




















HCM Signalized Intersection Capacity Analysis

2: I-385 NB Ramps & Roper Mountain Road

6/6/2011

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | |  |  |  |  |  | | |  |  |
| Volume (vph) | 0 | 0 | 0 | 1061 | 0 | 1506 | 265 | 1618 | 0 | 0 | 1551 | 462 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | 6.0 | 6.0 |
| Lane Util. Factor | | | | 0.95 | 0.95 | 0.88 | 0.97 | 0.95 | | | 0.95 | 1.00 |
| Frt | | | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | | 1.00 | 0.85 |
| Flt Protected | | | | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | | | 1.00 | 1.00 |
| Satd. Flow (prot) | | | | 1633 | 1633 | 2707 | 3335 | 3438 | | | 3438 | 1538 |
| Flt Permitted | | | | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | | | 1.00 | 1.00 |
| Satd. Flow (perm) | | | | 1633 | 1633 | 2707 | 3335 | 3438 | | | 3438 | 1538 |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 0 | 0 | 1179 | 0 | 1673 | 294 | 1798 | 0 | 0 | 1723 | 513 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 224 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 589 | 590 | 1663 | 294 | 1798 | 0 | 0 | 1723 | 289 |
| Turn Type | | | | Perm | | Perm | Prot | | | | | Perm |
| Protected Phases | | | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | | | | 8 | | 8 | | | | | | 6 |
| Actuated Green, G (s) | | | | 36.0 | 36.0 | 36.0 | 7.0 | 52.0 | | | 39.0 | 39.0 |
| Effective Green, g (s) | | | | 36.0 | 36.0 | 36.0 | 7.0 | 52.0 | | | 39.0 | 39.0 |
| Actuated g/C Ratio | | | | 0.36 | 0.36 | 0.36 | 0.07 | 0.52 | | | 0.39 | 0.39 |
| Clearance Time (s) | | | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | | 6.0 | 6.0 |
| Vehicle Extension (s) | | | | 4.9 | 4.9 | 4.9 | 4.3 | 4.9 | | | 4.9 | 4.9 |
| Lane Grp Cap (vph) | | | | 588 | 588 | 975 | 233 | 1788 | | | 1341 | 600 |
| v/s Ratio Prot | | | | | | | 0.09 | c0.52 | | | c0.50 | |
| v/s Ratio Perm | | | | 0.36 | 0.36 | c0.61 | | | | | | 0.19 |
| v/c Ratio | | | | 1.00 | 1.00 | 1.71 | 1.26 | 1.01 | | | 1.28 | 0.48 |
| Uniform Delay, d1 | | | | 32.0 | 32.0 | 32.0 | 46.5 | 24.0 | | | 30.5 | 22.9 |
| Progression Factor | | | | 1.00 | 1.00 | 1.00 | 1.43 | 0.63 | | | 0.67 | 0.64 |
| Incremental Delay, d2 | | | | 37.5 | 38.0 | 321.8 | 121.1 | 7.8 | | | 128.7 | 0.3 |
| Delay (s) | | | | 69.5 | 70.0 | 353.8 | 187.5 | 22.9 | | | 149.0 | 14.9 |
| Level of Service | | | | E | E | F | F | C | | | F | B |
| Approach Delay (s) | | 0.0 | | | 236.4 | | | 46.0 | | | 118.2 | |
| Approach LOS | | A | | | F | | | D | | | F | |
| Intersection Summary | | | | | | | | | | | | |
| HCM Average Control Delay | | | 144.1 | | | HCM Level of Service | | | F | | | |
| HCM Volume to Capacity ratio | | | 1.49 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 100.0 | | | Sum of lost time (s) | | | 18.0 | | | |
| Intersection Capacity Utilization | | | 146.5% | | | ICU Level of Service | | | H | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |