 17.0 |
| Change Period (Y+Rc), s | 4.0 | 5.3 | | 5.0 | 5.3 | * 5 | | 5.0 |
| Max Green Setting (Gmax), s | 15.8 | 63.7 | | 22.0 | 28.0 | * 54 | | 12.0 |
| Max Q Clear Time (g_c+I1), s | 15.7 | 27.1 | | 22.8 | 30.2 | 45.3 | | 14.0 |
| Green Ext Time (p_c), s | 0.1 | 25.1 | | 0.0 | 0.0 | 7.3 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 35.4 |
| HCM 2010 LOS | D |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 37.9 |
| Intersection LOS | E |

| Movement | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 10 | 10 | 10 | 0 | 100 | 10 | 280 | 0 | 10 | 415 | 85 | 0 | 160 | 420 | 5 |
| 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 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 11 | 11 | 11 | 0 | 109 | 11 | 304 | 0 | 11 | 451 | 92 | 0 | 174 | 457 | 5 |
| Number of Lanes | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 1 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 1 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 1 |
| HCM Control Delay | 13.3 | 19.8 | 48.5 | 41.9 |
| HCM LOS | B | C | E | E |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|
| Vol Left, % | 2% | 0% | 33% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 98% | 0% | 33% | 0% | 3% | 0% | 99% |
| Vol Right, % | 0% | 100% | 33% | 0% | 97% | 0% | 1% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 425 | 85 | 30 | 100 | 290 | 160 | 425 |
| LT Vol | 10 | 0 | 10 | 100 | 0 | 160 | 0 |
| Through Vol | 415 | 0 | 10 | 0 | 10 | 0 | 420 |
| RT Vol | 0 | 85 | 10 | 0 | 280 | 0 | 5 |
| Lane Flow Rate | 462 | 92 | 33 | 109 | 315 | 174 | 462 |
| Geometry Grp | 7 | 7 | 6 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.948 | 0.171 | 0.084 | 0.255 | 0.634 | 0.376 | 0.931 |
| Departure Headway (Hd) | 7.39 | 6.659 | 9.3 | 8.456 | 7.244 | 7.78 | 7.258 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 490 | 538 | 384 | 425 | 498 | 463 | 499 |
| Service Time | 5.143 | 4.411 | 7.393 | 6.205 | 4.993 | 5.534 | 5.012 |
| HCM Lane V/C Ratio | 0.943 | 0.171 | 0.086 | 0.256 | 0.633 | 0.376 | 0.926 |
| HCM Control Delay | 56 | 10.8 | 13.3 | 14.1 | 21.8 | 15.2 | 52 |
| HCM Lane LOS | F | B | B | B | C | C | F |
| HCM 95th-tile Q | 11.6 | 0.6 | 0.3 | 1 | 4.4 | 1.7 | 11.2 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 60 | 250 | 40 | 340 | 210 | 350 | 50 | 780 | 510 | 230 | 640 | 50 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| 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 | | 0.98 | 1.00 | | 0.97 | 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 |
| Adj Sat Flow, veh/h/ln | 1900 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 65 | 272 | 43 | 370 | 228 | 380 | 54 | 848 | 554 | 250 | 696 | 54 |
| Adj No. of Lanes | 0 | 2 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 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 | 77 | 335 | 55 | 438 | 460 | 627 | 70 | 1135 | 885 | 275 | 1453 | 113 |
| Arrive On Green | 0.13 | 0.13 | 0.13 | 0.08 | 0.08 | 0.08 | 0.07 | 0.54 | 0.54 | 0.26 | 0.73 | 0.73 |
| Sat Flow, veh/h | 594 | 2598 | 428 | 1774 | 1863 | 1546 | 1774 | 3539 | 1542 | 1774 | 3329 | 258 |
| Grp Volume(v), veh/h | 200 | 0 | 180 | 370 | 228 | 380 | 54 | 848 | 554 | 250 | 370 | 380 |
| Grp Sat Flow(s),veh/h/ln | 1833 | 0 | 1787 | 1774 | 1863 | 1546 | 1774 | 1770 | 1542 | 1774 | 1770 | 1817 |
| Q Serve(g_s), s | 12.8 | 0.0 | 11.7 | 24.7 | 14.1 | 23.4 | 3.6 | 22.3 | 31.9 | 16.4 | 10.4 | 10.5 |
| Cycle Q Clear(g_c), s | 12.8 | 0.0 | 11.7 | 24.7 | 14.1 | 23.4 | 3.6 | 22.3 | 31.9 | 16.4 | 10.4 | 10.5 |
| Prop In Lane | 0.32 | | 0.24 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.14 |
| Lane Grp Cap(c), veh/h | 236 | 0 | 230 | 438 | 460 | 627 | 70 | 1135 | 885 | 275 | 772 | 793 |
| V/C Ratio(X) | 0.85 | 0.00 | 0.78 | 0.84 | 0.50 | 0.61 | 0.78 | 0.75 | 0.63 | 0.91 | 0.48 | 0.48 |
| Avail Cap(c_a), veh/h | 307 | 0 | 299 | 548 | 576 | 723 | 386 | 1135 | 885 | 386 | 772 | 793 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.84 | 0.84 | 0.84 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 51.1 | 0.0 | 50.6 | 52.8 | 48.0 | 34.7 | 55.5 | 24.1 | 12.4 | 43.6 | 10.6 | 10.6 |
| Incr Delay (d2), s/veh | 12.9 | 0.0 | 6.8 | 8.2 | 0.7 | 0.9 | 6.7 | 4.5 | 3.3 | 16.4 | 2.1 | 2.1 |
| 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 | 7.4 | 0.0 | 6.2 | 13.2 | 7.4 | 10.2 | 1.9 | 11.5 | 19.0 | 9.2 | 5.4 | 5.5 |
| LnGrp Delay(d),s/veh | 64.0 | 0.0 | 57.4 | 61.0 | 48.6 | 35.6 | 62.3 | 28.6 | 15.7 | 60.1 | 12.7 | 12.7 |
| LnGrp LOS | E | | E | E | D | D | E | C | B | E | B | B |
| Approach Vol, veh/h | | 380 | | | 978 | | | 1456 | | | 1000 | |
| Approach Delay, s/veh | | 60.9 | | | 48.3 | | | 25.0 | | | 24.5 | |
| Approach LOS | | E | | | D | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 22.6 | 43.4 | | 19.5 | 8.7 | 57.3 | | 34.5 |
| Change Period (Y+Rc), s | 4.0 | 4.9 | | 4.0 | 4.0 | 4.9 | | 4.9 |
| Max Green Setting (Gmax), s | 26.1 | 18.9 | | 20.1 | 26.1 | 18.9 | | 37.1 |
| Max Q Clear Time (g_c+I1), s | 18.4 | 33.9 | | 14.8 | 5.6 | 12.5 | | 26.7 |
| Green Ext Time (p_c), s | 0.2 | 0.0 | | 0.6 | 0.0 | 5.3 | | 3.0 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 34.4 |
| HCM 2010 LOS | | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 90 | 750 | 100 | 390 | 680 | 160 | 150 | 320 | 330 | 150 | 250 | 70 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 | | 0.98 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 98 | 815 | 109 | 424 | 739 | 135 | 163 | 348 | 359 | 163 | 272 | 76 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 | 121 | 982 | 131 | 444 | 1481 | 270 | 266 | 591 | 888 | 179 | 591 | 491 |
| Arrive On Green | 0.11 | 0.52 | 0.52 | 0.42 | 0.83 | 0.83 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 |
| Sat Flow, veh/h | 1774 | 3139 | 420 | 1774 | 2990 | 546 | 1026 | 1863 | 1549 | 737 | 1863 | 1547 |
| Grp Volume(v), veh/h | 98 | 460 | 464 | 424 | 437 | 437 | 163 | 348 | 359 | 163 | 272 | 76 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1789 | 1774 | 1770 | 1766 | 1026 | 1863 | 1549 | 737 | 1863 | 1547 |
| Q Serve(g_s), s | 6.5 | 26.3 | 26.3 | 27.8 | 8.7 | 8.7 | 18.1 | 18.8 | 15.6 | 19.3 | 14.0 | 4.2 |
| Cycle Q Clear(g_c), s | 6.5 | 26.3 | 26.3 | 27.8 | 8.7 | 8.7 | 32.1 | 18.8 | 15.6 | 38.1 | 14.0 | 4.2 |
| Prop In Lane | 1.00 | | 0.23 | 1.00 | | 0.31 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 121 | 554 | 560 | 444 | 876 | 875 | 266 | 591 | 888 | 179 | 591 | 491 |
| V/C Ratio(X) | 0.81 | 0.83 | 0.83 | 0.95 | 0.50 | 0.50 | 0.61 | 0.59 | 0.40 | 0.91 | 0.46 | 0.15 |
| Avail Cap(c_a), veh/h | 170 | 554 | 560 | 466 | 876 | 875 | 266 | 591 | 888 | 179 | 591 | 491 |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.65 | 0.65 | 0.65 | 0.84 | 0.84 | 0.84 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 52.4 | 25.9 | 25.9 | 34.3 | 6.0 | 6.0 | 45.6 | 34.4 | 14.6 | 53.0 | 32.7 | 29.4 |
| Incr Delay (d2), s/veh | 8.4 | 9.2 | 9.1 | 26.6 | 1.7 | 1.7 | 4.1 | 1.5 | 0.3 | 43.4 | 0.6 | 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 | 3.5 | 14.2 | 14.3 | 16.8 | 4.4 | 4.4 | 5.4 | 9.9 | 6.7 | 7.5 | 7.3 | 1.8 |
| LnGrp Delay(d),s/veh | 60.8 | 35.1 | 35.1 | 60.9 | 7.7 | 7.7 | 49.7 | 35.9 | 14.9 | 96.4 | 33.3 | 29.5 |
| LnGrp LOS | E | D | D | E | A | A | D | D | B | F | C | C |
| Approach Vol, veh/h | | 1022 | | | 1298 | | | 870 | | | 511 | |
| Approach Delay, s/veh | | 37.6 | | | 25.1 | | | 29.8 | | | 52.9 | |
| Approach LOS | | D | | | C | | | C | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 13.5 | 43.5 | | 43.0 | 11.7 | 65.3 | | 43.0 |
| Change Period (Y+Rc), s | 3.5 | 5.9 | | 4.9 | 3.5 | 5.9 | | 4.9 |
| Max Green Setting (Gmax), s | 31.5 | 36.1 | | 38.1 | 11.5 | 56.1 | | 38.1 |
| Max Q Clear Time (g_c+I1), s | 29.8 | 28.3 | | 40.1 | 8.5 | 10.7 | | 34.1 |
| Green Ext Time (p_c), s | 0.3 | 5.7 | | 0.0 | 0.0 | 16.1 | | 2.5 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 33.5 |
| HCM 2010 LOS | | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 1070 | 520 | 450 | 970 | 0 | 0 | 0 | 0 | 400 | 10 | 350 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | | | | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | | | | 1.00 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 0 | 1863 | 1900 | 1863 | 1863 | 0 | | | | 1900 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 0 | 1163 | 529 | 489 | 1054 | 0 | | | | 435 | 11 | 193 |
| Adj No. of Lanes | 0 | 2 | 0 | 1 | 2 | 0 | | | | 0 | 1 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 2 | 2 |
| Cap, veh/h | 0 | 1102 | 481 | 622 | 2999 | 0 | | | | 393 | 10 | 356 |
| Arrive On Green | 0.00 | 0.77 | 0.77 | 0.70 | 1.00 | 0.00 | | | | 0.23 | 0.23 | 0.23 |
| Sat Flow, veh/h | 0 | 2493 | 1048 | 1774 | 3632 | 0 | | | | 1732 | 44 | 1569 |
| Grp Volume(v), veh/h | 0 | 845 | 847 | 489 | 1054 | 0 | | | | 446 | 0 | 193 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1770 | 1678 | 1774 | 1770 | 0 | | | | 1776 | 0 | 1569 |
| Q Serve(g_s), s | 0.0 | 66.6 | 66.6 | 26.6 | 0.0 | 0.0 | | | | 32.9 | 0.0 | 15.7 |
| Cycle Q Clear(g_c), s | 0.0 | 66.6 | 66.6 | 26.6 | 0.0 | 0.0 | | | | 32.9 | 0.0 | 15.7 |
| Prop In Lane | 0.00 | | 0.62 | 1.00 | | 0.00 | | | | 0.98 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 813 | 771 | 622 | 2999 | 0 | | | | 403 | 0 | 356 |
| V/C Ratio(X) | 0.00 | 1.04 | 1.10 | 0.79 | 0.35 | 0.00 | | | | 1.11 | 0.00 | 0.54 |
| Avail Cap(c_a), veh/h | 0 | 813 | 771 | 622 | 2999 | 0 | | | | 403 | 0 | 356 |
| HCM Platoon Ratio | 1.00 | 1.67 | 1.67 | 2.00 | 2.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 0.63 | 0.63 | 0.19 | 0.19 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 16.9 | 16.9 | 18.0 | 0.0 | 0.0 | | | | 56.1 | 0.0 | 49.4 |
| Incr Delay (d2), s/veh | 0.0 | 36.0 | 57.3 | 1.2 | 0.1 | 0.0 | | | | 76.9 | 0.0 | 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 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 39.4 | 41.9 | 12.8 | 0.0 | 0.0 | | | | 24.7 | 0.0 | 6.9 |
| LnGrp Delay(d),s/veh | 0.0 | 52.9 | 74.2 | 19.2 | 0.1 | 0.0 | | | | 133.0 | 0.0 | 50.4 |
| LnGrp LOS | | F | F | B | A | | | | | F | | D |
| Approach Vol, veh/h | | 1692 | | | 1543 | | | | | | 639 | |
| Approach Delay, s/veh | | 63.6 | | | 6.1 | | | | | | 108.0 | |
| Approach LOS | | E | | | A | | | | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 56.4 | 72.0 | | 38.0 | | 128.4 | | |
| Change Period (Y+Rc), s | 5.4 | * 5.4 | | 5.1 | | 5.4 | | |
| Max Green Setting (Gmax), s | 30.3 | * 67 | | 32.9 | | 101.6 | | |
| Max Q Clear Time (g_c+I1), s | 28.6 | 68.6 | | 34.9 | | 2.0 | | |
| Green Ext Time (p_c), s | 1.2 | 0.0 | | 0.0 | | 22.2 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 48.0 |
| HCM 2010 LOS | D |

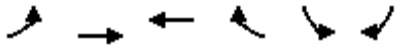
Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 290 | 1160 | 0 | 0 | 1050 | 480 | 380 | 0 | 610 | 0 | 0 | 0 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.99 | | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 0 | 0 | 1863 | 1863 | 1900 | 1863 | 1863 | | | |
| Adj Flow Rate, veh/h | 315 | 1261 | 0 | 0 | 1141 | 413 | 413 | 0 | 478 | | | |
| Adj No. of Lanes | 1 | 2 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | |
| Percent Heavy Veh, % | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | | | |
| Cap, veh/h | 307 | 2118 | 0 | 0 | 1381 | 618 | 584 | 0 | 513 | | | |
| Arrive On Green | 0.29 | 1.00 | 0.00 | 0.00 | 0.65 | 0.65 | 0.33 | 0.00 | 0.33 | | | |
| Sat Flow, veh/h | 1774 | 3632 | 0 | 0 | 3632 | 1583 | 1774 | 0 | 1560 | | | |
| Grp Volume(v), veh/h | 315 | 1261 | 0 | 0 | 1141 | 413 | 413 | 0 | 478 | | | |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 0 | 0 | 1770 | 1583 | 1774 | 0 | 1560 | | | |
| Q Serve(g_s), s | 25.1 | 0.1 | 0.0 | 0.0 | 35.3 | 23.4 | 29.5 | 0.0 | 43.0 | | | |
| Cycle Q Clear(g_c), s | 25.1 | 0.1 | 0.0 | 0.0 | 35.3 | 23.4 | 29.5 | 0.0 | 43.0 | | | |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 1.00 | 1.00 | | 1.00 | | | |
| Lane Grp Cap(c), veh/h | 307 | 2118 | 0 | 0 | 1381 | 618 | 584 | 0 | 513 | | | |
| V/C Ratio(X) | 1.03 | 0.60 | 0.00 | 0.00 | 0.83 | 0.67 | 0.71 | 0.00 | 0.93 | | | |
| Avail Cap(c_a), veh/h | 307 | 2118 | 0 | 0 | 1381 | 618 | 674 | 0 | 593 | | | |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.00 | 1.00 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | | | |
| Upstream Filter(I) | 0.09 | 0.09 | 0.00 | 0.00 | 0.78 | 0.78 | 1.00 | 0.00 | 1.00 | | | |
| Uniform Delay (d), s/veh | 51.5 | 0.0 | 0.0 | 0.0 | 21.6 | 19.5 | 42.5 | 0.0 | 47.0 | | | |
| Incr Delay (d2), s/veh | 22.4 | 0.1 | 0.0 | 0.0 | 4.6 | 4.5 | 2.6 | 0.0 | 19.6 | | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| %ile BackOfQ(50%),veh/ln | 14.1 | 0.1 | 0.0 | 0.0 | 17.8 | 10.9 | 14.9 | 0.0 | 21.2 | | | |
| LnGrp Delay(d),s/veh | 74.0 | 0.1 | 0.0 | 0.0 | 26.2 | 24.0 | 45.1 | 0.0 | 66.6 | | | |
| LnGrp LOS | F | A | | | C | C | D | | E | | | |
| Approach Vol, veh/h | | 1576 | | | 1554 | | | 891 | | | | |
| Approach Delay, s/veh | | 14.9 | | | 25.6 | | | 56.6 | | | | |
| Approach LOS | | B | | | C | | | E | | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 92.2 | | | 30.2 | 62.0 | | 52.8 |
| Change Period (Y+Rc), s | | 5.4 | | | 5.1 | 5.4 | | 5.1 |
| Max Green Setting (Gmax), s | | 79.4 | | | 25.1 | 49.2 | | 55.1 |
| Max Q Clear Time (g_c+I1), s | | 2.1 | | | 27.1 | 37.3 | | 45.0 |
| Green Ext Time (p_c), s | | 22.9 | | | 0.0 | 8.9 | | 2.8 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | 28.3 | |
| HCM 2010 LOS | C | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 380 | 1370 | 1160 | 300 | 430 | 400 |
| Number | 5 | 2 | 6 | 16 | 7 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 0.97 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 413 | 1489 | 1261 | 272 | 467 | 144 |
| Adj No. of Lanes | 1 | 2 | 3 | 1 | 2 | 1 |
| 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 | 431 | 2731 | 2510 | 759 | 537 | 247 |
| Arrive On Green | 0.49 | 1.00 | 0.82 | 0.82 | 0.16 | 0.16 |
| Sat Flow, veh/h | 1774 | 3632 | 5253 | 1537 | 3442 | 1583 |
| Grp Volume(v), veh/h | 413 | 1489 | 1261 | 272 | 467 | 144 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1695 | 1537 | 1721 | 1583 |
| Q Serve(g_s), s | 32.5 | 0.0 | 10.8 | 6.4 | 19.2 | 12.2 |
| Cycle Q Clear(g_c), s | 32.5 | 0.0 | 10.8 | 6.4 | 19.2 | 12.2 |
| Prop In Lane | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 431 | 2731 | 2510 | 759 | 537 | 247 |
| V/C Ratio(X) | 0.96 | 0.55 | 0.50 | 0.36 | 0.87 | 0.58 |
| Avail Cap(c_a), veh/h | 586 | 2731 | 2510 | 759 | 757 | 348 |
| HCM Platoon Ratio | 2.00 | 2.00 | 1.67 | 1.67 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.52 | 0.52 | 0.18 | 0.18 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 36.5 | 0.0 | 7.4 | 7.0 | 59.8 | 56.8 |
| Incr Delay (d2), s/veh | 14.1 | 0.4 | 0.1 | 0.2 | 7.2 | 1.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 17.4 | 0.2 | 4.9 | 2.7 | 9.7 | 10.8 |
| LnGrp Delay(d),s/veh | 50.7 | 0.4 | 7.5 | 7.3 | 66.9 | 58.4 |
| LnGrp LOS | D | A | A | A | E | E |
| Approach Vol, veh/h | | 1902 | 1533 | | 611 | |
| Approach Delay, s/veh | | 11.3 | 7.5 | | 64.9 | |
| Approach LOS | | B | A | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 117.3 | | 27.7 | 40.3 | 77.0 | | |
| Change Period (Y+Rc), s | | 5.4 | | 5.1 | 5.1 | 5.4 | | |
| Max Green Setting (Gmax), s | | 102.6 | | 31.9 | 47.9 | 49.6 | | |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | 21.2 | 34.5 | 12.8 | | |
| Green Ext Time (p_c), s | | 30.7 | | 1.4 | 0.8 | 21.4 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 18.0 |
| HCM 2010 LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 240 | 1180 | 190 | 250 | 1530 | 120 | 250 | 320 | 340 | 110 | 180 | 130 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.97 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 261 | 1283 | 207 | 272 | 1663 | 130 | 272 | 348 | 370 | 120 | 196 | 141 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 | 625 | 2387 | 1276 | 294 | 1676 | 731 | 266 | 358 | 304 | 116 | 201 | 166 |
| Arrive On Green | 0.35 | 0.67 | 0.67 | 0.28 | 0.79 | 0.79 | 0.15 | 0.19 | 0.19 | 0.07 | 0.11 | 0.11 |
| Sat Flow, veh/h | 1774 | 3539 | 1540 | 1774 | 3539 | 1544 | 1774 | 1863 | 1581 | 1774 | 1863 | 1545 |
| Grp Volume(v), veh/h | 261 | 1283 | 207 | 272 | 1663 | 130 | 272 | 348 | 370 | 120 | 196 | 141 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1540 | 1774 | 1770 | 1544 | 1774 | 1863 | 1581 | 1774 | 1863 | 1545 |
| Q Serve(g_s), s | 14.5 | 24.1 | 3.9 | 19.4 | 59.3 | 2.7 | 19.5 | 24.1 | 25.0 | 8.5 | 13.6 | 11.7 |
| Cycle Q Clear(g_c), s | 14.5 | 24.1 | 3.9 | 19.4 | 59.3 | 2.7 | 19.5 | 24.1 | 25.0 | 8.5 | 13.6 | 11.7 |
| 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 | 625 | 2387 | 1276 | 294 | 1676 | 731 | 266 | 358 | 304 | 116 | 201 | 166 |
| V/C Ratio(X) | 0.42 | 0.54 | 0.16 | 0.93 | 0.99 | 0.18 | 1.02 | 0.97 | 1.22 | 1.03 | 0.98 | 0.85 |
| Avail Cap(c_a), veh/h | 625 | 2387 | 1276 | 334 | 1677 | 732 | 266 | 358 | 304 | 116 | 201 | 166 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.76 | 0.76 | 0.76 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 32.0 | 10.8 | 4.2 | 46.3 | 13.3 | 7.4 | 55.3 | 52.1 | 52.5 | 60.8 | 57.8 | 57.0 |
| Incr Delay (d2), s/veh | 0.1 | 0.7 | 0.2 | 27.7 | 20.2 | 0.5 | 61.0 | 39.8 | 123.9 | 93.1 | 56.7 | 31.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.1 | 11.8 | 1.7 | 11.7 | 32.4 | 1.2 | 14.0 | 16.3 | 21.4 | 7.2 | 10.2 | 6.4 |
| LnGrp Delay(d),s/veh | 32.1 | 11.5 | 4.4 | 73.9 | 33.5 | 8.0 | 116.3 | 92.0 | 176.3 | 154.4 | 114.6 | 88.3 |
| LnGrp LOS | C | B | A | E | C | A | F | F | F | F | F | F |
| Approach Vol, veh/h | | 1751 | | | 2065 | | | 990 | | | 457 | |
| Approach Delay, s/veh | | 13.7 | | | 37.2 | | | 130.2 | | | 116.9 | |
| Approach LOS | | B | | | D | | | F | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 25.0 | 93.0 | 23.0 | 18.1 | 51.1 | 66.9 | 12.0 | 29.1 |
| Change Period (Y+Rc), s | 3.5 | 5.3 | 3.5 | 4.1 | 5.3 | * 5.3 | 3.5 | 4.1 |
| Max Green Setting (Gmax), s | 21.5 | 55.6 | 19.5 | 14.0 | 18.5 | * 62 | 8.5 | 25.0 |
| Max Q Clear Time (g_c+I1), s | 21.4 | 26.1 | 21.5 | 15.6 | 16.5 | 61.3 | 10.5 | 27.0 |
| Green Ext Time (p_c), s | 0.1 | 14.6 | 0.0 | 0.0 | 0.2 | 0.3 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 53.8 |
| HCM 2010 LOS | D |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

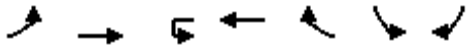
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 1640 | 170 | 500 | 2020 | 180 | 400 |
| Number | 6 | 16 | 5 | 2 | 3 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 1783 | 173 | 543 | 2196 | 196 | 435 |
| Adj No. of Lanes | 2 | 0 | 2 | 2 | 1 | 1 |
| 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 | 1814 | 173 | 696 | 2825 | 238 | 1092 |
| Arrive On Green | 0.93 | 0.93 | 0.40 | 1.00 | 0.13 | 0.13 |
| Sat Flow, veh/h | 3359 | 312 | 3442 | 3632 | 1774 | 1583 |
| Grp Volume(v), veh/h | 953 | 1003 | 543 | 2196 | 196 | 435 |
| Grp Sat Flow(s),veh/h/ln | 1770 | 1808 | 1721 | 1770 | 1774 | 1583 |
| Q Serve(g_s), s | 50.4 | 71.3 | 17.9 | 0.0 | 14.0 | 15.3 |
| Cycle Q Clear(g_c), s | 50.4 | 71.3 | 17.9 | 0.0 | 14.0 | 15.3 |
| Prop In Lane | | 0.17 | 1.00 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 983 | 1004 | 696 | 2825 | 238 | 1092 |
| V/C Ratio(X) | 0.97 | 1.00 | 0.78 | 0.78 | 0.82 | 0.40 |
| Avail Cap(c_a), veh/h | 983 | 1004 | 696 | 2825 | 341 | 1184 |
| HCM Platoon Ratio | 1.67 | 1.67 | 2.00 | 2.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.23 | 0.23 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 3.9 | 4.7 | 36.2 | 0.0 | 54.8 | 8.6 |
| Incr Delay (d2), s/veh | 22.2 | 28.2 | 1.6 | 0.5 | 7.1 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 26.7 | 37.5 | 8.6 | 0.2 | 7.3 | 15.6 |
| LnGrp Delay(d),s/veh | 26.2 | 32.9 | 37.8 | 0.5 | 61.9 | 8.7 |
| LnGrp LOS | C | C | D | A | E | A |
| Approach Vol, veh/h | 1956 | | | 2739 | 631 | |
| Approach Delay, s/veh | 29.6 | | | 7.9 | 25.2 | |
| Approach LOS | C | | | A | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 109.1 | | | 31.6 | 77.5 | | 20.9 |
| Change Period (Y+Rc), s | | 5.3 | | | 5.3 | * 5.3 | | 3.5 |
| Max Green Setting (Gmax), s | | 96.2 | | | 20.5 | * 72 | | 25.0 |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 19.9 | 73.3 | | 17.3 |
| Green Ext Time (p_c), s | | 84.6 | | | 0.1 | 0.0 | | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 17.9 |
| HCM 2010 LOS | B |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



| Movement | EBL | EBT | WBU | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Volume (veh/h) | 800 | 1260 | 0 | 1620 | 150 | 140 | 740 |
| Number | 1 | 6 | | 2 | 12 | 7 | 14 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | | 1863 | 1900 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 870 | 1370 | | 1761 | 147 | 152 | 804 |
| Adj No. of Lanes | 2 | 2 | | 2 | 0 | 1 | 2 |
| 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 | 896 | 2970 | | 1827 | 151 | 165 | 1797 |
| Arrive On Green | 0.52 | 1.00 | | 0.92 | 0.92 | 0.09 | 0.09 |
| Sat Flow, veh/h | 3442 | 3632 | | 3404 | 273 | 1774 | 2787 |
| Grp Volume(v), veh/h | 870 | 1370 | | 931 | 977 | 152 | 804 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1770 | | 1770 | 1815 | 1774 | 1393 |
| Q Serve(g_s), s | 31.8 | 0.0 | | 44.0 | 54.7 | 11.0 | 12.1 |
| Cycle Q Clear(g_c), s | 31.8 | 0.0 | | 44.0 | 54.7 | 11.0 | 12.1 |
| Prop In Lane | 1.00 | | | | 0.15 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 896 | 2970 | | 977 | 1001 | 165 | 1797 |
| V/C Ratio(X) | 0.97 | 0.46 | | 0.95 | 0.98 | 0.92 | 0.45 |
| Avail Cap(c_a), veh/h | 897 | 2970 | | 977 | 1001 | 165 | 1797 |
| HCM Platoon Ratio | 2.00 | 2.00 | | 1.67 | 1.67 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.27 | 0.27 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 30.7 | 0.0 | | 4.0 | 4.4 | 58.5 | 11.5 |
| Incr Delay (d2), s/veh | 9.8 | 0.1 | | 19.4 | 23.2 | 46.7 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 16.2 | 0.1 | | 23.8 | 30.0 | 7.5 | 19.6 |
| LnGrp Delay(d),s/veh | 40.5 | 0.1 | | 23.4 | 27.7 | 105.2 | 11.6 |
| LnGrp LOS | D | A | | C | C | F | B |
| Approach Vol, veh/h | | 2240 | | 1908 | | 956 | |
| Approach Delay, s/veh | | 15.8 | | 25.6 | | 26.5 | |
| Approach LOS | | B | | C | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 37.4 | 77.0 | | 15.6 | | 114.4 | | |
| Change Period (Y+Rc), s | 3.5 | 5.3 | | 3.5 | | 5.3 | | |
| Max Green Setting (Gmax), s | 33.9 | 71.7 | | 12.1 | | 100.1 | | |
| Max Q Clear Time (g_c+I1), s | 33.8 | 56.7 | | 14.1 | | 2.0 | | |
| Green Ext Time (p_c), s | 0.0 | 14.9 | | 0.0 | | 94.4 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 21.5 |
| HCM 2010 LOS | C |

Notes

User approved ignoring U-Turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 410 | 555 | 170 | 310 | 590 | 310 | 220 | 1030 | 310 | 650 | 1140 | 470 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| 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 | | 0.98 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 446 | 603 | 185 | 337 | 641 | 267 | 239 | 1120 | 337 | 707 | 1239 | 511 |
| Adj No. of Lanes | 2 | 2 | 0 | 2 | 2 | 0 | 1 | 3 | 0 | 2 | 3 | 1 |
| 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 | 449 | 657 | 201 | 504 | 638 | 266 | 264 | 1059 | 319 | 688 | 1649 | 503 |
| Arrive On Green | 0.22 | 0.41 | 0.41 | 0.24 | 0.44 | 0.44 | 0.25 | 0.46 | 0.46 | 0.33 | 0.54 | 0.54 |
| Sat Flow, veh/h | 3442 | 2670 | 818 | 3442 | 2438 | 1015 | 1774 | 3880 | 1167 | 3442 | 5085 | 1552 |
| Grp Volume(v), veh/h | 446 | 399 | 389 | 337 | 465 | 443 | 239 | 979 | 478 | 707 | 1239 | 511 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1770 | 1718 | 1721 | 1770 | 1684 | 1774 | 1695 | 1657 | 1721 | 1695 | 1552 |
| Q Serve(g_s), s | 18.6 | 30.7 | 30.9 | 12.7 | 37.7 | 37.7 | 18.8 | 39.3 | 39.3 | 28.8 | 27.1 | 46.7 |
| Cycle Q Clear(g_c), s | 18.6 | 30.7 | 30.9 | 12.7 | 37.7 | 37.7 | 18.8 | 39.3 | 39.3 | 28.8 | 27.1 | 46.7 |
| Prop In Lane | 1.00 | | 0.48 | 1.00 | | 0.60 | 1.00 | | 0.70 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 449 | 435 | 422 | 504 | 463 | 441 | 264 | 925 | 452 | 688 | 1649 | 503 |
| V/C Ratio(X) | 0.99 | 0.92 | 0.92 | 0.67 | 1.00 | 1.00 | 0.91 | 1.06 | 1.06 | 1.03 | 0.75 | 1.02 |
| Avail Cap(c_a), veh/h | 449 | 474 | 461 | 504 | 463 | 441 | 264 | 925 | 452 | 688 | 1649 | 503 |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 0.50 | 0.50 | 0.50 | 0.88 | 0.88 | 0.88 | 0.34 | 0.34 | 0.34 |
| Uniform Delay (d), s/veh | 56.2 | 41.1 | 41.1 | 51.2 | 40.5 | 40.5 | 53.2 | 39.2 | 39.2 | 48.0 | 28.5 | 33.0 |
| Incr Delay (d2), s/veh | 40.4 | 22.1 | 23.0 | 1.4 | 30.6 | 31.4 | 28.7 | 44.4 | 55.8 | 27.4 | 1.1 | 27.4 |
| 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 | 11.3 | 17.5 | 17.2 | 6.1 | 22.3 | 21.3 | 11.3 | 24.0 | 24.9 | 16.2 | 12.7 | 23.6 |
| LnGrp Delay(d),s/veh | 96.6 | 63.2 | 64.1 | 52.6 | 71.1 | 72.0 | 81.8 | 83.5 | 95.0 | 75.3 | 29.6 | 60.4 |
| LnGrp LOS | F | E | E | D | F | F | F | F | F | F | C | F |
| Approach Vol, veh/h | | 1234 | | | 1245 | | | 1696 | | | 2457 | |
| Approach Delay, s/veh | | 75.6 | | | 66.4 | | | 86.5 | | | 49.2 | |
| Approach LOS | | E | | | E | | | F | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 33.0 | 44.6 | 25.3 | 41.1 | 25.6 | 52.0 | 23.0 | 43.4 |
| Change Period (Y+Rc), s | 4.2 | * 5.3 | 4.2 | * 5.7 | 4.2 | * 5.3 | 4.2 | * 5.7 |
| Max Green Setting (Gmax), s | 28.8 | * 39 | 17.9 | * 39 | 21.4 | * 47 | 18.8 | * 38 |
| Max Q Clear Time (g_c+I1), s | 20.8 | 41.3 | 14.7 | 32.9 | 20.8 | 48.7 | 20.6 | 39.7 |
| Green Ext Time (p_c), s | 0.0 | 0.0 | 0.6 | 2.5 | 0.2 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 66.9 |
| HCM 2010 LOS | E |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

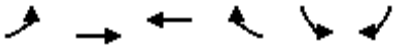
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 190 | 700 | 10 | 80 | 1090 | 180 | 40 | 5 | 25 | 240 | 10 | 310 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1900 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 207 | 761 | 10 | 87 | 1185 | 170 | 43 | 5 | 27 | 261 | 11 | 337 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 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 | 293 | 1965 | 26 | 110 | 1313 | 188 | 51 | 6 | 32 | 296 | 8 | 257 |
| Arrive On Green | 0.28 | 0.92 | 0.92 | 0.10 | 0.70 | 0.70 | 0.05 | 0.05 | 0.05 | 0.17 | 0.17 | 0.17 |
| Sat Flow, veh/h | 1774 | 3577 | 47 | 1774 | 3109 | 444 | 978 | 114 | 614 | 1774 | 50 | 1541 |
| Grp Volume(v), veh/h | 207 | 376 | 395 | 87 | 672 | 683 | 75 | 0 | 0 | 261 | 0 | 348 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1854 | 1774 | 1770 | 1784 | 1706 | 0 | 0 | 1774 | 0 | 1591 |
| Q Serve(g_s), s | 10.1 | 2.6 | 2.6 | 4.6 | 29.5 | 30.0 | 4.2 | 0.0 | 0.0 | 13.8 | 0.0 | 16.0 |
| Cycle Q Clear(g_c), s | 10.1 | 2.6 | 2.6 | 4.6 | 29.5 | 30.0 | 4.2 | 0.0 | 0.0 | 13.8 | 0.0 | 16.0 |
| Prop In Lane | 1.00 | | 0.03 | 1.00 | | 0.25 | 0.57 | | 0.36 | 1.00 | | 0.97 |
| Lane Grp Cap(c), veh/h | 293 | 972 | 1019 | 110 | 747 | 753 | 89 | 0 | 0 | 296 | 0 | 265 |
| V/C Ratio(X) | 0.71 | 0.39 | 0.39 | 0.79 | 0.90 | 0.91 | 0.84 | 0.00 | 0.00 | 0.88 | 0.00 | 1.31 |
| Avail Cap(c_a), veh/h | 293 | 972 | 1019 | 203 | 824 | 831 | 89 | 0 | 0 | 296 | 0 | 265 |
| HCM Platoon Ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.20 | 0.20 | 0.20 | 0.45 | 0.45 | 0.45 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 32.6 | 1.9 | 1.9 | 42.4 | 12.5 | 12.6 | 45.1 | 0.0 | 0.0 | 39.1 | 0.0 | 40.0 |
| Incr Delay (d2), s/veh | 1.3 | 0.2 | 0.2 | 2.1 | 8.3 | 8.6 | 47.0 | 0.0 | 0.0 | 24.5 | 0.0 | 164.9 |
| 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(50%),veh/ln | 5.0 | 1.2 | 1.2 | 2.3 | 15.6 | 15.9 | 3.1 | 0.0 | 0.0 | 8.8 | 0.0 | 19.1 |
| LnGrp Delay(d),s/veh | 34.0 | 2.1 | 2.1 | 44.5 | 20.8 | 21.2 | 92.1 | 0.0 | 0.0 | 63.6 | 0.0 | 204.9 |
| LnGrp LOS | C | A | A | D | C | C | F | | | E | | F |
| Approach Vol, veh/h | | 978 | | | 1442 | | | 75 | | | 609 | |
| Approach Delay, s/veh | | 8.9 | | | 22.4 | | | 92.1 | | | 144.4 | |
| Approach LOS | | A | | | C | | | F | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 9.0 | 58.0 | | 20.0 | 21.2 | 45.8 | | 9.0 |
| Change Period (Y+Rc), s | 3.0 | 5.3 | | 4.0 | 5.3 | * 5.3 | | 4.0 |
| Max Green Setting (Gmax), s | 11.0 | 47.7 | | 16.0 | 13.5 | * 45 | | 5.0 |
| Max Q Clear Time (g_c+I1), s | 6.6 | 4.6 | | 18.0 | 12.1 | 32.0 | | 6.2 |
| Green Ext Time (p_c), s | 0.0 | 7.4 | | 0.0 | 0.2 | 8.5 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 43.8 |
| HCM 2010 LOS | D |

**Notes**

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 350 | 680 | 910 | 220 | 150 | 380 |
| Number | 5 | 2 | 6 | 16 | 7 | 14 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 380 | 739 | 989 | 214 | 163 | 413 |
| Adj No. of Lanes | 1 | 2 | 2 | 0 | 1 | 1 |
| 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 | 389 | 2149 | 1010 | 218 | 497 | 444 |
| Arrive On Green | 0.22 | 0.61 | 0.35 | 0.35 | 0.28 | 0.28 |
| Sat Flow, veh/h | 1774 | 3632 | 2990 | 625 | 1774 | 1583 |
| Grp Volume(v), veh/h | 380 | 739 | 603 | 600 | 163 | 413 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1770 | 1752 | 1774 | 1583 |
| Q Serve(g_s), s | 18.9 | 9.2 | 30.0 | 30.1 | 6.5 | 22.6 |
| Cycle Q Clear(g_c), s | 18.9 | 9.2 | 30.0 | 30.1 | 6.5 | 22.6 |
| Prop In Lane | 1.00 | | | 0.36 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 389 | 2149 | 617 | 611 | 497 | 444 |
| V/C Ratio(X) | 0.98 | 0.34 | 0.98 | 0.98 | 0.33 | 0.93 |
| Avail Cap(c_a), veh/h | 389 | 2149 | 617 | 611 | 519 | 463 |
| 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 | 34.5 | 8.7 | 28.6 | 28.7 | 25.4 | 31.2 |
| Incr Delay (d2), s/veh | 39.4 | 0.2 | 30.9 | 31.8 | 0.4 | 25.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 13.5 | 4.5 | 19.9 | 19.9 | 3.2 | 20.5 |
| LnGrp Delay(d),s/veh | 73.9 | 8.9 | 59.5 | 60.5 | 25.7 | 56.2 |
| LnGrp LOS | E | A | E | E | C | E |
| Approach Vol, veh/h | | 1119 | 1203 | | 576 | |
| Approach Delay, s/veh | | 30.9 | 60.0 | | 47.6 | |
| Approach LOS | | C | E | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 60.5 | | 28.4 | 23.0 | 37.5 | | |
| Change Period (Y+Rc), s | | 6.5 | | 3.5 | 3.5 | 6.5 | | |
| Max Green Setting (Gmax), s | | 54.0 | | 26.0 | 19.5 | 31.0 | | |
| Max Q Clear Time (g_c+I1), s | | 11.2 | | 24.6 | 20.9 | 32.1 | | |
| Green Ext Time (p_c), s | | 32.2 | | 0.3 | 0.0 | 0.0 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 46.3 |
| HCM 2010 LOS | D |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 190 | 530 | 100 | 130 | 750 | 180 | 240 | 290 | 100 | 180 | 270 | 230 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 | | 0.99 | 1.00 | | 0.99 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 207 | 576 | 87 | 141 | 815 | 162 | 261 | 315 | 109 | 196 | 293 | 189 |
| Adj No. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 | 221 | 1014 | 153 | 171 | 899 | 179 | 293 | 495 | 415 | 228 | 427 | 358 |
| Arrive On Green | 0.12 | 0.33 | 0.33 | 0.10 | 0.31 | 0.31 | 0.17 | 0.27 | 0.27 | 0.13 | 0.23 | 0.23 |
| Sat Flow, veh/h | 1774 | 3085 | 465 | 1774 | 2944 | 585 | 1774 | 1863 | 1560 | 1774 | 1863 | 1561 |
| Grp Volume(v), veh/h | 207 | 330 | 333 | 141 | 490 | 487 | 261 | 315 | 109 | 196 | 293 | 189 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1770 | 1781 | 1774 | 1770 | 1759 | 1774 | 1863 | 1560 | 1774 | 1863 | 1561 |
| Q Serve(g_s), s | 11.6 | 15.4 | 15.5 | 7.8 | 26.7 | 26.7 | 14.4 | 15.0 | 5.5 | 10.9 | 14.4 | 10.6 |
| Cycle Q Clear(g_c), s | 11.6 | 15.4 | 15.5 | 7.8 | 26.7 | 26.7 | 14.4 | 15.0 | 5.5 | 10.9 | 14.4 | 10.6 |
| Prop In Lane | 1.00 | | 0.26 | 1.00 | | 0.33 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 221 | 582 | 585 | 171 | 540 | 537 | 293 | 495 | 415 | 228 | 427 | 358 |
| V/C Ratio(X) | 0.94 | 0.57 | 0.57 | 0.82 | 0.91 | 0.91 | 0.89 | 0.64 | 0.26 | 0.86 | 0.69 | 0.53 |
| Avail Cap(c_a), veh/h | 221 | 582 | 585 | 195 | 552 | 549 | 345 | 576 | 482 | 311 | 540 | 453 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 43.5 | 27.8 | 27.8 | 44.5 | 33.5 | 33.5 | 41.0 | 32.5 | 29.1 | 42.8 | 35.3 | 33.9 |
| Incr Delay (d2), s/veh | 43.4 | 2.1 | 2.2 | 22.0 | 19.4 | 19.5 | 19.8 | 3.2 | 0.7 | 12.7 | 4.5 | 2.6 |
| 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(50%),veh/ln | 8.4 | 7.9 | 7.9 | 4.9 | 15.8 | 15.9 | 8.7 | 8.1 | 2.5 | 6.1 | 7.9 | 4.8 |
| LnGrp Delay(d),s/veh | 86.9 | 29.9 | 30.0 | 66.5 | 52.9 | 53.0 | 60.8 | 35.7 | 29.8 | 55.5 | 39.8 | 36.4 |
| LnGrp LOS | F | C | C | E | D | D | E | D | C | E | D | D |
| Approach Vol, veh/h | | 870 | | | 1118 | | | 685 | | | 678 | |
| Approach Delay, s/veh | | 43.5 | | | 54.6 | | | 44.3 | | | 43.4 | |
| Approach LOS | | D | | | D | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Phs Duration (G+Y+Rc), s | 13.7 | 38.7 | 20.1 | 27.9 | 16.0 | 36.3 | 16.4 | 31.6 |
| Change Period (Y+Rc), s | 4.0 | 5.7 | 3.5 | 4.9 | 3.5 | 5.7 | 3.5 | 4.9 |
| Max Green Setting (Gmax), s | 11.8 | 32.3 | 19.5 | 29.1 | 12.5 | 31.3 | 17.6 | 31.0 |
| Max Q Clear Time (g_c+I1), s | 9.8 | 17.5 | 16.4 | 16.4 | 13.6 | 28.7 | 12.9 | 17.0 |
| Green Ext Time (p_c), s | 0.0 | 11.8 | 0.1 | 6.4 | 0.0 | 2.0 | 0.1 | 6.9 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 47.4 |
| HCM 2010 LOS | D |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 18.3 |
| Intersection LOS | C |

| Movement | WBU | WBL | WBR | NBU | NBT | NBR | SBU | SBL | SBT |
|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 150 | 200 | 0 | 320 | 30 | 0 | 260 | 280 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 163 | 217 | 0 | 348 | 33 | 0 | 283 | 304 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |

| Approach | WB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 2 | 1 |
| Conflicting Approach Left | NB | | WB |
| Conflicting Lanes Left | 1 | 0 | 1 |
| Conflicting Approach Right | SB | WB | |
| Conflicting Lanes Right | 2 | 1 | 0 |
| HCM Control Delay | 19.2 | 19.4 | 16.9 |
| HCM LOS | C | C | C |

| Lane | NBLn1 | WBLn1 | SBLn1 | SBLn2 |
|---|---|---|---|---|
| Vol Left, % | 0% | 43% | 100% | 0% |
| Vol Thru, % | 91% | 0% | 0% | 100% |
| Vol Right, % | 9% | 57% | 0% | 0% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 350 | 350 | 260 | 280 |
| LT Vol | 0 | 150 | 260 | 0 |
| Through Vol | 320 | 0 | 0 | 280 |
| RT Vol | 30 | 200 | 0 | 0 |
| Lane Flow Rate | 380 | 380 | 283 | 304 |
| Geometry Grp | 5 | 2 | 7 | 7 |
| Degree of Util (X) | 0.64 | 0.638 | 0.54 | 0.538 |
| Departure Headway (Hd) | 6.052 | 6.038 | 6.877 | 6.367 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 593 | 593 | 523 | 563 |
| Service Time | 4.121 | 4.107 | 4.652 | 4.142 |
| HCM Lane V/C Ratio | 0.641 | 0.641 | 0.541 | 0.54 |
| HCM Control Delay | 19.4 | 19.2 | 17.5 | 16.4 |
| HCM Lane LOS | C | C | C | C |
| HCM 95th-tile Q | 4.6 | 4.5 | 3.2 | 3.2 |

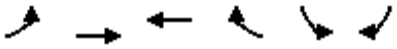
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 690 | 320 | 185 | 555 | 0 | 0 | 0 | 0 | 240 | 5 | 250 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | | | | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.96 | 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 |
| Adj Sat Flow, veh/h/ln | 0 | 1863 | 1863 | 1863 | 1863 | 0 | | | | 1900 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 0 | 750 | 348 | 201 | 603 | 0 | | | | 261 | 5 | 272 |
| Adj No. of Lanes | 0 | 1 | 1 | 1 | 2 | 0 | | | | 0 | 1 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 2 | 2 | 2 | 2 | 0 | | | | 2 | 2 | 2 |
| Cap, veh/h | 0 | 790 | 645 | 338 | 2402 | 0 | | | | 338 | 6 | 307 |
| Arrive On Green | 0.00 | 0.85 | 0.85 | 0.06 | 0.22 | 0.00 | | | | 0.19 | 0.19 | 0.19 |
| Sat Flow, veh/h | 0 | 1863 | 1522 | 1774 | 3632 | 0 | | | | 1742 | 33 | 1583 |
| Grp Volume(v), veh/h | 0 | 750 | 348 | 201 | 603 | 0 | | | | 266 | 0 | 272 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1863 | 1522 | 1774 | 1770 | 0 | | | | 1776 | 0 | 1583 |
| Q Serve(g_s), s | 0.0 | 25.1 | 5.1 | 8.8 | 11.2 | 0.0 | | | | 11.4 | 0.0 | 13.4 |
| Cycle Q Clear(g_c), s | 0.0 | 25.1 | 5.1 | 8.8 | 11.2 | 0.0 | | | | 11.4 | 0.0 | 13.4 |
| Prop In Lane | 0.00 | | 1.00 | 1.00 | | 0.00 | | | | 0.98 | | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 790 | 645 | 338 | 2402 | 0 | | | | 344 | 0 | 307 |
| V/C Ratio(X) | 0.00 | 0.95 | 0.54 | 0.59 | 0.25 | 0.00 | | | | 0.77 | 0.00 | 0.89 |
| Avail Cap(c_a), veh/h | 0 | 880 | 719 | 338 | 2402 | 0 | | | | 355 | 0 | 317 |
| HCM Platoon Ratio | 1.00 | 2.00 | 2.00 | 0.33 | 0.33 | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.00 | | | | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 5.4 | 3.9 | 34.5 | 14.3 | 0.0 | | | | 30.6 | 0.0 | 31.4 |
| Incr Delay (d2), s/veh | 0.0 | 21.8 | 3.2 | 1.8 | 0.2 | 0.0 | | | | 8.8 | 0.0 | 23.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 16.0 | 2.5 | 4.5 | 5.6 | 0.0 | | | | 6.4 | 0.0 | 7.8 |
| LnGrp Delay(d),s/veh | 0.0 | 27.2 | 7.1 | 36.3 | 14.6 | 0.0 | | | | 39.4 | 0.0 | 54.6 |
| LnGrp LOS | | C | A | D | B | | | | | D | | D |
| Approach Vol, veh/h | | 1098 | | | 804 | | | | | | 538 | |
| Approach Delay, s/veh | | 20.8 | | | 20.0 | | | | | | 47.1 | |
| Approach LOS | | C | | | B | | | | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 12.2 | 37.2 | | 20.6 | | 59.4 | | |
| Change Period (Y+Rc), s | 5.1 | * 5.1 | | 5.1 | | 5.1 | | |
| Max Green Setting (Gmax), s | 11.3 | * 38 | | 16.0 | | 53.8 | | |
| Max Q Clear Time (g_c+I1), s | 10.8 | 27.1 | | 15.4 | | 13.2 | | |
| Green Ext Time (p_c), s | 0.2 | 3.2 | | 0.1 | | 3.0 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 26.3 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 340 | 630 | 740 | 350 | 0 | 0 |
| Number | 5 | 2 | 6 | 16 | | |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | | |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 0.97 | | |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | | |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | | |
| Adj Flow Rate, veh/h | 370 | 685 | 804 | 380 | | |
| Adj No. of Lanes | 1 | 1 | 2 | 1 | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | | |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | | |
| Cap, veh/h | 402 | 1737 | 2290 | 990 | | |
| Arrive On Green | 0.45 | 1.00 | 1.00 | 1.00 | | |
| Sat Flow, veh/h | 1774 | 1863 | 3632 | 1529 | | |
| Grp Volume(v), veh/h | 370 | 685 | 804 | 380 | | |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1770 | 1529 | | |
| Q Serve(g_s), s | 15.6 | 0.0 | 0.0 | 0.0 | | |
| Cycle Q Clear(g_c), s | 15.6 | 0.0 | 0.0 | 0.0 | | |
| Prop In Lane | 1.00 | | | 1.00 | | |
| Lane Grp Cap(c), veh/h | 402 | 1737 | 2290 | 990 | | |
| V/C Ratio(X) | 0.92 | 0.39 | 0.35 | 0.38 | | |
| Avail Cap(c_a), veh/h | 783 | 1737 | 2290 | 990 | | |
| HCM Platoon Ratio | 2.00 | 2.00 | 2.00 | 2.00 | | |
| Upstream Filter(I) | 0.47 | 0.47 | 0.77 | 0.77 | | |
| Uniform Delay (d), s/veh | 21.2 | 0.0 | 0.0 | 0.0 | | |
| Incr Delay (d2), s/veh | 1.9 | 0.3 | 0.3 | 0.9 | | |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | | |
| %ile BackOfQ(50%),veh/ln | 7.6 | 0.2 | 0.1 | 0.2 | | |
| LnGrp Delay(d),s/veh | 23.0 | 0.3 | 0.3 | 0.9 | | |
| LnGrp LOS | C | A | A | A | | |
| Approach Vol, veh/h | | 1055 | 1184 | | | |
| Approach Delay, s/veh | | 8.3 | 0.5 | | | |
| Approach LOS | | A | A | | | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 80.0 | | | 22.8 | 57.2 | | |
| Change Period (Y+Rc), s | | 5.4 | | | * 4.7 | 5.4 | | |
| Max Green Setting (Gmax), s | | 74.6 | | | * 35 | 34.6 | | |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 17.6 | 2.0 | | |
| Green Ext Time (p_c), s | | 9.9 | | | 0.5 | 9.2 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 4.2 |
| HCM 2010 LOS | A |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 135 | 495 | 0 | 0 | 615 | 75 | 270 | 200 | 200 | 40 | 0 | 220 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 | | 0.99 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 0 | 0 | 1863 | 1900 | 1863 | 1863 | 1863 | 1900 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 147 | 538 | 0 | 0 | 668 | 82 | 255 | 270 | 184 | 43 | 0 | 239 |
| Adj No. of Lanes | 1 | 1 | 0 | 0 | 3 | 0 | 1 | 1 | 1 | 0 | 1 | 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 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 380 | 874 | 0 | 0 | 862 | 105 | 332 | 348 | 292 | 37 | 0 | 203 |
| Arrive On Green | 0.43 | 0.94 | 0.00 | 0.00 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.15 | 0.00 | 0.15 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 0 | 4763 | 559 | 1774 | 1863 | 1562 | 245 | 0 | 1364 |
| Grp Volume(v), veh/h | 147 | 538 | 0 | 0 | 491 | 259 | 255 | 270 | 184 | 282 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 0 | 1695 | 1764 | 1774 | 1863 | 1562 | 1610 | 0 | 0 |
| Q Serve(g_s), s | 4.5 | 3.4 | 0.0 | 0.0 | 11.0 | 11.2 | 10.9 | 11.0 | 8.7 | 11.9 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.5 | 3.4 | 0.0 | 0.0 | 11.0 | 11.2 | 10.9 | 11.0 | 8.7 | 11.9 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 0.00 | | 0.32 | 1.00 | | 1.00 | 0.15 | | 0.85 |
| Lane Grp Cap(c), veh/h | 380 | 874 | 0 | 0 | 636 | 331 | 332 | 348 | 292 | 239 | 0 | 0 |
| V/C Ratio(X) | 0.39 | 0.62 | 0.00 | 0.00 | 0.77 | 0.78 | 0.77 | 0.78 | 0.63 | 1.18 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 380 | 874 | 0 | 0 | 831 | 432 | 397 | 417 | 350 | 239 | 0 | 0 |
| HCM Platoon Ratio | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.94 | 0.94 | 0.00 | 0.00 | 0.77 | 0.77 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 19.3 | 1.4 | 0.0 | 0.0 | 30.9 | 30.9 | 30.9 | 30.9 | 30.0 | 34.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.2 | 3.0 | 0.0 | 0.0 | 6.9 | 13.2 | 8.4 | 8.4 | 3.5 | 114.7 | 0.0 | 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(50%),veh/ln | 2.2 | 1.9 | 0.0 | 0.0 | 5.7 | 6.7 | 6.1 | 6.4 | 4.0 | 12.9 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 19.5 | 4.4 | 0.0 | 0.0 | 37.8 | 44.1 | 39.3 | 39.3 | 33.5 | 148.8 | 0.0 | 0.0 |
| LnGrp LOS | B | A | | | D | D | D | D | C | F | | |
| Approach Vol, veh/h | | 685 | | | 750 | | | 709 | | | 282 | |
| Approach Delay, s/veh | | 7.7 | | | 40.0 | | | 37.8 | | | 148.8 | |
| Approach LOS | | A | | | D | | | D | | | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 42.9 | | 17.0 | 22.5 | 20.4 | | 20.1 |
| Change Period (Y+Rc), s | | 5.4 | | 5.1 | 5.4 | * 5.4 | | 5.1 |
| Max Green Setting (Gmax), s | | 34.6 | | 11.9 | 10.3 | * 20 | | 17.9 |
| Max Q Clear Time (g_c+I1), s | | 5.4 | | 13.9 | 6.5 | 13.2 | | 13.0 |
| Green Ext Time (p_c), s | | 2.4 | | 0.0 | 1.0 | 1.8 | | 1.9 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 42.9 |
| HCM 2010 LOS | D |

**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 50 | 545 | 125 | 145 | 505 | 65 | 90 | 80 | 100 | 40 | 80 | 20 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 | | 0.99 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1900 | 1863 | 1900 | 1900 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 54 | 592 | 136 | 158 | 549 | 71 | 98 | 87 | 64 | 43 | 87 | 22 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 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 | 69 | 719 | 165 | 197 | 910 | 118 | 191 | 139 | 86 | 139 | 241 | 52 |
| Arrive On Green | 0.04 | 0.49 | 0.49 | 0.11 | 0.56 | 0.56 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1774 | 1466 | 337 | 1774 | 1617 | 209 | 534 | 668 | 416 | 317 | 1162 | 250 |
| Grp Volume(v), veh/h | 54 | 0 | 728 | 158 | 0 | 620 | 249 | 0 | 0 | 152 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 0 | 1803 | 1774 | 0 | 1826 | 1618 | 0 | 0 | 1729 | 0 | 0 |
| Q Serve(g_s), s | 1.9 | 0.0 | 21.7 | 5.5 | 0.0 | 14.1 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 1.9 | 0.0 | 21.7 | 5.5 | 0.0 | 14.1 | 8.7 | 0.0 | 0.0 | 4.6 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.19 | 1.00 | | 0.11 | 0.39 | | 0.26 | 0.28 | | 0.14 |
| Lane Grp Cap(c), veh/h | 69 | 0 | 884 | 197 | 0 | 1027 | 416 | 0 | 0 | 433 | 0 | 0 |
| V/C Ratio(X) | 0.78 | 0.00 | 0.82 | 0.80 | 0.00 | 0.60 | 0.60 | 0.00 | 0.00 | 0.35 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 127 | 0 | 990 | 212 | 0 | 1089 | 607 | 0 | 0 | 633 | 0 | 0 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 30.0 | 0.0 | 13.7 | 27.3 | 0.0 | 9.1 | 23.0 | 0.0 | 0.0 | 21.5 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 17.3 | 0.0 | 5.4 | 18.4 | 0.0 | 1.0 | 1.7 | 0.0 | 0.0 | 0.6 | 0.0 | 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(50%),veh/ln | 1.2 | 0.0 | 12.0 | 3.7 | 0.0 | 7.3 | 4.2 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 47.3 | 0.0 | 19.1 | 45.6 | 0.0 | 10.1 | 24.7 | 0.0 | 0.0 | 22.1 | 0.0 | 0.0 |
| LnGrp LOS | D | | B | D | | B | C | | | C | | |
| Approach Vol, veh/h | | 782 | | | 778 | | | 249 | | | 152 | |
| Approach Delay, s/veh | | 21.1 | | | 17.3 | | | 24.7 | | | 22.1 | |
| Approach LOS | | C | | | B | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 10.5 | 35.3 | | 17.1 | 5.9 | 39.9 | | 17.1 |
| Change Period (Y+Rc), s | 3.5 | 4.5 | | 4.0 | 3.5 | 4.5 | | 4.0 |
| Max Green Setting (Gmax), s | 7.5 | 34.5 | | 21.0 | 4.5 | 37.5 | | 21.0 |
| Max Q Clear Time (g_c+I1), s | 7.5 | 23.7 | | 6.6 | 3.9 | 16.1 | | 10.7 |
| Green Ext Time (p_c), s | 0.0 | 7.1 | | 2.5 | 0.0 | 11.4 | | 2.0 |

| Intersection Summary | | |
|---|---|---|
| HCM 2010 Ctrl Delay | | 20.1 |
| HCM 2010 LOS | | C |

| Intersection | |
|---|---|
| Int Delay, s/veh | 9 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Vol, veh/h | 250 | 500 | 515 | 125 | 70 | 160 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | - | - | - | 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 | 272 | 543 | 560 | 136 | 76 | 174 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 696 | 0 | - | 0 | 1715 | 628 |
| Stage 1 | - | - | - | - | 628 | - |
| Stage 2 | - | - | - | - | 1087 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 900 | - | - | - | 99 | 483 |
| Stage 1 | - | - | - | - | 532 | - |
| Stage 2 | - | - | - | - | 323 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 900 | - | - | - | ~ 69 | 483 |
| Mov Cap-2 Maneuver | - | - | - | - | 169 | - |
| Stage 1 | - | - | - | - | 532 | - |
| Stage 2 | - | - | - | - | 225 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 3.6 | 0 | 51.7 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 900 | - | - | - | 309 |
| HCM Lane V/C Ratio | 0.302 | - | - | - | 0.809 |
| HCM Control Delay (s) | 10.7 | - | - | - | 51.7 |
| HCM Lane LOS | B | - | - | - | F |
| HCM 95th %tile Q(veh) | 1.3 | - | - | - | 6.7 |

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 15 | 445 | 100 | 225 | 475 | 0 | 70 | 5 | 180 | 10 | 5 | 10 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| 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 | | 0.99 | 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1900 | 1863 | 1900 | 1900 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 16 | 484 | 109 | 245 | 516 | 0 | 76 | 5 | 158 | 11 | 5 | 11 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 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 | 584 | 941 | 212 | 522 | 1190 | 0 | 168 | 27 | 196 | 192 | 96 | 129 |
| Arrive On Green | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | 0.00 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 |
| Sat Flow, veh/h | 881 | 1472 | 332 | 821 | 1863 | 0 | 383 | 139 | 1020 | 475 | 499 | 670 |
| Grp Volume(v), veh/h | 16 | 0 | 593 | 245 | 516 | 0 | 239 | 0 | 0 | 27 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 881 | 0 | 1804 | 821 | 1863 | 0 | 1542 | 0 | 0 | 1644 | 0 | 0 |
| Q Serve(g_s), s | 0.5 | 0.0 | 8.9 | 11.6 | 7.0 | 0.0 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.4 | 0.0 | 8.9 | 20.5 | 7.0 | 0.0 | 7.4 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.18 | 1.00 | | 0.00 | 0.32 | | 0.66 | 0.41 | | 0.41 |
| Lane Grp Cap(c), veh/h | 584 | 0 | 1153 | 522 | 1190 | 0 | 391 | 0 | 0 | 417 | 0 | 0 |
| V/C Ratio(X) | 0.03 | 0.00 | 0.51 | 0.47 | 0.43 | 0.00 | 0.61 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 632 | 0 | 1251 | 566 | 1291 | 0 | 594 | 0 | 0 | 611 | 0 | 0 |
| 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 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 6.4 | 0.0 | 4.9 | 10.4 | 4.6 | 0.0 | 19.4 | 0.0 | 0.0 | 16.7 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.8 | 1.4 | 0.5 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 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(50%),veh/ln | 0.1 | 0.0 | 4.5 | 2.8 | 3.6 | 0.0 | 3.2 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 6.5 | 0.0 | 5.7 | 11.8 | 5.1 | 0.0 | 20.0 | 0.0 | 0.0 | 16.7 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | B | A | | B | | | B | | |
| Approach Vol, veh/h | | 609 | | | 761 | | | 239 | | | 27 | |
| Approach Delay, s/veh | | 5.7 | | | 7.3 | | | 20.0 | | | 16.7 | |
| Approach LOS | | A | | | A | | | B | | | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 37.3 | | 13.2 | | 37.3 | | 13.2 |
| Change Period (Y+Rc), s | | 5.0 | | 3.5 | | 5.0 | | 3.5 |
| Max Green Setting (Gmax), s | | 35.0 | | 16.5 | | 35.0 | | 16.5 |
| Max Q Clear Time (g_c+I1), s | | 10.9 | | 2.6 | | 22.5 | | 9.4 |
| Green Ext Time (p_c), s | | 16.5 | | 0.9 | | 9.8 | | 0.6 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 8.7 |
| HCM 2010 LOS | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 570 | 170 | 180 | 1010 | 930 | 680 |
| Number | 7 | 14 | 5 | 2 | 6 | 16 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 620 | 185 | 196 | 1098 | 1011 | 739 |
| Adj No. of Lanes | 2 | 1 | 1 | 3 | 2 | 1 |
| 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 | 914 | 420 | 125 | 2859 | 1546 | 1112 |
| Arrive On Green | 0.27 | 0.27 | 0.07 | 0.56 | 0.44 | 0.44 |
| Sat Flow, veh/h | 3442 | 1583 | 1774 | 5253 | 3632 | 1583 |
| Grp Volume(v), veh/h | 620 | 185 | 196 | 1098 | 1011 | 739 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1583 | 1774 | 1695 | 1770 | 1583 |
| Q Serve(g_s), s | 10.3 | 6.2 | 4.5 | 7.7 | 14.4 | 16.6 |
| Cycle Q Clear(g_c), s | 10.3 | 6.2 | 4.5 | 7.7 | 14.4 | 16.6 |
| Prop In Lane | 1.00 | 1.00 | 1.00 | | | 1.00 |
| Lane Grp Cap(c), veh/h | 914 | 420 | 125 | 2859 | 1546 | 1112 |
| V/C Ratio(X) | 0.68 | 0.44 | 1.57 | 0.38 | 0.65 | 0.66 |
| Avail Cap(c_a), veh/h | 1780 | 819 | 125 | 2870 | 1592 | 1133 |
| 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 | 21.0 | 19.5 | 29.6 | 7.8 | 14.2 | 5.3 |
| Incr Delay (d2), s/veh | 1.3 | 1.0 | 289.7 | 0.1 | 1.0 | 1.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.0 | 5.8 | 12.2 | 3.6 | 7.1 | 13.2 |
| LnGrp Delay(d),s/veh | 22.3 | 20.5 | 319.4 | 7.9 | 15.2 | 6.9 |
| LnGrp LOS | C | C | F | A | B | A |
| Approach Vol, veh/h | 805 | | | 1294 | 1750 | |
| Approach Delay, s/veh | 21.9 | | | 55.1 | 11.7 | |
| Approach LOS | C | | | E | B | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 41.9 | | 21.9 | 8.0 | 33.9 | | |
| Change Period (Y+Rc), s | | 6.0 | | 5.0 | 3.5 | * 6 | | |
| Max Green Setting (Gmax), s | | 36.0 | | 33.0 | 4.5 | * 29 | | |
| Max Q Clear Time (g_c+I1), s | | 9.7 | | 12.3 | 6.5 | 18.6 | | |
| Green Ext Time (p_c), s | | 21.8 | | 4.6 | 0.0 | 9.2 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 28.4 |
| HCM 2010 LOS | C |

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 200 | 100 | 550 | 350 | 110 | 250 |
| Number | 7 | 14 | 2 | 12 | 1 | 6 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 217 | 109 | 598 | 380 | 120 | 272 |
| Adj No. of Lanes | 1 | 1 | 1 | 0 | 1 | 1 |
| 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 | 262 | 234 | 656 | 417 | 148 | 1385 |
| Arrive On Green | 0.15 | 0.15 | 0.62 | 0.62 | 0.08 | 0.74 |
| Sat Flow, veh/h | 1774 | 1583 | 1066 | 677 | 1774 | 1863 |
| Grp Volume(v), veh/h | 217 | 109 | 0 | 978 | 120 | 272 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1583 | 0 | 1743 | 1774 | 1863 |
| Q Serve(g_s), s | 9.3 | 4.9 | 0.0 | 38.4 | 5.2 | 3.4 |
| Cycle Q Clear(g_c), s | 9.3 | 4.9 | 0.0 | 38.4 | 5.2 | 3.4 |
| Prop In Lane | 1.00 | 1.00 | | 0.39 | 1.00 | |
| Lane Grp Cap(c), veh/h | 262 | 234 | 0 | 1073 | 148 | 1385 |
| V/C Ratio(X) | 0.83 | 0.47 | 0.00 | 0.91 | 0.81 | 0.20 |
| Avail Cap(c_a), veh/h | 364 | 324 | 0 | 1239 | 148 | 1563 |
| HCM Platoon Ratio | 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 |
| Uniform Delay (d), s/veh | 32.3 | 30.5 | 0.0 | 13.1 | 35.2 | 3.0 |
| Incr Delay (d2), s/veh | 7.8 | 0.5 | 0.0 | 9.1 | 28.5 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.1 | 2.2 | 0.0 | 20.9 | 3.7 | 1.8 |
| LnGrp Delay(d),s/veh | 40.1 | 31.0 | 0.0 | 22.2 | 63.7 | 3.1 |
| LnGrp LOS | D | C | | C | E | A |
| Approach Vol, veh/h | 326 | | 978 | | | 392 |
| Approach Delay, s/veh | 37.1 | | 22.2 | | | 21.7 |
| Approach LOS | D | | C | | | C |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | |
| Phs Duration (G+Y+Rc), s | 10.0 | 52.6 | | 15.5 | | 62.6 | | |
| Change Period (Y+Rc), s | 3.5 | 4.5 | | 4.0 | | 4.5 | | |
| Max Green Setting (Gmax), s | 6.5 | 55.5 | | 16.0 | | 65.5 | | |
| Max Q Clear Time (g_c+I1), s | 11.3 | 40.4 | | 11.3 | | 5.4 | | |
| Green Ext Time (p_c), s | 0.0 | 7.7 | | 0.3 | | 12.6 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 25.0 |
| HCM 2010 LOS | C |

| Intersection | |
|---|---|
| Int Delay, s/veh | 13.9 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 560 | 200 | 140 | 370 | 0 | 0 | 0 | 0 | 120 | 5 | 280 |
| Conflicting Peds, #/hr | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop |
| RT Channelized | - | - | Free | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | 0 | - | - | - | - | - | - | 0 | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 609 | 217 | 152 | 402 | 0 | 0 | 0 | 0 | 130 | 5 | 304 |

| Major/Minor | Major1 | | | Major2 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 402 | 0 | - | 609 | 0 | 0 | 1316 | 1316 | 402 |
| Stage 1 | - | - | - | - | - | - | 707 | 707 | - |
| Stage 2 | - | - | - | - | - | - | 609 | 609 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 6.42 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 5.42 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 5.42 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1157 | - | 0 | 970 | - | - | 174 | 158 | 648 |
| Stage 1 | - | - | 0 | - | - | - | 489 | 438 | - |
| Stage 2 | - | - | 0 | - | - | - | 543 | 485 | - |
| Platoon blocked, % | | - | | | - | - | | | |
| Mov Cap-1 Maneuver | 1157 | - | - | 970 | - | - | 139 | 0 | 648 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 139 | 0 | - |
| Stage 1 | - | - | - | - | - | - | 390 | 0 | - |
| Stage 2 | - | - | - | - | - | - | 543 | 0 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 2.6 | 47.5 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1157 | - | 970 | - | - | 139 | 648 |
| HCM Lane V/C Ratio | - | - | 0.157 | - | - | 0.938 | 0.47 |
| HCM Control Delay (s) | 0 | - | 9.4 | 0 | - | 122.5 | 15.4 |
| HCM Lane LOS | A | - | A | A | - | F | C |
| HCM 95th %tile Q(veh) | 0 | - | 0.6 | - | - | 6.5 | 2.5 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 41.1 |
| Intersection LOS | E |

| Movement | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 240 | 440 | 0 | 0 | 0 | 300 | 110 | 0 | 210 | 5 | 390 |
| 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 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 261 | 478 | 0 | 0 | 0 | 326 | 120 | 0 | 228 | 5 | 424 |
| Number of Lanes | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |

| Approach | EB | WB | NB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 2 | 1 | 0 |
| Conflicting Approach Left | | NB | EB |
| Conflicting Lanes Left | 0 | 2 | 1 |
| Conflicting Approach Right | NB | | WB |
| Conflicting Lanes Right | 2 | 0 | 2 |
| HCM Control Delay | 67.6 | 20.6 | 25.3 |
| HCM LOS | F | C | D |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | WBLn2 |
|---|---|---|---|---|---|
| Vol Left, % | 98% | 0% | 35% | 0% | 0% |
| Vol Thru, % | 2% | 0% | 65% | 100% | 0% |
| Vol Right, % | 0% | 100% | 0% | 0% | 100% |
| Sign Control | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 215 | 390 | 680 | 300 | 110 |
| LT Vol | 210 | 0 | 240 | 0 | 0 |
| Through Vol | 5 | 0 | 440 | 300 | 0 |
| RT Vol | 0 | 390 | 0 | 0 | 110 |
| Lane Flow Rate | 234 | 424 | 739 | 326 | 120 |
| Geometry Grp | 7 | 7 | 6 | 7 | 7 |
| Degree of Util (X) | 0.507 | 0.781 | 1 | 0.671 | 0.223 |
| Departure Headway (Hd) | 7.817 | 6.63 | 7.253 | 7.411 | 6.71 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes |
| Cap | 463 | 547 | 503 | 489 | 537 |
| Service Time | 5.538 | 4.351 | 5.292 | 5.136 | 4.435 |
| HCM Lane V/C Ratio | 0.505 | 0.775 | 1.469 | 0.667 | 0.223 |
| HCM Control Delay | 18.3 | 29.1 | 67.6 | 24 | 11.4 |
| HCM Lane LOS | C | D | F | C | B |
| HCM 95th-tile Q | 2.8 | 7.2 | 13.6 | 4.9 | 0.8 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | |
| Intersection LOS | |

| Movement | SBU | SBL | SBT | SBR |
|---|---|---|---|---|
| Vol, veh/h | 0 | 0 | 0 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 0 |
| Number of Lanes | 0 | 0 | 0 | 0 |

| Approach | |
|---|---|
| Opposing Approach | |
| Opposing Lanes | |
| Conflicting Approach Left | |
| Conflicting Lanes Left | |
| Conflicting Approach Right | |
| Conflicting Lanes Right | |
| HCM Control Delay | |
| HCM LOS | |

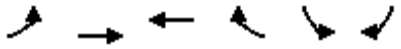
| Lane |
|---|

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 35.5 |
| Intersection LOS | E |

| Movement | EBU | EBL | EBT | WBU | WBT | WBR | SBU | SBL | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Vol, veh/h | 0 | 150 | 190 | 0 | 475 | 915 | 0 | 40 | 40 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 163 | 207 | 0 | 516 | 995 | 0 | 43 | 43 |
| Number of Lanes | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |

| Approach | EB | WB | SB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 2 | 2 | 0 |
| Conflicting Approach Left | SB | | WB |
| Conflicting Lanes Left | 2 | 0 | 2 |
| Conflicting Approach Right | | SB | EB |
| Conflicting Lanes Right | 0 | 2 | 2 |
| HCM Control Delay | 12.3 | 42.6 | 10.9 |
| HCM LOS | B | E | B |

| Lane | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 0% | 0% | 100% | 0% |
| Vol Thru, % | 0% | 100% | 100% | 0% | 0% | 0% |
| Vol Right, % | 0% | 0% | 0% | 100% | 0% | 100% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 150 | 190 | 475 | 915 | 40 | 40 |
| LT Vol | 150 | 0 | 0 | 0 | 40 | 0 |
| Through Vol | 0 | 190 | 475 | 0 | 0 | 0 |
| RT Vol | 0 | 0 | 0 | 915 | 0 | 40 |
| Lane Flow Rate | 163 | 207 | 516 | 995 | 43 | 43 |
| Geometry Grp | 7 | 7 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.302 | 0.354 | 0.757 | 1 | 0.096 | 0.082 |
| Departure Headway (Hd) | 6.673 | 6.174 | 5.281 | 4.576 | 7.958 | 6.761 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 536 | 578 | 682 | 796 | 449 | 527 |
| Service Time | 4.451 | 3.952 | 3.043 | 2.338 | 5.732 | 4.535 |
| HCM Lane V/C Ratio | 0.304 | 0.358 | 0.757 | 1.25 | 0.096 | 0.082 |
| HCM Control Delay | 12.3 | 12.3 | 22.7 | 53 | 11.6 | 10.1 |
| HCM Lane LOS | B | B | C | F | B | B |
| HCM 95th-tile Q | 1.3 | 1.6 | 7 | 17.1 | 0.3 | 0.3 |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 50 | 210 | 1040 | 220 | 1540 | 450 |
| Number | 5 | 2 | 6 | 16 | 7 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 0.98 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 54 | 228 | 1130 | 239 | 1674 | 489 |
| Adj No. of Lanes | 1 | 1 | 2 | 1 | 2 | 1 |
| 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 | 69 | 774 | 1180 | 516 | 1668 | 767 |
| Arrive On Green | 0.04 | 0.42 | 0.33 | 0.33 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1774 | 1863 | 3632 | 1548 | 3442 | 1583 |
| Grp Volume(v), veh/h | 54 | 228 | 1130 | 239 | 1674 | 489 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1770 | 1548 | 1721 | 1583 |
| Q Serve(g_s), s | 3.3 | 8.9 | 34.1 | 13.3 | 52.9 | 25.1 |
| Cycle Q Clear(g_c), s | 3.3 | 8.9 | 34.1 | 13.3 | 52.9 | 25.1 |
| Prop In Lane | 1.00 | | | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 69 | 774 | 1180 | 516 | 1668 | 767 |
| V/C Ratio(X) | 0.78 | 0.29 | 0.96 | 0.46 | 1.00 | 0.64 |
| Avail Cap(c_a), veh/h | 81 | 788 | 1183 | 518 | 1668 | 767 |
| 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 | 52.0 | 21.2 | 35.6 | 28.7 | 28.1 | 21.0 |
| Incr Delay (d2), s/veh | 27.5 | 0.1 | 16.8 | 0.2 | 22.9 | 1.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.1 | 4.6 | 19.4 | 5.7 | 30.3 | 22.7 |
| LnGrp Delay(d),s/veh | 79.5 | 21.3 | 52.4 | 28.9 | 51.0 | 22.3 |
| LnGrp LOS | E | C | D | C | F | C |
| Approach Vol, veh/h | | 282 | 1369 | | 2163 | |
| Approach Delay, s/veh | | 32.5 | 48.3 | | 44.6 | |
| Approach LOS | | C | D | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 51.2 | | 58.0 | 9.0 | 42.2 | | |
| Change Period (Y+Rc), s | | 5.8 | | 5.1 | * 4.7 | 5.8 | | |
| Max Green Setting (Gmax), s | | 46.2 | | 52.9 | * 5 | 36.5 | | |
| Max Q Clear Time (g_c+I1), s | | 10.9 | | 54.9 | 5.3 | 36.1 | | |
| Green Ext Time (p_c), s | | 7.4 | | 0.0 | 0.0 | 0.3 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 45.0 |
| HCM 2010 LOS | D |

Notes

* HCM 2010 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 | | | | | | | | | | | | |
| Volume (veh/h) | 10 | 0 | 10 | 400 | 0 | 240 | 5 | 1440 | 430 | 150 | 720 | 10 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| 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 | | 0.97 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1900 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 11 | 0 | 11 | 348 | 122 | 261 | 5 | 1565 | 0 | 163 | 783 | 11 |
| Adj No. of Lanes | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 2 | 1 |
| 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 | 31 | 0 | 28 | 414 | 124 | 265 | 9 | 1704 | 762 | 181 | 2017 | 879 |
| Arrive On Green | 0.02 | 0.00 | 0.02 | 0.23 | 0.23 | 0.23 | 0.01 | 0.48 | 0.00 | 0.10 | 0.57 | 0.57 |
| Sat Flow, veh/h | 1774 | 0 | 1583 | 1774 | 530 | 1133 | 1774 | 3539 | 1583 | 1774 | 3539 | 1542 |
| Grp Volume(v), veh/h | 11 | 0 | 11 | 348 | 0 | 383 | 5 | 1565 | 0 | 163 | 783 | 11 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 0 | 1583 | 1774 | 0 | 1663 | 1774 | 1770 | 1583 | 1774 | 1770 | 1542 |
| Q Serve(g_s), s | 0.7 | 0.0 | 0.8 | 22.0 | 0.0 | 27.0 | 0.3 | 48.4 | 0.0 | 10.7 | 14.4 | 0.4 |
| Cycle Q Clear(g_c), s | 0.7 | 0.0 | 0.8 | 22.0 | 0.0 | 27.0 | 0.3 | 48.4 | 0.0 | 10.7 | 14.4 | 0.4 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.68 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 31 | 0 | 28 | 414 | 0 | 388 | 9 | 1704 | 762 | 181 | 2017 | 879 |
| V/C Ratio(X) | 0.36 | 0.00 | 0.40 | 0.84 | 0.00 | 0.99 | 0.55 | 0.92 | 0.00 | 0.90 | 0.39 | 0.01 |
| Avail Cap(c_a), veh/h | 241 | 0 | 215 | 414 | 0 | 388 | 241 | 1812 | 811 | 181 | 2017 | 879 |
| 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 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 57.2 | 0.0 | 57.2 | 43.0 | 0.0 | 44.9 | 58.4 | 28.4 | 0.0 | 52.3 | 14.0 | 11.0 |
| Incr Delay (d2), s/veh | 2.6 | 0.0 | 3.4 | 13.6 | 0.0 | 41.8 | 17.8 | 7.8 | 0.0 | 39.5 | 0.4 | 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(50%),veh/ln | 0.4 | 0.0 | 0.4 | 12.4 | 0.0 | 16.9 | 0.2 | 25.3 | 0.0 | 7.2 | 7.1 | 0.2 |
| LnGrp Delay(d),s/veh | 59.8 | 0.0 | 60.7 | 56.6 | 0.0 | 86.8 | 76.3 | 36.2 | 0.0 | 91.8 | 14.4 | 11.0 |
| LnGrp LOS | E | | E | E | | F | E | D | | F | B | B |
| Approach Vol, veh/h | | 22 | | | 731 | | | 1570 | | | 957 | |
| Approach Delay, s/veh | | 60.2 | | | 72.4 | | | 36.3 | | | 27.6 | |
| Approach LOS | | E | | | E | | | D | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | 16.0 | 63.2 | | 6.6 | 5.6 | 73.6 | | 32.0 |
| Change Period (Y+Rc), s | 4.0 | * 6.5 | | 4.5 | 5.0 | 6.5 | | 4.5 |
| Max Green Setting (Gmax), s | 12.0 | * 60 | | 16.0 | 16.0 | 55.0 | | 27.5 |
| Max Q Clear Time (g_c+I1), s | 11.7 | 50.4 | | 2.8 | 2.3 | 16.4 | | 29.0 |
| Green Ext Time (p_c), s | 0.0 | 6.3 | | 0.0 | 0.0 | 32.0 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 42.0 |
| HCM 2010 LOS | D |

**Notes**

User approved volume balancing among the lanes for turning movement.

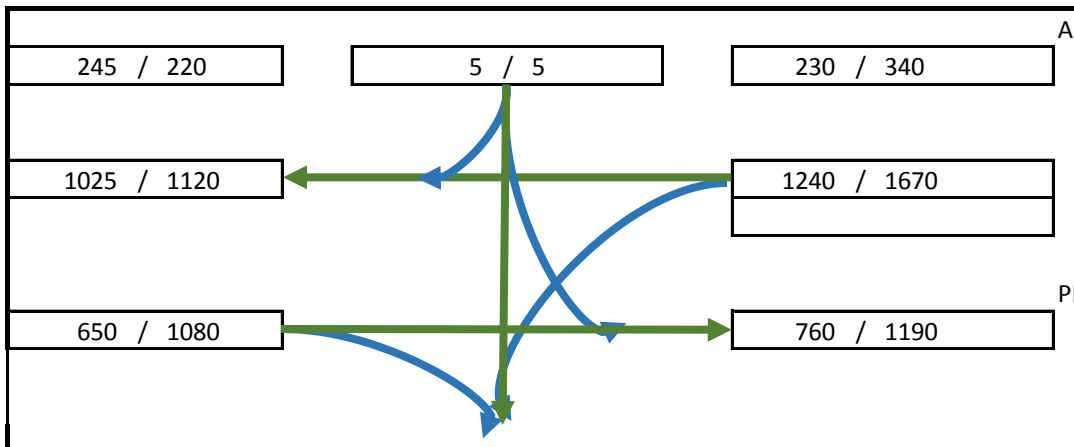
# Appendix B
# Future Year 2035 Ramp Intersection Capacity Calculation Worksheets – SMUP Strategy

**SIGNALIZED INTERSECTION**
**CAPACITY ANALYSIS**

INTERSECTION: Poinsettia Lan / I-5 SB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/15/2016
TIME:

**DEMAND TRAFFIC FLOWS**




AM

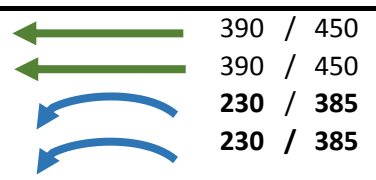
| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 230 | 5 | 245 |
| EB: | | 530 | 120 |
| WB: | 460 | 780 | |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 340 | 5 | 220 |
| EB: | 0 | 850 | 230 |
| WB: | 770 | 900 | 0 |

LANE VOLUMES (ILV/HR)

**PHASE I**



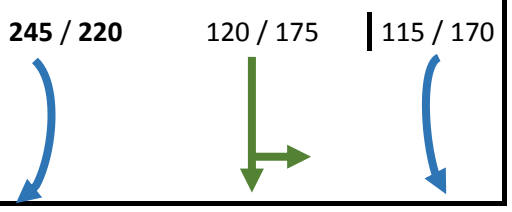
| | | | |
|---|---|---|---|
| | | 390 | / 450 |
| AM | 230 | 390 | / 450 |
| PM | 385 | **230** | / **385** |
| | | **230** | / **385** |

**PHASE II**

| | | | |
|---|---|---|---|
| AM | 265 | **265** | **/ 425** |
| PM | 425 | 265 | / 425 |
| | | 120 | / 230 |

Remaining WB Through 161/40

**PHASE III**



| | | | | |
|---|---|---|---|---|
| AM | 245 | **245** / **220** | 120 / 175 | 115 / 170 |
| PM | 220 | | | |

**PHASE IV**

CRITICAL LANE VOLUMES PER HOUR

| AM | PM |
|---|---|
| 740 | 1030 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 740 | Under Capacity |
| PM: | 1030 | Under Capacity |

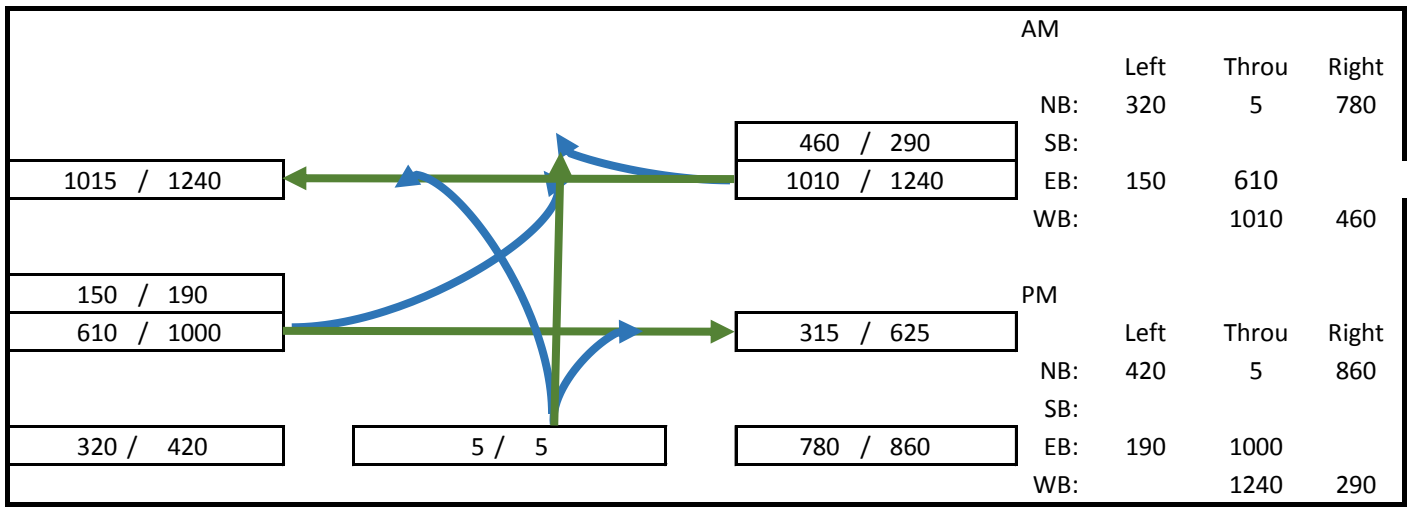
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

**SIGNALIZED INTERSECTION**
**CAPACITY ANALYSIS**

INTERSECTION: Poinsettia Lane / I-5 NB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/15/2016
TIME:

**DEMAND TRAFFIC FLOWS**




AM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | 320 | 5 | 780 |
| SB: | | | |
| EB: | 150 | 610 | |
| WB: | | 1010 | 460 |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | 420 | 5 | 860 |
| SB: | | | |
| EB: | 190 | 1000 | |
| WB: | | 1240 | 290 |

LANE VOLUMES (ILV/HR)

| PHASE I | | |
|---|---|---|
| AM | 150 | **150**/**190** |
| PM | 190 | 305/500 |
| | | 305/500 |

| PHASE II | | |
|---|---|---|
| AM | 460 | **460**/290 |
| PM | 414 | 336/413 |
| | | 336/413 |
| Remaining EB Through | 155/310 | 337/**414** |

| PHASE III | | |
|---|---|---|
| AM | 390 | 325/425 **390**/430 390/430 |
| PM | 430 | |

| PHASE IV |
|---|
| |

CRITICAL LANE VOLUMES PER HOUR

| AM | PHASE II |
|---|---|
| 1000 | 1034 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 1000 | Under Capacity |
| PM: | 1034 | Under Capacity |

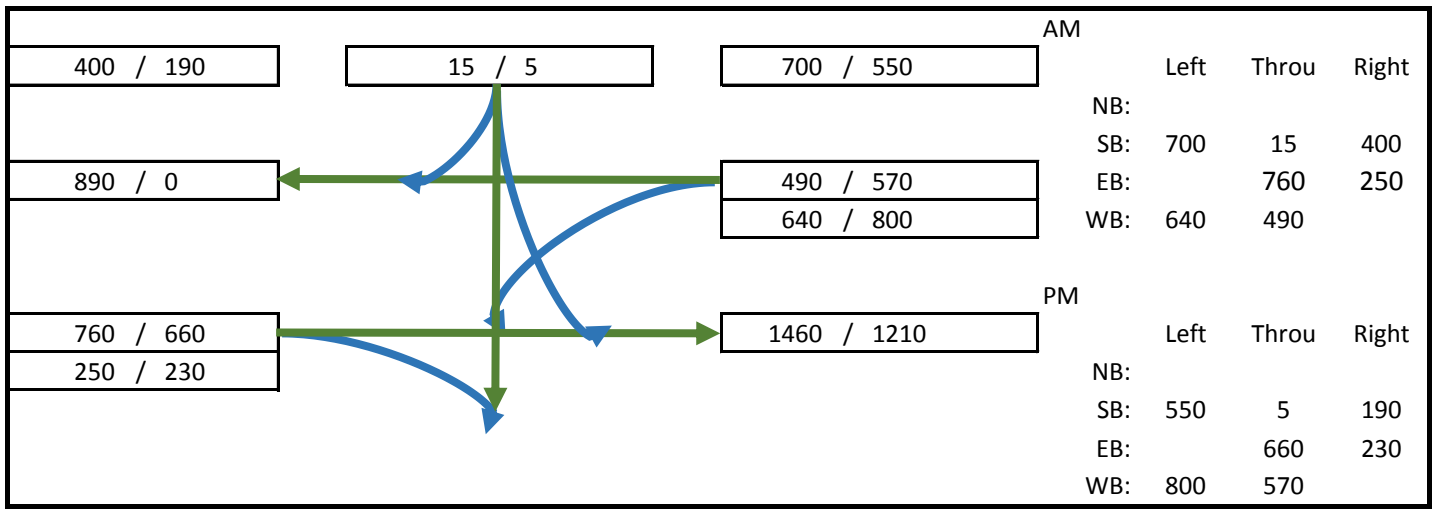
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

## SIGNALIZED INTERSECTION
## CAPACITY ANALYSIS

INTERSECTION: La Costa Avenue / I-5 SB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/15/2016
TIME:

### DEMAND TRAFFIC FLOWS




AM

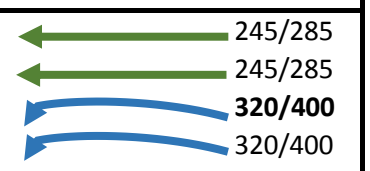
| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 700 | 15 | 400 |
| EB: | | 760 | 250 |
| WB: | 640 | 490 | |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 550 | 5 | 190 |
| EB: | | 660 | 230 |
| WB: | 800 | 570 | |

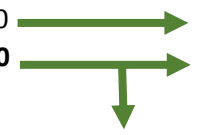
### LANE VOLUMES (ILV/HR)

**PHASE I**




AM 320
PM 400

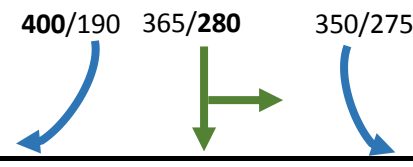
**PHASE II**




AM 630
PM 560

Remaining WB Through 75/0

**PHASE III**




AM 400
PM 280

**PHASE IV**

### CRITICAL LANE VOLUMES PER HOUR

| AM | PHASE II |
|---|---|
| 1350 | 1240 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 1350 | At Capacity |
| PM: | 1240 | At Capacity |

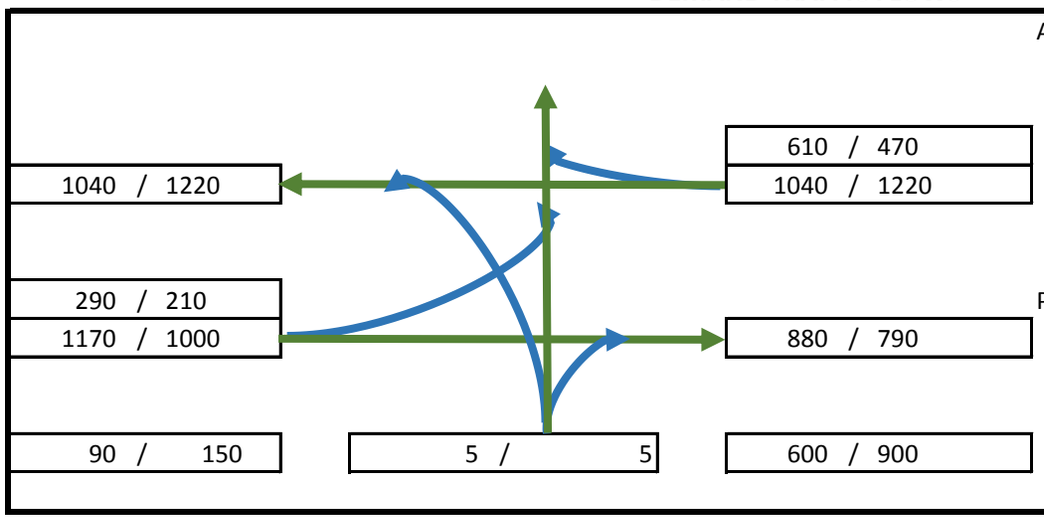
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

## SIGNALIZED INTERSECTION
## CAPACITY ANALYSIS

INTERSECTION: La Costa Avenue / I-5 NB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/15/2016
TIME:

### DEMAND TRAFFIC FLOWS




AM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | 90 | 5 | 600 |
| SB: | | | |
| EB: | 290 | 1170 | |
| WB: | | 1040 | 610 |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | 150 | 5 | 900 |
| SB: | | | |
| EB: | 210 | 1000 | |
| WB: | | 1220 | 470 |

### LANE VOLUMES (ILV/HR)

**PHASE I**

| | | |
|---|---|---|
| AM | 290 | **290/210** |
| PM | 210 | 585/500 |
| | | 585/500 |

**PHASE II**

| | | |
|---|---|---|
| AM | 610 | **610/470** |
| PM | 470 | 346/406 |
| | | 346/406 |
| Remaining EB Through | **295/290** | 347/407 |

**PHASE III**

| | |
|---|---|
| AM | 305 |
| PM | 455 |

90/150 **305/455** 300/450

**PHASE IV**

### CRITICAL LANE VOLUMES PER HOUR

| AM | PHASE II |
|---|---|
| 1205 | 1135 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 1205 | At Capacity |
| PM: | 1135 | Under Capacity |

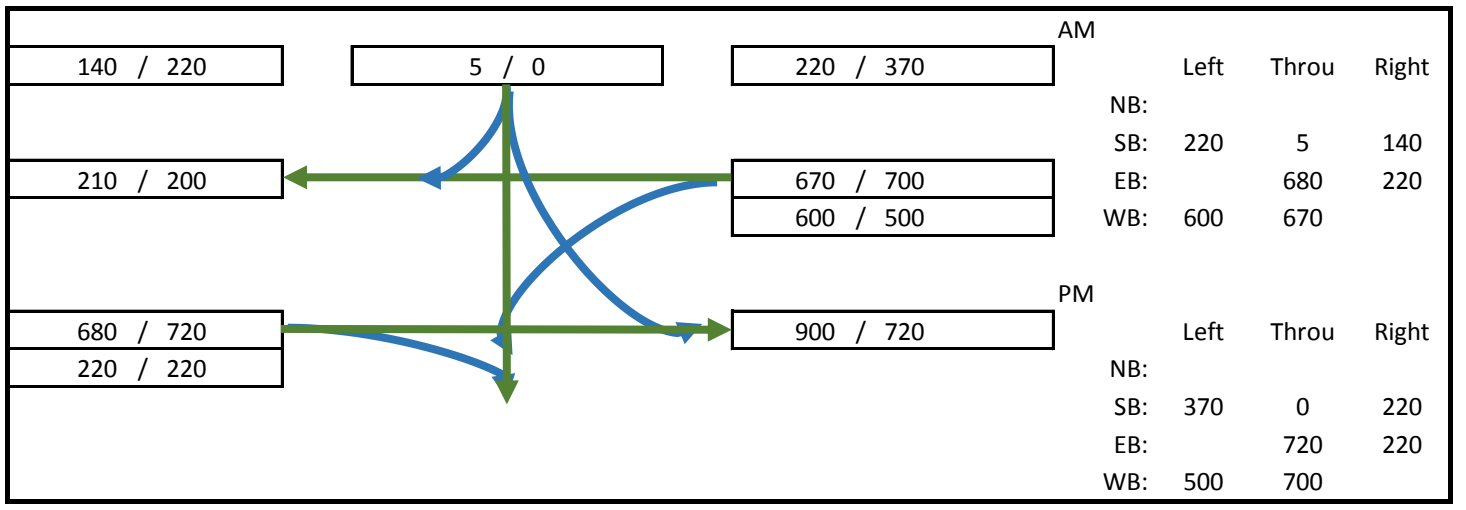
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

## SIGNALIZED INTERSECTION
## CAPACITY ANALYSIS

INTERSECTION: Leucadia Blvd / I-5 SB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/15/2016
TIME:

### DEMAND TRAFFIC FLOWS




AM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 220 | 5 | 140 |
| EB: | | 680 | 220 |
| WB: | 600 | 670 | |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 370 | 0 | 220 |
| EB: | | 720 | 220 |
| WB: | 500 | 700 | |

### LANE VOLUMES (ILV/HR)

**PHASE I**

| | | |
|---|---|---|
| AM | 300 | 335/350 |
| PM | 250 | 335/350 |
| | | 300/250 |
| | | **300/250** |

**PHASE II**

| | | |
|---|---|---|
| AM | 340 | **340/360** |
| PM | 360 | 340/360 |
| | | 220/220 |
| Remaining WB Through | **100/35** | |

**PHASE III**

| | | | | |
|---|---|---|---|---|
| AM | 140 | | | |
| PM | 220 | **140/220** | 115/185 | 110/185 |

**PHASE IV**

### CRITICAL LANE VOLUMES PER HOUR

| AM | PHASE II |
|---|---|
| 780 | 830 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 780 | Under Capacity |
| PM: | 830 | Under Capacity |

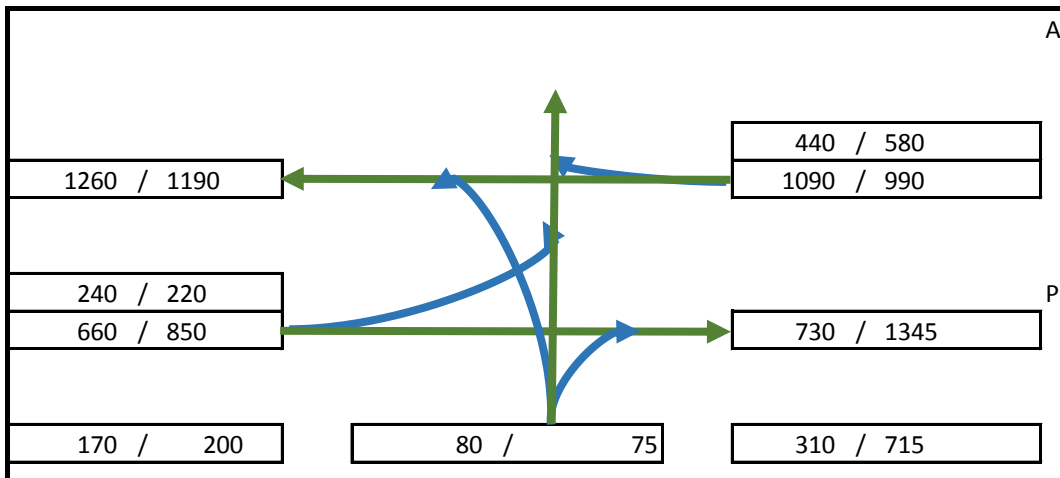
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

## SIGNALIZED INTERSECTION
## CAPACITY ANALYSIS

INTERSECTION: Leucadia Blvd / I-5 NB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/14/2016
TIME:

### DEMAND TRAFFIC FLOWS




AM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | 170 | 80 | 310 |
| SB: | | | |
| EB: | 240 | 660 | |
| WB: | | 1090 | 440 |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | 200 | 75 | 715 |
| SB: | | | |
| EB: | 220 | 850 | |
| WB: | | 990 | 580 |

### LANE VOLUMES (ILV/HR)

**PHASE I**

| | | |
|---|---|---|
| AM | 240 | **240/220** |
| PM | 220 | 330/425 |
| | | 330/425 |

**PHASE II**

| | | |
|---|---|---|
| AM | 804 | **804/910** |
| PM | 910 | 363/333 |
| | | 363/333 |
| Remaining EB Through | 90/205 | |

**PHASE III**

| | |
|---|---|
| AM | 165 |
| PM | 358 |

85/100 **165**/180 155/**360** 155/360

**PHASE IV**

### CRITICAL LANE VOLUMES PER HOUR

| AM | PHASE II |
|---|---|
| 1209 | 1488 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 1209 | At Capacity |
| PM: | 1488 | At Capacity |

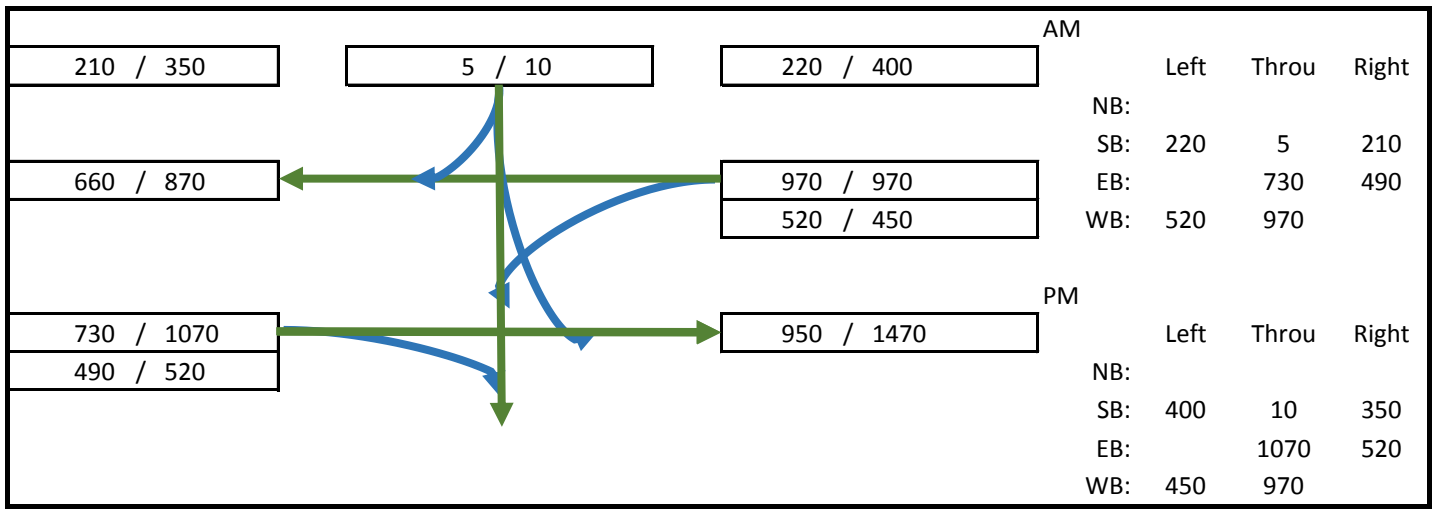
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

## SIGNALIZED INTERSECTION
## CAPACITY ANALYSIS

INTERSECTION: Encinitas Blvd / I-5 SB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/14/2016
TIME:

### DEMAND TRAFFIC FLOWS




AM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 220 | 5 | 210 |
| EB: | | 730 | 490 |
| WB: | 520 | 970 | |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 400 | 10 | 350 |
| EB: | | 1070 | 520 |
| WB: | 450 | 970 | |

### LANE VOLUMES (ILV/HR)

**PHASE I**

| | | |
|---|---|---|
| AM | 520 | 485/485 |
| PM | 450 | 485/485 |
| | | **520/450** |

**PHASE II**

| | | |
|---|---|---|
| AM | 855 | 365/535 |
| PM | 1055 | **855/1055** |
| Remaining WB Through | 0 /35 | |

**PHASE III**

| | | | |
|---|---|---|---|
| AM | 225 | 210/350 | **225/410** |
| PM | 410 | | |

**PHASE IV**

### CRITICAL LANE VOLUMES PER HOUR

| AM | PHASE II |
|---|---|
| 1600 | 1915 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 1600 | Over Capacity |
| PM: | 1915 | Over Capacity |

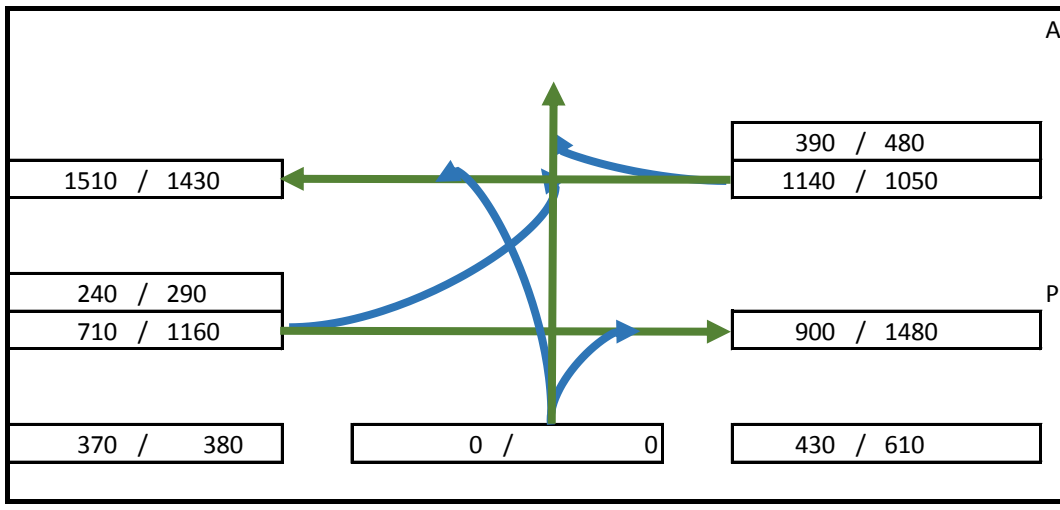
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

**SIGNALIZED INTERSECTION**
**CAPACITY ANALYSIS**

INTERSECTION: Encinitas Blvd / I-5 NB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/14/2016
TIME:

**DEMAND TRAFFIC FLOWS**




AM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | 370 | 0 | 430 |
| SB: | | | |
| EB: | 240 | 710 | |
| WB: | | 1140 | 390 |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | 380 | 0 | 610 |
| SB: | | | |
| EB: | 290 | 1160 | |
| WB: | | 1050 | 480 |

LANE VOLUMES (ILV/HR)

| PHASE I | | |
|---|---|---|
| AM | 240 | **240/290** |
| PM | 290 | 355/580 |
| | | 355/580 |

| PHASE II | | |
|---|---|---|
| AM | 570 | 390/480 |
| PM | 525 | **570/525** |
| | | 570/525 |
| Remaning EB Through | 125/300 | |

| PHASE III | | |
|---|---|---|
| AM | 430 | |
| PM | 610 | |
| | | 370/390 **430/610** |

| PHASE IV |
|---|
| |

CRITICAL LANE VOLUMES PER HOUR

| AM |
|---|
| 1240 |

| PHASE II |
|---|
| 1425 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 1240 | At Capacity |
| PM: | 1425 | At Capacity |

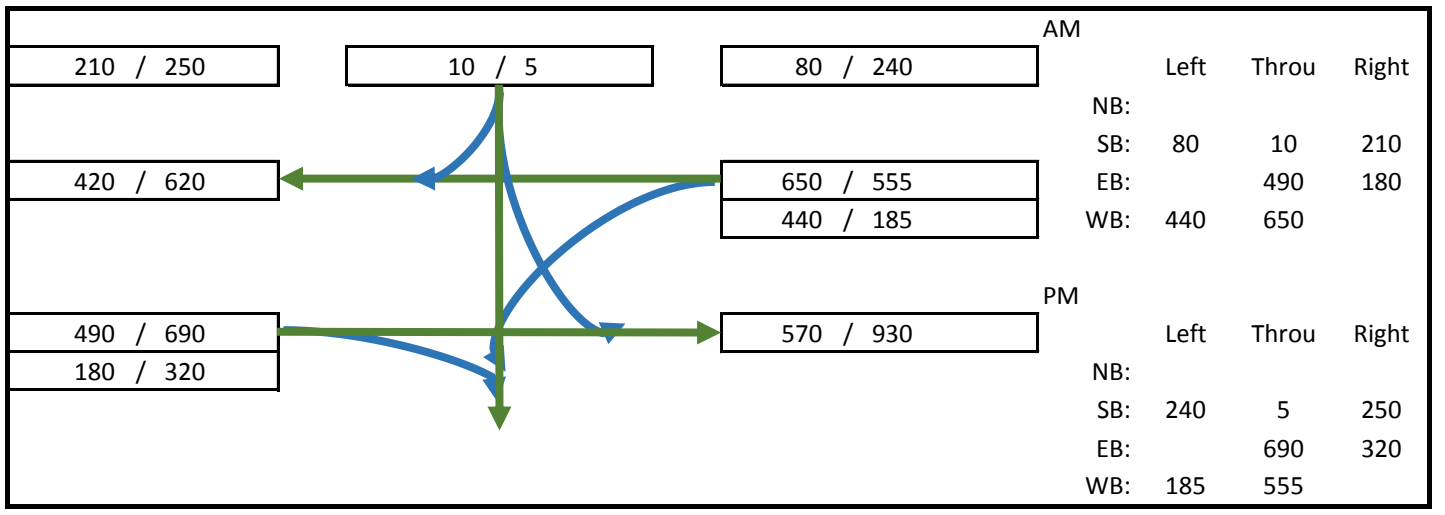
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

## SIGNALIZED INTERSECTION
## CAPACITY ANALYSIS

INTERSECTION: Santa Fe Drive / I-5 SB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/14/2016
TIME:

### DEMAND TRAFFIC FLOWS




AM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 80 | 10 | 210 |
| EB: | | 490 | 180 |
| WB: | 440 | 650 | |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 240 | 5 | 250 |
| EB: | | 690 | 320 |
| WB: | 185 | 555 | |

### LANE VOLUMES (ILV/HR)

**PHASE I**

| | | | |
|---|---|---|---|
| AM | 440 | 325/278 | |
| PM | 185 | 325/278 | |
| | | **440/185** | |

**PHASE II**

| | | |
|---|---|---|
| AM | 490 | **490/690** |
| PM | 690 | 180/320 |
| Remaining WB Through | 0/93 | |

**PHASE III**

| | | | |
|---|---|---|---|
| AM | 210 | **210/250** | 90/245 |
| PM | 250 | | |

**PHASE IV**

### CRITICAL LANE VOLUMES PER HOUR

| AM | PHASE II |
|---|---|
| 1140 | 1125 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 1140 | Under Capacity |
| PM: | 1125 | Under Capacity |

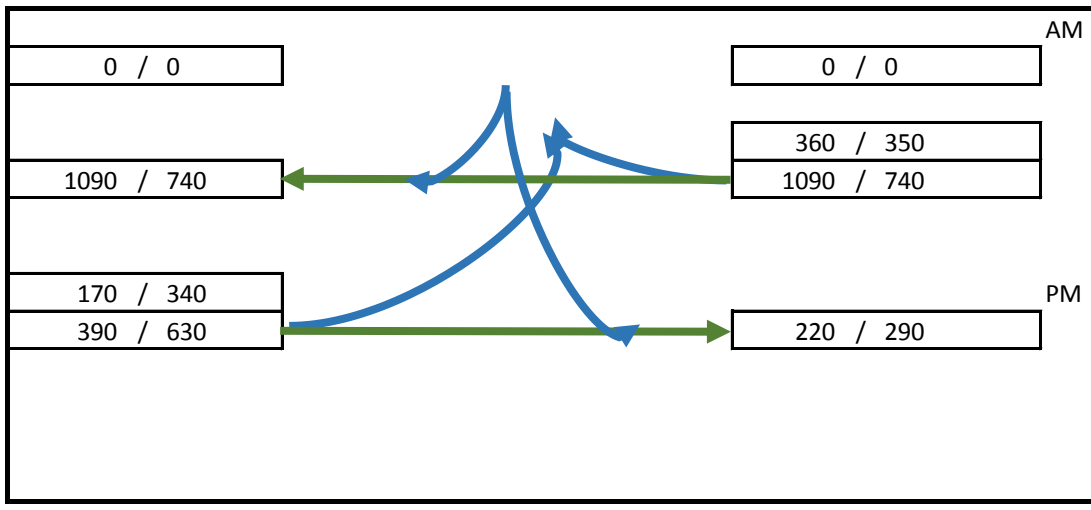
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

## SIGNALIZED INTERSECTION
## CAPACITY ANALYSIS

INTERSECTION: Santa Fe Drive / I-5 NB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/14/2016
TIME:

### DEMAND TRAFFIC FLOWS




| AM | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | | | |
| EB: | 170 | 390 | |
| WB: | | 1090 | 360 |

| PM | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | | | |
| EB: | 340 | 630 | |
| WB: | | 740 | 350 |

LANE VOLUMES (ILV/HR)

| PHASE I | | |
|---|---|---|
| AM | 170 | **170/340** |
| PM | 340 | 390/630 |

| PHASE II | | |
|---|---|---|
| AM | 545 | 360/350 |
| PM | 370 | **545/370** |
| | | 545/370 |
| Remaining EB Through | 220/290 | |

| PHASE III |
|---|
| |

| PHASE IV |
|---|
| |

CRITICAL LANE VOLUMES PER HOUR

| AM | PHASE II |
|---|---|
| 715 | 710 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 715 | Under Capacity |
| PM: | 710 | Under Capacity |

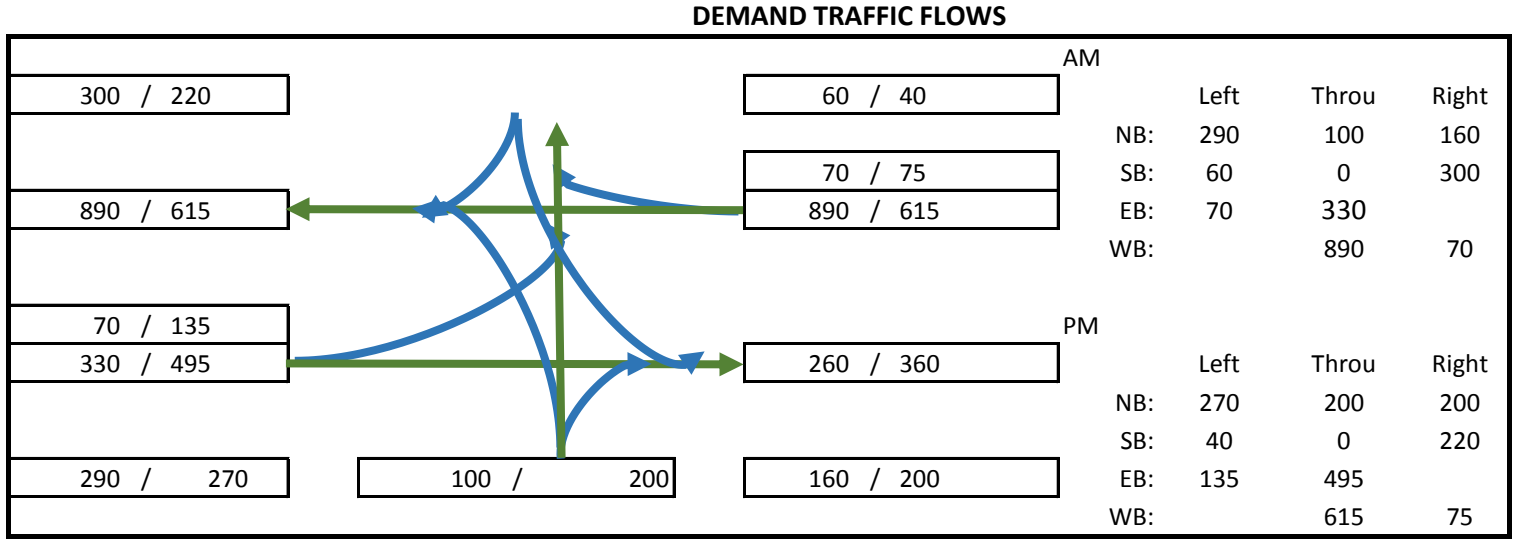
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

**SIGNALIZED INTERSECTION**
**CAPACITY ANALYSIS**

INTERSECTION: Santa Fe / I-5 NB Off-Ramp / Regal Road
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/14/2016
TIME:

**DEMAND TRAFFIC FLOWS**




AM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | 290 | 100 | 160 |
| SB: | 60 | 0 | 300 |
| EB: | 70 | 330 | |
| WB: | | 890 | 70 |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | 270 | 200 | 200 |
| SB: | 40 | 0 | 220 |
| EB: | 135 | 495 | |
| WB: | | 615 | 75 |

LANE VOLUMES (ILV/HR)

| PHASE I | | |
|---|---|---|
| AM | 70 | **70/135** |
| PM | 135 | 330/495 |

| PHASE II | | |
|---|---|---|
| AM | 367 | **367/280** |
| PM | 360 | 296/206 |
| | | 296/206 |
| Remaining EB Through | 260/**360** | |

| PHASE III | | | |
|---|---|---|---|
| AM | 300 | 300/220 | **60/40** |
| PM | 220 | | |

| PHASE IV | | | | |
|---|---|---|---|---|
| AM | 325 | | | |
| PM | 435 | | | |
| | | 145/135 | **325/435** | 80/100 |

CRITICAL LANE VOLUMES PER HOUR

| AM |
|---|
| 1061.666667 |

| PHASE II |
|---|
| 1150 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 1062 | Under Capacity |
| PM: | 1150 | Under Capacity |

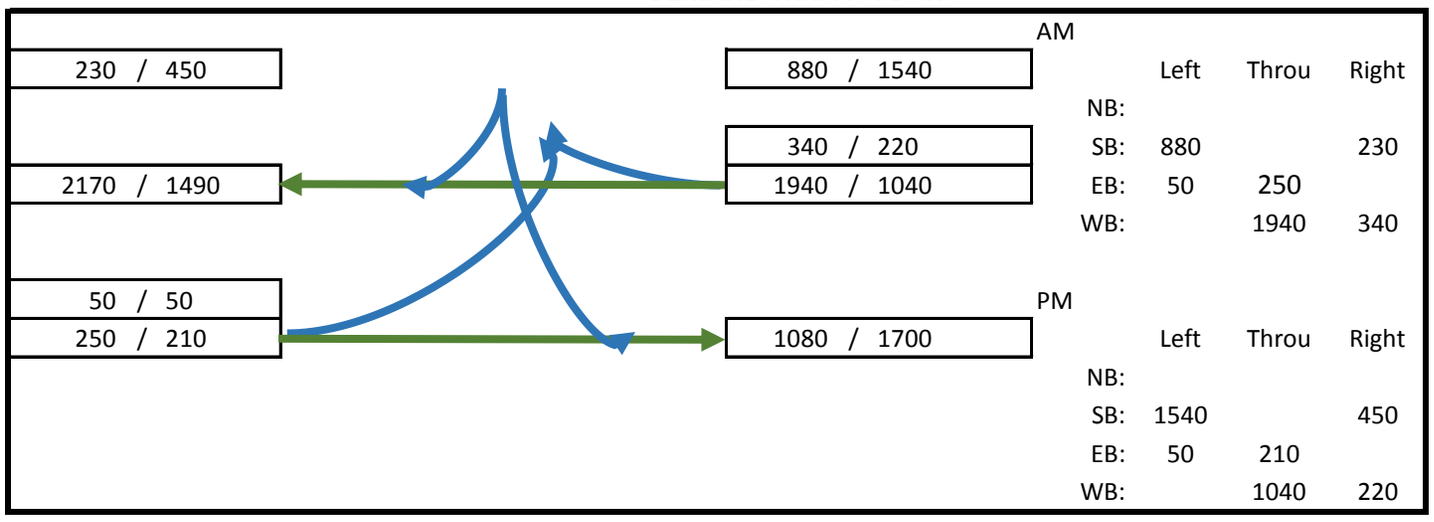
| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

## SIGNALIZED INTERSECTION
## CAPACITY ANALYSIS

INTERSECTION: Manchester Avenue / I-5 NB Ramps
ALTERNATIVE: Future Conditions

DIST. CO. RTE
PM:
DATE: 4/14/2016
TIME:

### DEMAND TRAFFIC FLOWS




AM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 880 | | 230 |
| EB: | 50 | 250 | |
| WB: | | 1940 | 340 |

PM

| | Left | Throu | Right |
|---|---|---|---|
| NB: | | | |
| SB: | 1540 | | 450 |
| EB: | 50 | 210 | |
| WB: | | 1040 | 220 |

### LANE VOLUMES (ILV/HR)

**PHASE I**

| | | |
|---|---|---|
| AM | 50 | **50/50** |
| PM | 50 | 250/210 |

**PHASE II**

| | | |
|---|---|---|
| AM | 970 | 340/220 |
| PM | 520 | **970/520** |
| | | 970/520 |
| Remaining EB Through | 200/160 | |

**PHASE III**

| | | | | |
|---|---|---|---|---|
| AM | 440 | 230/450 | **440/770** | 440/770 |
| PM | 770 | | | |

**PHASE IV**

### CRITICAL LANE VOLUMES PER HOUR

| AM | PHASE II |
|---|---|
| 1460 | 1340 |

TOTAL OPERATING LEVEL (ILV/HR):

| | | |
|---|---|---|
| AM: | 1460 | At Capacity |
| PM: | 1340 | At Capacity |

| | |
|---|---|
| < 1,200 ILV/HR | **Under Capacity** |
| > 1,200 BUT < 1,500 ILV/HR | **At Capacity** |
| > 1,500 ILV/HR (CAPACITY) | **Over Capacity** |

# Appendix C
# Traffic Signal Warrants – SMUP Strategy

## Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| | | | |
|---|---|---|---|
| | | COUNT DATE | SANDAG Series 12 Model |
| Major St: | La Costa Avenue | # of Lanes: | 1 |
| Minor St: | Vulcan Avenue | # of Lanes: | 1 |

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

**URBAN (U)**

| | | | |
|---|---|---|---|
| Major St ADT (Total): | 17700 | Roadway Type: | Urban |
| Minor Street ADT (Highest Direction): | 7300 | | |

**(Based on Estimated Average Daily Traffic - See Note)**

**CONDITION A - Minimum Vehicular Volume**

Satisfied X Not Satisfied

Number of lanes for moving traffic on each approach

| Major Street | Minor Street | Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban | Rural | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban | Rural |
|---|---|---|---|---|---|
| 1 | 1 | 8000 | 5,600 | 2,400 | 1,680 |
| 2 or more | 1 | 9,600 | 6,720 | 2,400 | 1,680 |
| 2 or more | 2 or more | 9,600 | 6,720 | 3,200 | 2,240 |
| 1 | 2 or more | 8,000 | 5,600 | 3,200 | 2,240 |

**CONDITION B - Interruption of Continuous Traffc**

Staisfied X Not Satisfied

Number of lanes for moving traffic on each approach

| Major Street | Minor Street | Vehichles Per Day on Major Street (Total of Both Approaches) Urban | Rural | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban | Rural |
|---|---|---|---|---|---|
| 1 | 1 | 12,000 | 8,400 | 1,200 | 850 |
| 2 or more | 1 | 14,400 | 10,080 | 1,200 | 850 |
| 2 or more | 2 or more | 14,400 | 10,080 | 1,600 | 1,120 |
| 1 | 2 or more | 12,000 | 8,400 | 1,600 | 1,120 |

**Combination of CONDITIONS A+B**

Satisfied X Not Satisfied

No one condition satisfied, but following conditions fulfilled 80% or More

| | A | B |
|---|---|---|
| | 221% | 148% |

| Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) |
|---|---|
| 2 CONDITIONS 80% | 2 CONDITIONS 80% |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

## Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
## (Average Traffic Estimate Form)

| | | | |
|---|---|---|---|
| | | COUNT DATE | SANDAG Series 12 Model |
| Major St: | Santa Fe Drive | # of Lanes: | 1 |
| Minor St: | Balour Drive | # of Lanes: | 1 |

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

**URBAN (U)**

| | | | |
|---|---|---|---|
| Major St ADT (Total): | 18600 | Roadway Type: | Urban |
| Minor Street ADT (Highest Direction): | 10700 | | |

**(Based on Estimated Average Daily Traffic - See Note)**

| **CONDITION A - Minimum Vehicular Volume** | Minimum Requirements EADT | |
|---|---|---|
| Satisfied X Not Satisfied | Vehichles Per Day on Major Street (Total of Both Approaches) | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) |
| Number of lanes for moving traffic on each approach | | |
| Major Street / Minor Street | Urban / Rural | Urban / Rural |
| 1 / 1 | 8000 / 5,600 | 2,400 / 1,680 |
| 2 or more / 1 | 9,600 / 6,720 | 2,400 / 1,680 |
| 2 or more / 2 or more | 9,600 / 6,720 | 3,200 / 2,240 |
| 1 / 2 or more | 8,000 / 5,600 | 3,200 / 2,240 |
| **CONDITION B - Interruption of Continuous Traffc** | Vehichles Per Day on Major Street (Total of Both Approaches) | Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) |
| Staisfied X Not Satisfied | | |
| Number of lanes for moving traffic on each approach | | |
| Major Street / Minor Street | Urban / Rural | Urban / Rural |
| 1 / 1 | 12,000 / 8,400 | 1,200 / 850 |
| 2 or more / 1 | 14,400 / 10,080 | 1,200 / 850 |
| 2 or more / 2 or more | 14,400 / 10,080 | 1,600 / 1,120 |
| 1 / 2 or more | 12,000 / 8,400 | 1,600 / 1,120 |
| **Combination of CONDITIONS A+B** | | |
| Satisfied X Not Satisfied | 2 CONDITIONS 80% | 2 CONDITIONS 80% |
| No one condition satisfied, but following conditions fulfilled 80% or More | 233% A / 155% B | |

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

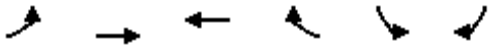
The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

# Appendix D
# Future Year 2035 AM / PM Peak Hour Intersection LOS Worksheets – SMUP Strategy Mitigation

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 470 | 130 | 245 | 490 | 60 | 230 |
| Number | 2 | 12 | 1 | 6 | 3 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | 0.97 | 1.00 | | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1900 | 1900 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 511 | 141 | 266 | 533 | 65 | 250 |
| Adj No. of Lanes | 1 | 0 | 0 | 1 | 1 | 1 |
| 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 | 1054 | 291 | 308 | 551 | 284 | 254 |
| Arrive On Green | 0.75 | 0.75 | 0.75 | 0.75 | 0.16 | 0.16 |
| Sat Flow, veh/h | 1396 | 385 | 344 | 730 | 1774 | 1583 |
| Grp Volume(v), veh/h | 0 | 652 | 799 | 0 | 65 | 250 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1781 | 1074 | 0 | 1774 | 1583 |
| Q Serve(g_s), s | 0.0 | 14.1 | 58.8 | 0.0 | 3.2 | 15.7 |
| Cycle Q Clear(g_c), s | 0.0 | 14.1 | 73.0 | 0.0 | 3.2 | 15.7 |
| Prop In Lane | | 0.22 | 0.33 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 1345 | 858 | 0 | 284 | 254 |
| V/C Ratio(X) | 0.00 | 0.48 | 0.93 | 0.00 | 0.23 | 0.99 |
| Avail Cap(c_a), veh/h | 0 | 1346 | 860 | 0 | 284 | 254 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 4.7 | 17.2 | 0.0 | 36.6 | 41.8 |
| Incr Delay (d2), s/veh | 0.0 | 0.3 | 16.4 | 0.0 | 0.4 | 52.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 7.0 | 25.0 | 0.0 | 1.6 | 10.6 |
| LnGrp Delay(d),s/veh | 0.0 | 5.0 | 33.6 | 0.0 | 37.0 | 94.3 |
| LnGrp LOS | | A | C | | D | F |
| Approach Vol, veh/h | 652 | | | 799 | 315 | |
| Approach Delay, s/veh | 5.0 | | | 33.6 | 82.5 | |
| Approach LOS | A | | | C | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 79.9 | | | | 79.9 | | 20.0 |
| Change Period (Y+Rc), s | | 4.5 | | | | 4.5 | | 4.0 |
| Max Green Setting (Gmax), s | | 75.5 | | | | 75.5 | | 16.0 |
| Max Q Clear Time (g_c+I1), s | | 16.1 | | | | 75.0 | | 17.7 |
| Green Ext Time (p_c), s | | 17.7 | | | | 0.4 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 31.8 |
| HCM 2010 LOS | C |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 190 | 470 | 770 | 160 | 40 | 230 |
| Number | 5 | 2 | 6 | 16 | 7 | 14 |
| 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 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1900 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 207 | 511 | 837 | 174 | 43 | 250 |
| Adj No. of Lanes | 1 | 1 | 1 | 0 | 0 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 0 | 0 |
| Cap, veh/h | 204 | 1338 | 841 | 175 | 47 | 272 |
| Arrive On Green | 0.12 | 0.72 | 0.56 | 0.56 | 0.20 | 0.20 |
| Sat Flow, veh/h | 1774 | 1863 | 1497 | 311 | 235 | 1369 |
| Grp Volume(v), veh/h | 207 | 511 | 0 | 1011 | 294 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1808 | 1609 | 0 |
| Q Serve(g_s), s | 12.5 | 11.6 | 0.0 | 60.4 | 19.4 | 0.0 |
| Cycle Q Clear(g_c), s | 12.5 | 11.6 | 0.0 | 60.4 | 19.4 | 0.0 |
| Prop In Lane | 1.00 | | | 0.17 | 0.15 | 0.85 |
| Lane Grp Cap(c), veh/h | 204 | 1338 | 0 | 1015 | 320 | 0 |
| V/C Ratio(X) | 1.01 | 0.38 | 0.00 | 1.00 | 0.92 | 0.00 |
| Avail Cap(c_a), veh/h | 204 | 1338 | 0 | 1015 | 341 | 0 |
| HCM Platoon Ratio | 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 |
| Uniform Delay (d), s/veh | 48.1 | 5.9 | 0.0 | 23.7 | 42.6 | 0.0 |
| Incr Delay (d2), s/veh | 66.6 | 0.2 | 0.0 | 27.1 | 28.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 9.8 | 5.9 | 0.0 | 37.4 | 11.2 | 0.0 |
| LnGrp Delay(d),s/veh | 114.8 | 6.1 | 0.0 | 50.8 | 70.7 | 0.0 |
| LnGrp LOS | F | A | | D | E | |
| Approach Vol, veh/h | | 718 | 1011 | | 294 | |
| Approach Delay, s/veh | | 37.4 | 50.8 | | 70.7 | |
| Approach LOS | | D | D | | E | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 83.0 | | 25.6 | 17.0 | 66.0 | | |
| Change Period (Y+Rc), s | | 5.0 | | 4.0 | 4.5 | 5.0 | | |
| Max Green Setting (Gmax), s | | 78.0 | | 23.0 | 12.5 | 61.0 | | |
| Max Q Clear Time (g_c+I1), s | | 13.6 | | 21.4 | 14.5 | 62.4 | | |
| Green Ext Time (p_c), s | | 18.8 | | 0.2 | 0.0 | 0.0 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 49.0 |
| HCM 2010 LOS | D |

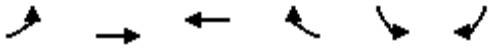
**Notes**

User approved volume balancing among the lanes for turning movement.

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 540 | 80 | 250 | 560 | 75 | 180 |
| Number | 2 | 12 | 1 | 6 | 3 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | 0.97 | 1.00 | | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1900 | 1900 | 1863 | 1863 | 1863 |
| Adj Flow Rate, veh/h | 587 | 87 | 272 | 609 | 82 | 196 |
| Adj No. of Lanes | 1 | 0 | 0 | 1 | 1 | 1 |
| 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 | 1257 | 186 | 307 | 617 | 237 | 211 |
| Arrive On Green | 0.80 | 0.80 | 0.80 | 0.80 | 0.13 | 0.13 |
| Sat Flow, veh/h | 1579 | 234 | 337 | 775 | 1774 | 1583 |
| Grp Volume(v), veh/h | 0 | 674 | 881 | 0 | 82 | 196 |
| Grp Sat Flow(s),veh/h/ln | 0 | 1813 | 1112 | 0 | 1774 | 1583 |
| Q Serve(g_s), s | 0.0 | 14.5 | 79.8 | 0.0 | 5.0 | 14.7 |
| Cycle Q Clear(g_c), s | 0.0 | 14.5 | 94.3 | 0.0 | 5.0 | 14.7 |
| Prop In Lane | | 0.13 | 0.31 | | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h | 0 | 1443 | 924 | 0 | 237 | 211 |
| V/C Ratio(X) | 0.00 | 0.47 | 0.95 | 0.00 | 0.35 | 0.93 |
| Avail Cap(c_a), veh/h | 0 | 1443 | 924 | 0 | 237 | 211 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 0.0 | 4.0 | 18.3 | 0.0 | 47.3 | 51.4 |
| Incr Delay (d2), s/veh | 0.0 | 0.2 | 19.2 | 0.0 | 0.9 | 42.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.0 | 7.2 | 33.3 | 0.0 | 2.5 | 8.9 |
| LnGrp Delay(d),s/veh | 0.0 | 4.2 | 37.5 | 0.0 | 48.1 | 93.8 |
| LnGrp LOS | | A | D | | D | F |
| Approach Vol, veh/h | 674 | | | 881 | 278 | |
| Approach Delay, s/veh | 4.2 | | | 37.5 | 80.3 | |
| Approach LOS | A | | | D | F | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 100.0 | | | | 100.0 | | 20.0 |
| Change Period (Y+Rc), s | | 4.5 | | | | 4.5 | | 4.0 |
| Max Green Setting (Gmax), s | | 95.5 | | | | 95.5 | | 16.0 |
| Max Q Clear Time (g_c+I1), s | | 16.5 | | | | 96.3 | | 16.7 |
| Green Ext Time (p_c), s | | 21.6 | | | | 0.0 | | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 31.8 |
| HCM 2010 LOS | C |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 250 | 500 | 515 | 125 | 70 | 160 |
| Number | 5 | 2 | 6 | 16 | 7 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | | 0.98 | 1.00 | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1900 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 272 | 543 | 560 | 136 | 76 | 174 |
| Adj No. of Lanes | 1 | 1 | 1 | 0 | 0 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 0 | 0 |
| Cap, veh/h | 318 | 1289 | 659 | 160 | 91 | 207 |
| Arrive On Green | 0.18 | 0.69 | 0.46 | 0.46 | 0.18 | 0.18 |
| Sat Flow, veh/h | 1774 | 1863 | 1442 | 350 | 496 | 1135 |
| Grp Volume(v), veh/h | 272 | 543 | 0 | 696 | 251 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1792 | 1638 | 0 |
| Q Serve(g_s), s | 10.7 | 9.1 | 0.0 | 24.8 | 10.6 | 0.0 |
| Cycle Q Clear(g_c), s | 10.7 | 9.1 | 0.0 | 24.8 | 10.6 | 0.0 |
| Prop In Lane | 1.00 | | | 0.20 | 0.30 | 0.69 |
| Lane Grp Cap(c), veh/h | 318 | 1289 | 0 | 819 | 299 | 0 |
| V/C Ratio(X) | 0.86 | 0.42 | 0.00 | 0.85 | 0.84 | 0.00 |
| Avail Cap(c_a), veh/h | 395 | 1505 | 0 | 949 | 525 | 0 |
| HCM Platoon Ratio | 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 |
| Uniform Delay (d), s/veh | 28.6 | 4.8 | 0.0 | 17.3 | 28.3 | 0.0 |
| Incr Delay (d2), s/veh | 14.0 | 0.2 | 0.0 | 6.6 | 6.2 | 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 | 6.5 | 4.6 | 0.0 | 13.7 | 5.3 | 0.0 |
| LnGrp Delay(d),s/veh | 42.6 | 5.0 | 0.0 | 23.9 | 34.5 | 0.0 |
| LnGrp LOS | D | A | | C | C | |
| Approach Vol, veh/h | | 815 | 696 | | 251 | |
| Approach Delay, s/veh | | 17.6 | 23.9 | | 34.5 | |
| Approach LOS | | B | C | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 54.7 | | 17.1 | 16.9 | 37.8 | | |
| Change Period (Y+Rc), s | | 5.0 | | 4.0 | 4.0 | 5.0 | | |
| Max Green Setting (Gmax), s | | 58.0 | | 23.0 | 16.0 | 38.0 | | |
| Max Q Clear Time (g_c+I1), s | | 11.1 | | 12.6 | 12.7 | 26.8 | | |
| Green Ext Time (p_c), s | | 11.2 | | 0.6 | 0.3 | 6.0 | | |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 22.5 |
| HCM 2010 LOS | C |

Notes

User approved volume balancing among the lanes for turning movement.