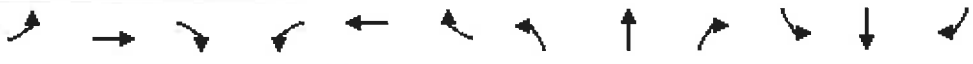


Lanes, Volumes, Timings  
1: N. Courtenay Pkwy & Pioneer Rd

2-2027 NO BUILD AM PEAK HOUR

|                         |  |       |      |       |       |       |       |       |       |       |        |      |
|-------------------------|------------------------------------------------------------------------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|--------|------|
| Lane Group              | EBL                                                                                | EBT   | EBR  | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT    | SBR  |
| Lane Configurations     |                                                                                    | ↔     |      |       | ↔     | ↔     | ↔     | ↕     | ↔     | ↔     | ↕      |      |
| Traffic Volume (vph)    | 96                                                                                 | 28    | 30   | 174   | 42    | 163   | 32    | 1098  | 86    | 207   | 1582   | 34   |
| Future Volume (vph)     | 96                                                                                 | 28    | 30   | 174   | 42    | 163   | 32    | 1098  | 86    | 207   | 1582   | 34   |
| Confl. Peds. (#/hr)     |                                                                                    |       |      |       |       |       |       |       | 1     |       |        |      |
| Peak Hour Factor        | 0.91                                                                               | 0.91  | 0.91 | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91  | 0.91   | 0.91 |
| Heavy Vehicles (%)      | 3%                                                                                 | 4%    | 2%   | 2%    | 6%    | 2%    | 25%   | 3%    | 2%    | 2%    | 3%     | 7%   |
| Shared Lane Traffic (%) |                                                                                    |       |      |       |       |       |       |       |       |       |        |      |
| Lane Group Flow (vph)   | 0                                                                                  | 169   | 0    | 0     | 237   | 179   | 35    | 1207  | 95    | 227   | 1775   | 0    |
| Turn Type               | Perm                                                                               | NA    |      | Perm  | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA     |      |
| Protected Phases        |                                                                                    | 8     |      |       | 4     |       | 1     | 6     |       | 5     | 2      |      |
| Permitted Phases        | 8                                                                                  |       |      | 4     |       | 4     | 6     |       | 6     | 2     |        |      |
| Detector Phase          | 8                                                                                  | 8     |      | 4     | 4     | 4     | 1     | 6     | 6     | 5     | 2      |      |
| Switch Phase            |                                                                                    |       |      |       |       |       |       |       |       |       |        |      |
| Minimum Initial (s)     | 7.0                                                                                | 7.0   |      | 7.0   | 7.0   | 7.0   | 5.0   | 15.0  | 15.0  | 5.0   | 15.0   |      |
| Minimum Split (s)       | 41.7                                                                               | 41.7  |      | 40.7  | 40.7  | 40.7  | 12.8  | 30.8  | 30.8  | 12.8  | 32.8   |      |
| Total Split (s)         | 50.0                                                                               | 50.0  |      | 50.0  | 50.0  | 50.0  | 18.0  | 75.0  | 75.0  | 35.0  | 92.0   |      |
| Total Split (%)         | 31.3%                                                                              | 31.3% |      | 31.3% | 31.3% | 31.3% | 11.3% | 46.9% | 46.9% | 21.9% | 57.5%  |      |
| Maximum Green (s)       | 43.3                                                                               | 43.3  |      | 43.3  | 43.3  | 43.3  | 10.2  | 68.2  | 68.2  | 27.2  | 85.2   |      |
| Yellow Time (s)         | 3.7                                                                                | 3.7   |      | 3.7   | 3.7   | 3.7   | 4.8   | 4.8   | 4.8   | 4.8   | 4.8    |      |
| All-Red Time (s)        | 3.0                                                                                | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 3.0   | 2.0    |      |
| Lost Time Adjust (s)    |                                                                                    | 0.0   |      |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    |      |
| Total Lost Time (s)     |                                                                                    | 6.7   |      |       | 6.7   | 6.7   | 7.8   | 6.8   | 6.8   | 7.8   | 6.8    |      |
| Lead/Lag                |                                                                                    |       |      |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag    |      |
| Lead-Lag Optimize?      |                                                                                    |       |      |       |       |       | Yes   | Yes   | Yes   | Yes   | Yes    |      |
| Vehicle Extension (s)   | 3.5                                                                                | 3.5   |      | 3.5   | 3.5   | 3.5   | 3.0   | 3.5   | 3.5   | 3.0   | 3.5    |      |
| Recall Mode             | None                                                                               | None  |      | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max  |      |
| Walk Time (s)           | 7.0                                                                                | 7.0   |      | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0    |      |
| Flash Don't Walk (s)    | 28.0                                                                               | 28.0  |      | 27.0  | 27.0  | 27.0  |       | 17.0  | 17.0  |       | 19.0   |      |
| Pedestrian Calls (#/hr) | 0                                                                                  | 0     |      | 0     | 0     | 0     |       | 0     | 0     |       | 0      |      |
| Act Effct Green (s)     |                                                                                    | 36.7  |      |       | 36.7  | 36.7  | 89.4  | 83.4  | 83.4  | 108.8 | 97.6   |      |
| Actuated g/C Ratio      |                                                                                    | 0.23  |      |       | 0.23  | 0.23  | 0.56  | 0.52  | 0.52  | 0.68  | 0.61   |      |
| v/c Ratio               |                                                                                    | 0.94  |      |       | 0.87  | 0.39  | 0.35  | 0.68  | 0.11  | 0.70  | 0.86   |      |
| Control Delay (s/veh)   |                                                                                    | 108.9 |      |       | 88.9  | 14.8  | 28.8  | 33.6  | 1.5   | 25.5  | 41.4   |      |
| Queue Delay             |                                                                                    | 0.0   |      |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    |      |
| Total Delay (s/veh)     |                                                                                    | 108.9 |      |       | 88.9  | 14.8  | 28.8  | 33.6  | 1.5   | 25.5  | 41.4   |      |
| LOS                     |                                                                                    | F     |      |       | F     | B     | C     | C     | A     | C     | D      |      |
| Approach Delay (s/veh)  |                                                                                    | 108.9 |      |       | 57.0  |       |       | 31.2  |       |       | 39.6   |      |
| Approach LOS            |                                                                                    | F     |      |       | E     |       |       | C     |       |       | D      |      |
| Queue Length 50th (ft)  |                                                                                    | 167   |      |       | 239   | 32    | 12    | 495   | 0     | 121   | 876    |      |
| Queue Length 95th (ft)  |                                                                                    | #292  |      |       | #339  | 99    | 38    | 687   | 13    | m171  | m#1092 |      |
| Internal Link Dist (ft) |                                                                                    | 649   |      |       | 211   |       |       | 778   |       |       | 658    |      |
| Turn Bay Length (ft)    |                                                                                    |       |      |       |       | 125   | 150   |       | 105   | 245   |        |      |
| Base Capacity (vph)     |                                                                                    | 212   |      |       | 320   | 516   | 129   | 1765  | 842   | 403   | 2060   |      |
| Starvation Cap Reductn  |                                                                                    | 0     |      |       | 0     | 0     | 0     | 0     | 0     | 0     | 0      |      |
| Spillback Cap Reductn   |                                                                                    | 0     |      |       | 0     | 0     | 0     | 0     | 0     | 0     | 0      |      |
| Storage Cap Reductn     |                                                                                    | 0     |      |       | 0     | 0     | 0     | 0     | 0     | 0     | 0      |      |
| Reduced v/c Ratio       |                                                                                    | 0.80  |      |       | 0.74  | 0.35  | 0.27  | 0.68  | 0.11  | 0.56  | 0.86   |      |
| Intersection Summary    |                                                                                    |       |      |       |       |       |       |       |       |       |        |      |

Synchro 12 Report

Lanes, Volumes, Timings  
1: N. Courtenay Pkwy & Pioneer Rd

2-2027 NO BUILD AM PEAK HOUR

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 135 (84%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay (s/veh): 41.5

Intersection LOS: D

Intersection Capacity Utilization 82.3%

ICU Level of Service E

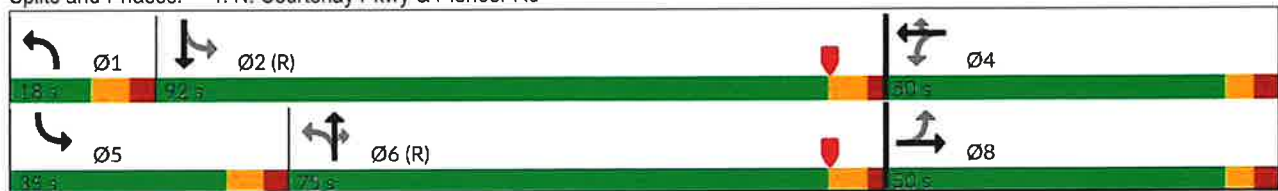
Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: N. Courtenay Pkwy & Pioneer Rd



HCM 7th Signalized Intersection Summary  
1: N. Courtenay Pkwy & Pioneer Rd

2-2027 NO BUILD AM PEAK HOUR

| Movement                     | EBL  | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          |      | ↔     |      |      | ↔    | ↔     | ↔    | ↕    | ↔    | ↔    | ↕    |      |
| Traffic Volume (veh/h)       | 96   | 28    | 30   | 174  | 42   | 163   | 32   | 1098 | 86   | 207  | 1582 | 34   |
| Future Volume (veh/h)        | 96   | 28    | 30   | 174  | 42   | 163   | 32   | 1098 | 86   | 207  | 1582 | 34   |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Lane Width 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 |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No    |      |      | No   |       |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1856 | 1841  | 1870 | 1870 | 1811 | 1870  | 1530 | 1856 | 1870 | 1870 | 1856 | 1796 |
| Adj Flow Rate, veh/h         | 105  | 31    | 28   | 191  | 46   | 124   | 35   | 1207 | 43   | 227  | 1738 | 36   |
| Peak Hour Factor             | 0.91 | 0.91  | 0.91 | 0.91 | 0.91 | 0.91  | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, %         | 3    | 4     | 2    | 2    | 6    | 2     | 25   | 3    | 2    | 2    | 3    | 7    |
| Cap, veh/h                   | 231  | 68    | 54   | 253  | 51   | 316   | 213  | 2116 | 950  | 340  | 2271 | 47   |
| Arrive On Green              | 0.20 | 0.20  | 0.20 | 0.20 | 0.20 | 0.20  | 0.02 | 0.60 | 0.60 | 0.14 | 1.00 | 1.00 |
| Sat Flow, veh/h              | 974  | 340   | 270  | 1068 | 257  | 1585  | 1457 | 3526 | 1584 | 1781 | 3532 | 73   |
| Grp Volume(v), veh/h         | 164  | 0     | 0    | 237  | 0    | 124   | 35   | 1207 | 43   | 227  | 865  | 909  |
| Grp Sat Flow(s),veh/h/ln     | 1584 | 0     | 0    | 1325 | 0    | 1585  | 1457 | 1763 | 1584 | 1781 | 1763 | 1842 |
| Q Serve(g_s), s              | 0.0  | 0.0   | 0.0  | 13.5 | 0.0  | 10.9  | 1.5  | 33.3 | 1.8  | 8.3  | 0.0  | 0.0  |
| Cycle Q Clear(g_c), s        | 14.5 | 0.0   | 0.0  | 28.1 | 0.0  | 10.9  | 1.5  | 33.3 | 1.8  | 8.3  | 0.0  | 0.0  |
| Prop In Lane                 | 0.64 |       | 0.17 | 0.81 |      | 1.00  | 1.00 |      | 1.00 | 1.00 |      | 0.04 |
| Lane Grp Cap(c), veh/h       | 352  | 0     | 0    | 305  | 0    | 316   | 213  | 2116 | 950  | 340  | 1133 | 1185 |
| V/C Ratio(X)                 | 0.47 | 0.00  | 0.00 | 0.78 | 0.00 | 0.39  | 0.16 | 0.57 | 0.05 | 0.67 | 0.76 | 0.77 |
| Avail Cap(c_a), veh/h        | 456  | 0     | 0    | 403  | 0    | 429   | 270  | 2116 | 950  | 522  | 1133 | 1185 |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 |
| Upstream Filter(I)           | 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     | 57.1 | 0.0   | 0.0  | 62.8 | 0.0  | 55.7  | 11.5 | 19.5 | 13.2 | 15.6 | 0.0  | 0.0  |
| Incr Delay (d2), s/veh       | 1.2  | 0.0   | 0.0  | 7.5  | 0.0  | 1.0   | 0.4  | 1.1  | 0.1  | 2.3  | 4.9  | 4.8  |
| 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(95%),veh/ln     | 10.1 | 0.0   | 0.0  | 15.3 | 0.0  | 8.0   | 0.9  | 19.3 | 1.2  | 5.1  | 2.8  | 2.8  |
| Unsig. Movement Delay, s/veh |      |       |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 58.2 | 0.0   | 0.0  | 70.4 | 0.0  | 56.6  | 11.9 | 20.6 | 13.2 | 17.9 | 4.9  | 4.8  |
| LnGrp LOS                    | E    |       |      | E    |      | E     | B    | C    | B    | B    | A    | A    |
| Approach Vol, veh/h          |      | 164   |      |      | 361  |       |      | 1285 |      |      | 2001 |      |
| Approach Delay, s/veh        |      | 58.2  |      |      | 65.6 |       |      | 20.1 |      |      | 6.3  |      |
| Approach LOS                 |      | E     |      |      | E    |       |      | C    |      |      | A    |      |
| Timer - Assigned Phs         | 1    | 2     |      | 4    | 5    | 6     |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 11.7 | 109.7 |      | 38.6 | 18.6 | 102.8 |      | 38.6 |      |      |      |      |
| Change Period (Y+Rc), s      | 7.8  | 6.8   |      | 6.7  | 7.8  | 6.8   |      | 6.7  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.2 | 85.2  |      | 43.3 | 27.2 | 68.2  |      | 43.3 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 3.5  | 2.0   |      | 30.1 | 10.3 | 35.3  |      | 16.5 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 29.6  |      | 1.8  | 0.5  | 12.3  |      | 1.1  |      |      |      |      |
| <b>Intersection Summary</b>  |      |       |      |      |      |       |      |      |      |      |      |      |
| HCM 7th Control Delay, s/veh |      |       | 18.8 |      |      |       |      |      |      |      |      |      |
| HCM 7th LOS                  |      |       | B    |      |      |       |      |      |      |      |      |      |

Synchro 12 Report

## Lanes, Volumes, Timings

2-2027 NO BUILD AM PEAK HOUR

## 2: N. Courtenay Pkwy &amp; S.R. 528 EB on-off Ramps

|                                                                        |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                                                             | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations                                                    |  |                                                                                   |  |                                                                                   |                                                                                   |                                                                                   |                                                                                    |  |  |  |  |                                                                                     |
| Traffic Volume (vph)                                                   | 857                                                                               | 0                                                                                 | 971                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 1134                                                                                | 342                                                                                 | 263                                                                                 | 1005                                                                                | 0                                                                                   |
| Future Volume (vph)                                                    | 857                                                                               | 0                                                                                 | 971                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 1134                                                                                | 342                                                                                 | 263                                                                                 | 1005                                                                                | 0                                                                                   |
| Peak Hour Factor                                                       | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                               | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)                                                     | 6%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 2%                                                                                  | 2%                                                                                  | 7%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Shared Lane Traffic (%)                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)                                                  | 912                                                                               | 0                                                                                 | 1033                                                                              | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 1206                                                                                | 364                                                                                 | 280                                                                                 | 1069                                                                                | 0                                                                                   |
| Turn Type                                                              | Prot                                                                              |                                                                                   | Prot                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | NA                                                                                  | Perm                                                                                | Prot                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases                                                       | 7                                                                                 |                                                                                   | 7                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                                                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Detector Phase                                                         | 7                                                                                 |                                                                                   | 7                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 6                                                                                   | 6                                                                                   | 5                                                                                   | 2                                                                                   |                                                                                     |
| Switch Phase                                                           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)                                                    | 5.0                                                                               |                                                                                   | 5.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 12.0                                                                                | 12.0                                                                                | 5.0                                                                                 | 12.0                                                                                |                                                                                     |
| Minimum Split (s)                                                      | 9.5                                                                               |                                                                                   | 9.5                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 25.4                                                                                | 25.4                                                                                | 25.8                                                                                | 25.4                                                                                |                                                                                     |
| Total Split (s)                                                        | 60.0                                                                              |                                                                                   | 60.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 64.0                                                                                | 64.0                                                                                | 36.0                                                                                | 100.0                                                                               |                                                                                     |
| Total Split (%)                                                        | 37.5%                                                                             |                                                                                   | 37.5%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 40.0%                                                                               | 40.0%                                                                               | 22.5%                                                                               | 62.5%                                                                               |                                                                                     |
| Maximum Green (s)                                                      | 55.5                                                                              |                                                                                   | 55.5                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 56.6                                                                                | 56.6                                                                                | 28.2                                                                                | 92.6                                                                                |                                                                                     |
| Yellow Time (s)                                                        | 3.5                                                                               |                                                                                   | 3.5                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 4.8                                                                                 | 4.8                                                                                 | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| All-Red Time (s)                                                       | 1.0                                                                               |                                                                                   | 1.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 2.6                                                                                 | 2.6                                                                                 | 3.0                                                                                 | 2.6                                                                                 |                                                                                     |
| Lost Time Adjust (s)                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)                                                    | 4.5                                                                               |                                                                                   | 4.5                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 7.4                                                                                 | 7.4                                                                                 | 7.8                                                                                 | 7.4                                                                                 |                                                                                     |
| Lead/Lag                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | Lag                                                                                 | Lag                                                                                 | Lead                                                                                |                                                                                     |                                                                                     |
| Lead-Lag Optimize?                                                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |                                                                                     |                                                                                     |
| Vehicle Extension (s)                                                  | 3.0                                                                               |                                                                                   | 3.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 4.0                                                                                 | 4.0                                                                                 | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Recall Mode                                                            | None                                                                              |                                                                                   | None                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | C-Max                                                                               | C-Max                                                                               | None                                                                                | C-Max                                                                               |                                                                                     |
| Act Effect Green (s)                                                   | 55.1                                                                              |                                                                                   | 55.1                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 56.6                                                                                | 56.6                                                                                | 28.6                                                                                | 93.0                                                                                |                                                                                     |
| Actuated g/C Ratio                                                     | 0.34                                                                              |                                                                                   | 0.34                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.35                                                                                | 0.35                                                                                | 0.18                                                                                | 0.58                                                                                |                                                                                     |
| v/c Ratio                                                              | 0.80                                                                              |                                                                                   | 0.97                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.69                                                                                | 0.47                                                                                | 1.00                                                                                | 0.56                                                                                |                                                                                     |
| Control Delay (s/veh)                                                  | 53.9                                                                              |                                                                                   | 63.6                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 62.2                                                                                | 22.9                                                                                | 96.0                                                                                | 15.9                                                                                |                                                                                     |
| Queue Delay                                                            | 3.3                                                                               |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 3.6                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.8                                                                                 |                                                                                     |
| Total Delay (s/veh)                                                    | 57.2                                                                              |                                                                                   | 63.6                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 65.9                                                                                | 22.9                                                                                | 96.0                                                                                | 16.7                                                                                |                                                                                     |
| LOS                                                                    | E                                                                                 |                                                                                   | E                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                    | E                                                                                   | C                                                                                   | F                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay (s/veh)                                                 |                                                                                   | 60.6                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 55.9                                                                                |                                                                                     |                                                                                     | 33.1                                                                                |                                                                                     |
| Approach LOS                                                           |                                                                                   | E                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | E                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |
| Queue Length 50th (ft)                                                 | 444                                                                               |                                                                                   | 530                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 474                                                                                 | 160                                                                                 | ~304                                                                                | 453                                                                                 |                                                                                     |
| Queue Length 95th (ft)                                                 | 529                                                                               |                                                                                   | #695                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 522                                                                                 | m283                                                                                | #506                                                                                | 527                                                                                 |                                                                                     |
| Internal Link Dist (ft)                                                |                                                                                   | 674                                                                               |                                                                                   |                                                                                   | 677                                                                               |                                                                                   |                                                                                    | 1602                                                                                |                                                                                     |                                                                                     | 365                                                                                 |                                                                                     |
| Turn Bay Length (ft)                                                   | 385                                                                               |                                                                                   | 385                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | 725                                                                                 |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)                                                    | 1145                                                                              |                                                                                   | 1074                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 1739                                                                                | 776                                                                                 | 281                                                                                 | 1919                                                                                |                                                                                     |
| Starvation Cap Reductn                                                 | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0                                                                                   | 0                                                                                   | 0                                                                                   | 500                                                                                 |                                                                                     |
| Spillback Cap Reductn                                                  | 148                                                                               |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 431                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   |                                                                                     |
| Storage Cap Reductn                                                    | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio                                                      | 0.91                                                                              |                                                                                   | 0.96                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.92                                                                                | 0.47                                                                                | 1.00                                                                                | 0.75                                                                                |                                                                                     |
| <b>Intersection Summary</b>                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Cycle Length: 160                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length: 160                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Offset: 73 (46%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Natural Cycle: 90                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Synchro 12 Report

## Lanes, Volumes, Timings

2-2027 NO BUILD AM PEAK HOUR

### 2: N. Courtenay Pkwy & S.R. 528 EB on-off Ramps

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay (s/veh): 51.5

Intersection LOS: D

Intersection Capacity Utilization 125.1%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

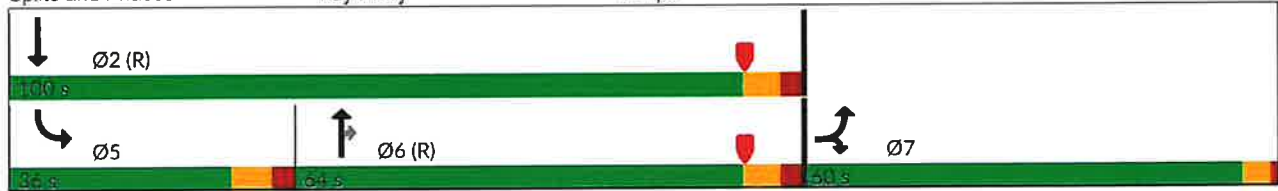
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: N. Courtenay Pkwy & S.R. 528 EB on-off Ramps



HCM 7th Signalized Intersection Summary  
2: N. Courtenay Pkwy & S.R. 528 EB on-off Ramps

2-2027 NO BUILD AM PEAK HOUR

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |                                                                                   |  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |  |  |  |                                                                                     |
| Traffic Volume (veh/h)       | 857                                                                               | 0                                                                                 | 971                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 1134                                                                                | 342                                                                                 | 263                                                                                 | 1005                                                                                | 0                                                                                   |
| Future Volume (veh/h)        | 857                                                                               | 0                                                                                 | 971                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 1134                                                                                | 342                                                                                 | 263                                                                                 | 1005                                                                                | 0                                                                                   |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Lane Width Adj.              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |                                                                                   |                                                                                   |                                                                                   | 1.00                                                                              | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped-Bike Adj(A_pbT)          | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   |                                                                                   | 1.00                                                                              |                                                                                     | 1.00                                                                                | 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                                                                                |
| Work Zone On Approach        | No                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | No                                                                                |                                                                                     |                                                                                     | No                                                                                  |                                                                                     |                                                                                     |
| Adj Sat Flow, veh/h/ln       | 1811                                                                              | 0                                                                                 | 1870                                                                              |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 | 1870                                                                                | 1870                                                                                | 1796                                                                                | 1870                                                                                | 0                                                                                   |
| Adj Flow Rate, veh/h         | 912                                                                               | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 | 1206                                                                                | 0                                                                                   | 280                                                                                 | 1069                                                                                | 0                                                                                   |
| Peak Hour Factor             | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              |                                                                                   |                                                                                   |                                                                                   | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Percent Heavy Veh, %         | 6                                                                                 | 0                                                                                 | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 | 2                                                                                   | 2                                                                                   | 7                                                                                   | 2                                                                                   | 0                                                                                   |
| Cap, veh/h                   | 989                                                                               | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 | 2072                                                                                |                                                                                     | 300                                                                                 | 2239                                                                                | 0                                                                                   |
| Arrive On Green              | 0.30                                                                              | 0.00                                                                              | 0.00                                                                              |                                                                                   |                                                                                   |                                                                                   | 0.00                                                                              | 0.13                                                                                | 0.00                                                                                | 0.06                                                                                | 0.21                                                                                | 0.00                                                                                |
| Sat Flow, veh/h              | 3346                                                                              | 0                                                                                 | 2790                                                                              |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 | 5274                                                                                | 1585                                                                                | 1711                                                                                | 3647                                                                                | 0                                                                                   |
| Grp Volume(v), veh/h         | 912                                                                               | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 | 1206                                                                                | 0                                                                                   | 280                                                                                 | 1069                                                                                | 0                                                                                   |
| Grp Sat Flow(s),veh/h/ln     | 1673                                                                              | 0                                                                                 | 1395                                                                              |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 | 1702                                                                                | 1585                                                                                | 1711                                                                                | 1777                                                                                | 0                                                                                   |
| Q Serve(g_s), s              | 42.2                                                                              | 0.0                                                                               | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               | 35.5                                                                                | 0.0                                                                                 | 26.1                                                                                | 42.3                                                                                | 0.0                                                                                 |
| Cycle Q Clear(g_c), s        | 42.2                                                                              | 0.0                                                                               | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               | 35.5                                                                                | 0.0                                                                                 | 26.1                                                                                | 42.3                                                                                | 0.0                                                                                 |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              |                                                                                   |                                                                                   |                                                                                   | 0.00                                                                              |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 0.00                                                                                |
| Lane Grp Cap(c), veh/h       | 989                                                                               | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 | 2072                                                                                |                                                                                     | 300                                                                                 | 2239                                                                                | 0                                                                                   |
| V/C Ratio(X)                 | 0.92                                                                              | 0.00                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.00                                                                              | 0.58                                                                                |                                                                                     | 0.93                                                                                | 0.48                                                                                | 0.00                                                                                |
| Avail Cap(c_a), veh/h        | 1161                                                                              | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 | 2072                                                                                |                                                                                     | 302                                                                                 | 2239                                                                                | 0                                                                                   |
| HCM Platoon Ratio            | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |                                                                                   |                                                                                   |                                                                                   | 1.00                                                                              | 0.33                                                                                | 0.33                                                                                | 0.33                                                                                | 0.33                                                                                | 1.00                                                                                |
| Upstream Filter(I)           | 1.00                                                                              | 0.00                                                                              | 0.00                                                                              |                                                                                   |                                                                                   |                                                                                   | 0.00                                                                              | 1.00                                                                                | 0.00                                                                                | 0.85                                                                                | 0.85                                                                                | 0.00                                                                                |
| Uniform Delay (d), s/veh     | 54.6                                                                              | 0.0                                                                               | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               | 56.5                                                                                | 0.0                                                                                 | 74.4                                                                                | 40.2                                                                                | 0.0                                                                                 |
| Incr Delay (d2), s/veh       | 11.0                                                                              | 0.0                                                                               | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               | 1.2                                                                                 | 0.0                                                                                 | 31.2                                                                                | 0.6                                                                                 | 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(95%),veh/ln     | 26.7                                                                              | 0.0                                                                               | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               | 23.2                                                                                | 0.0                                                                                 | 20.4                                                                                | 27.2                                                                                | 0.0                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d), s/veh        | 65.5                                                                              | 0.0                                                                               | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               | 57.7                                                                                | 0.0                                                                                 | 105.6                                                                               | 40.8                                                                                | 0.0                                                                                 |
| LnGrp LOS                    | E                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | E                                                                                   |                                                                                     | F                                                                                   | D                                                                                   |                                                                                     |
| Approach Vol, veh/h          | 912                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1206                                                                              |                                                                                     |                                                                                     | 1349                                                                                |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 65.5                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 57.7                                                                              |                                                                                     |                                                                                     | 54.3                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | E                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | E                                                                                 |                                                                                     |                                                                                     | D                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 2                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 5                                                                                 |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 108.2                                                                             |                                                                                   |                                                                                   | 51.8                                                                              |                                                                                   |                                                                                   | 35.9                                                                              |                                                                                     |                                                                                     | 72.3                                                                                |                                                                                     |                                                                                     |
| Change Period (Y+Rc), s      | 7.4                                                                               |                                                                                   |                                                                                   | 4.5                                                                               |                                                                                   |                                                                                   | 7.8                                                                               |                                                                                     |                                                                                     | 7.4                                                                                 |                                                                                     |                                                                                     |
| Max Green Setting (Gmax), s  | 92.6                                                                              |                                                                                   |                                                                                   | 55.5                                                                              |                                                                                   |                                                                                   | 28.2                                                                              |                                                                                     |                                                                                     | 56.6                                                                                |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 44.3                                                                              |                                                                                   |                                                                                   | 44.2                                                                              |                                                                                   |                                                                                   | 28.1                                                                              |                                                                                     |                                                                                     | 37.5                                                                                |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 13.5                                                                              |                                                                                   |                                                                                   | 3.0                                                                               |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                     |                                                                                     | 10.2                                                                                |                                                                                     |                                                                                     |

Intersection Summary

|                              |      |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 58.4 |
| HCM 7th LOS                  | E    |

Notes

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

Synchro 12 Report

## Lanes, Volumes, Timings

2-2027 NO BUILD AM PEAK HOUR

## 3: N. Courtenay Pkwy &amp; S.R. 528 WB on-off Ramps

|                             |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |                                                                                   |                                                                                   |  |                                                                                   |  |  |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 236                                                                               | 0                                                                                 | 427                                                                               | 531                                                                                | 1585                                                                                | 0                                                                                   | 0                                                                                   | 1130                                                                                | 514                                                                                 |
| Future Volume (vph)         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 236                                                                               | 0                                                                                 | 427                                                                               | 531                                                                                | 1585                                                                                | 0                                                                                   | 0                                                                                   | 1130                                                                                | 514                                                                                 |
| Confl. Peds. (#/hr)         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 1                                                                                 |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Confl. Bikes (#/hr)         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 1                                                                                   |
| Peak Hour Factor            | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                               | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                |
| Heavy Vehicles (%)          | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 4%                                                                                | 3%                                                                                 | 4%                                                                                  | 2%                                                                                  | 2%                                                                                  | 4%                                                                                  | 10%                                                                                 |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)       | 0                                                                                 | 0                                                                                 | 0                                                                                 | 254                                                                               | 0                                                                                 | 459                                                                               | 571                                                                                | 1704                                                                                | 0                                                                                   | 0                                                                                   | 1215                                                                                | 553                                                                                 |
| Turn Type                   |                                                                                   |                                                                                   |                                                                                   | Prot                                                                              |                                                                                   | Perm                                                                              | Prot                                                                               | NA                                                                                  |                                                                                     |                                                                                     | NA                                                                                  | Perm                                                                                |
| Protected Phases            |                                                                                   |                                                                                   |                                                                                   | 3                                                                                 |                                                                                   |                                                                                   | 1                                                                                  | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |
| Permitted Phases            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 3                                                                                 |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 2                                                                                   |
| Detector Phase              |                                                                                   |                                                                                   |                                                                                   | 3                                                                                 |                                                                                   | 3                                                                                 | 1                                                                                  | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   | 2                                                                                   |
| Switch Phase                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)         |                                                                                   |                                                                                   |                                                                                   | 7.0                                                                               |                                                                                   | 7.0                                                                               | 5.0                                                                                | 12.0                                                                                |                                                                                     |                                                                                     | 12.0                                                                                | 12.0                                                                                |
| Minimum Split (s)           |                                                                                   |                                                                                   |                                                                                   | 14.0                                                                              |                                                                                   | 14.0                                                                              | 22.5                                                                               | 22.5                                                                                |                                                                                     |                                                                                     | 22.5                                                                                | 22.5                                                                                |
| Total Split (s)             |                                                                                   |                                                                                   |                                                                                   | 40.0                                                                              |                                                                                   | 40.0                                                                              | 53.0                                                                               | 120.0                                                                               |                                                                                     |                                                                                     | 67.0                                                                                | 67.0                                                                                |
| Total Split (%)             |                                                                                   |                                                                                   |                                                                                   | 25.0%                                                                             |                                                                                   | 25.0%                                                                             | 33.1%                                                                              | 75.0%                                                                               |                                                                                     |                                                                                     | 41.9%                                                                               | 41.9%                                                                               |
| Maximum Green (s)           |                                                                                   |                                                                                   |                                                                                   | 33.0                                                                              |                                                                                   | 33.0                                                                              | 45.1                                                                               | 112.5                                                                               |                                                                                     |                                                                                     | 59.5                                                                                | 59.5                                                                                |
| Yellow Time (s)             |                                                                                   |                                                                                   |                                                                                   | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.8                                                                                | 5.3                                                                                 |                                                                                     |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |
| All-Red Time (s)            |                                                                                   |                                                                                   |                                                                                   | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.1                                                                                | 2.2                                                                                 |                                                                                     |                                                                                     | 2.2                                                                                 | 2.2                                                                                 |
| Lost Time Adjust (s)        |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 |                                                                                     |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |
| Total Lost Time (s)         |                                                                                   |                                                                                   |                                                                                   | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.9                                                                                | 7.5                                                                                 |                                                                                     |                                                                                     | 7.5                                                                                 | 7.5                                                                                 |
| Lead/Lag                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                               |                                                                                     |                                                                                     |                                                                                     | Lag                                                                                 | Lag                                                                                 |
| Lead-Lag Optimize?          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                |                                                                                     |                                                                                     |                                                                                     | Yes                                                                                 | Yes                                                                                 |
| Vehicle Extension (s)       |                                                                                   |                                                                                   |                                                                                   | 3.0                                                                               |                                                                                   | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 |                                                                                     |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |
| Recall Mode                 |                                                                                   |                                                                                   |                                                                                   | None                                                                              |                                                                                   | None                                                                              | Min                                                                                | C-Max                                                                               |                                                                                     |                                                                                     | C-Max                                                                               | C-Max                                                                               |
| Act Effct Green (s)         |                                                                                   |                                                                                   |                                                                                   | 33.0                                                                              |                                                                                   | 33.0                                                                              | 32.3                                                                               | 112.5                                                                               |                                                                                     |                                                                                     | 72.3                                                                                | 72.3                                                                                |
| Actuated g/C Ratio          |                                                                                   |                                                                                   |                                                                                   | 0.21                                                                              |                                                                                   | 0.21                                                                              | 0.20                                                                               | 0.70                                                                                |                                                                                     |                                                                                     | 0.45                                                                                | 0.45                                                                                |
| v/c Ratio                   |                                                                                   |                                                                                   |                                                                                   | 0.36                                                                              |                                                                                   | 1.20                                                                              | 0.83                                                                               | 0.70                                                                                |                                                                                     |                                                                                     | 0.54                                                                                | 0.72                                                                                |
| Control Delay (s/veh)       |                                                                                   |                                                                                   |                                                                                   | 56.1                                                                              |                                                                                   | 154.3                                                                             | 64.2                                                                               | 36.3                                                                                |                                                                                     |                                                                                     | 33.5                                                                                | 28.7                                                                                |
| Queue Delay                 |                                                                                   |                                                                                   |                                                                                   | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.3                                                                                | 48.5                                                                                |                                                                                     |                                                                                     | 0.3                                                                                 | 0.0                                                                                 |
| Total Delay (s/veh)         |                                                                                   |                                                                                   |                                                                                   | 56.1                                                                              |                                                                                   | 154.3                                                                             | 64.5                                                                               | 84.8                                                                                |                                                                                     |                                                                                     | 33.8                                                                                | 28.7                                                                                |
| LOS                         |                                                                                   |                                                                                   |                                                                                   | E                                                                                 |                                                                                   | F                                                                                 | E                                                                                  | F                                                                                   |                                                                                     |                                                                                     | C                                                                                   | C                                                                                   |
| Approach Delay (s/veh)      |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 119.3                                                                             |                                                                                   |                                                                                    | 79.7                                                                                |                                                                                     |                                                                                     | 32.2                                                                                |                                                                                     |
| Approach LOS                |                                                                                   |                                                                                   |                                                                                   |                                                                                   | F                                                                                 |                                                                                   |                                                                                    | E                                                                                   |                                                                                     |                                                                                     | C                                                                                   |                                                                                     |
| Queue Length 50th (ft)      |                                                                                   |                                                                                   |                                                                                   | 119                                                                               |                                                                                   | ~506                                                                              | 278                                                                                | 952                                                                                 |                                                                                     |                                                                                     | 334                                                                                 | 306                                                                                 |
| Queue Length 95th (ft)      |                                                                                   |                                                                                   |                                                                                   | 163                                                                               |                                                                                   | #735                                                                              | 335                                                                                | 1026                                                                                |                                                                                     |                                                                                     | 411                                                                                 | 501                                                                                 |
| Internal Link Dist (ft)     |                                                                                   | 690                                                                               |                                                                                   |                                                                                   | 789                                                                               |                                                                                   |                                                                                    | 365                                                                                 |                                                                                     |                                                                                     | 641                                                                                 |                                                                                     |
| Turn Bay Length (ft)        |                                                                                   |                                                                                   |                                                                                   | 150                                                                               |                                                                                   | 275                                                                               |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     | 90                                                                                  |
| Base Capacity (vph)         |                                                                                   |                                                                                   |                                                                                   | 708                                                                               |                                                                                   | 383                                                                               | 958                                                                                | 2440                                                                                |                                                                                     |                                                                                     | 2253                                                                                | 767                                                                                 |
| Starvation Cap Reductn      |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                 | 78                                                                                 | 1081                                                                                |                                                                                     |                                                                                     | 0                                                                                   | 0                                                                                   |
| Spillback Cap Reductn       |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                  | 0                                                                                   |                                                                                     |                                                                                     | 447                                                                                 | 0                                                                                   |
| Storage Cap Reductn         |                                                                                   |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                  | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   | 0                                                                                   |
| Reduced v/c Ratio           |                                                                                   |                                                                                   |                                                                                   | 0.36                                                                              |                                                                                   | 1.20                                                                              | 0.65                                                                               | 1.25                                                                                |                                                                                     |                                                                                     | 0.67                                                                                | 0.72                                                                                |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Cycle Length: 160           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length: 160  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

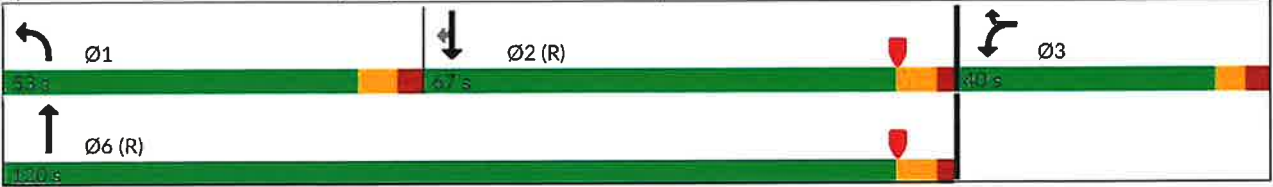
Synchro 12 Report

Lanes, Volumes, Timings  
3: N. Courtenay Pkwy & S.R. 528 WB on-off Ramps

2-2027 NO BUILD AM PEAK HOUR

|                                                                                                             |                        |
|-------------------------------------------------------------------------------------------------------------|------------------------|
| Offset: 25 (16%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow                                      |                        |
| Natural Cycle: 70                                                                                           |                        |
| Control Type: Actuated-Coordinated                                                                          |                        |
| Maximum v/c Ratio: 1.20                                                                                     |                        |
| Intersection Signal Delay (s/veh): 68.0                                                                     | Intersection LOS: E    |
| Intersection Capacity Utilization 125.1%                                                                    | ICU Level of Service H |
| Analysis Period (min) 15                                                                                    |                        |
| ~ Volume exceeds capacity, queue is theoretically infinite.<br>Queue shown is maximum after two cycles.     |                        |
| # 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |                        |

Splits and Phases: 3: N. Courtenay Pkwy & S.R. 528 WB on-off Ramps



HCM 7th Signalized Intersection Summary  
3: N. Courtenay Pkwy & S.R. 528 WB on-off Ramps

2-2027 NO BUILD AM PEAK HOUR

|                              |  |      |     |       |      |       |      |      |      |      |      |      |
|------------------------------|------------------------------------------------------------------------------------|------|-----|-------|------|-------|------|------|------|------|------|------|
| Movement                     | EBL                                                                                | EBT  | EBR | WBL   | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations          |                                                                                    |      |     | ↔↔    |      | ↗     | ↔↔   | ↕↕   |      |      | ↕↕↕  | ↗    |
| Traffic Volume (veh/h)       | 0                                                                                  | 0    | 0   | 236   | 0    | 427   | 531  | 1585 | 0    | 0    | 1130 | 514  |
| Future Volume (veh/h)        | 0                                                                                  | 0    | 0   | 236   | 0    | 427   | 531  | 1585 | 0    | 0    | 1130 | 514  |
| Initial Q (Qb), veh          |                                                                                    |      |     | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Lane Width Adj.              |                                                                                    |      |     | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT)          |                                                                                    |      |     | 1.00  |      | 1.00  | 1.00 |      | 1.00 | 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 |
| Work Zone On Approach        |                                                                                    |      |     | No    |      |       |      | No   |      |      |      | No   |
| Adj Sat Flow, veh/h/ln       |                                                                                    |      |     | 1870  | 0    | 1841  | 1856 | 1841 | 0    | 0    | 1841 | 1752 |
| Adj Flow Rate, veh/h         |                                                                                    |      |     | 254   | 0    | 389   | 571  | 1704 | 0    | 0    | 1215 | 422  |
| Peak Hour Factor             |                                                                                    |      |     | 0.93  | 0.93 | 0.93  | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, %         |                                                                                    |      |     | 2     | 0    | 4     | 3    | 4    | 0    | 0    | 4    | 10   |
| Cap, veh/h                   |                                                                                    |      |     | 713   | 0    | 322   | 627  | 2459 | 0    | 0    | 2366 | 685  |
| Arrive On Green              |                                                                                    |      |     | 0.21  | 0.00 | 0.21  | 0.37 | 1.00 | 0.00 | 0.00 | 0.47 | 0.47 |
| Sat Flow, veh/h              |                                                                                    |      |     | 3456  | 0    | 1560  | 3428 | 3589 | 0    | 0    | 5191 | 1454 |
| Grp Volume(v), veh/h         |                                                                                    |      |     | 254   | 0    | 389   | 571  | 1704 | 0    | 0    | 1215 | 422  |
| Grp Sat Flow(s),veh/h/ln     |                                                                                    |      |     | 1728  | 0    | 1560  | 1714 | 1749 | 0    | 0    | 1675 | 1454 |
| Q Serve(g_s), s              |                                                                                    |      |     | 10.1  | 0.0  | 33.0  | 25.3 | 0.0  | 0.0  | 0.0  | 27.0 | 34.6 |
| Cycle Q Clear(g_c), s        |                                                                                    |      |     | 10.1  | 0.0  | 33.0  | 25.3 | 0.0  | 0.0  | 0.0  | 27.0 | 34.6 |
| Prop In Lane                 |                                                                                    |      |     | 1.00  |      | 1.00  | 1.00 |      | 0.00 | 0.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h       |                                                                                    |      |     | 713   | 0    | 322   | 627  | 2459 | 0    | 0    | 2366 | 685  |
| V/C Ratio(X)                 |                                                                                    |      |     | 0.36  | 0.00 | 1.21  | 0.91 | 0.69 | 0.00 | 0.00 | 0.51 | 0.62 |
| Avail Cap(c_a), veh/h        |                                                                                    |      |     | 713   | 0    | 322   | 966  | 2459 | 0    | 0    | 2366 | 685  |
| HCM Platoon Ratio            |                                                                                    |      |     | 1.00  | 1.00 | 1.00  | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           |                                                                                    |      |     | 1.00  | 0.00 | 1.00  | 0.59 | 0.59 | 0.00 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     |                                                                                    |      |     | 54.4  | 0.0  | 63.5  | 49.5 | 0.0  | 0.0  | 0.0  | 29.5 | 31.6 |
| Incr Delay (d2), s/veh       |                                                                                    |      |     | 0.3   | 0.0  | 119.5 | 5.5  | 1.0  | 0.0  | 0.0  | 0.8  | 4.1  |
| Initial Q Delay(d3), s/veh   |                                                                                    |      |     | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(95%),veh/ln     |                                                                                    |      |     | 7.7   | 0.0  | 34.5  | 13.4 | 0.6  | 0.0  | 0.0  | 16.2 | 18.2 |
| Unsig. Movement Delay, s/veh |                                                                                    |      |     |       |      |       |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        |                                                                                    |      |     | 54.7  | 0.0  | 183.0 | 55.0 | 1.0  | 0.0  | 0.0  | 30.3 | 35.7 |
| LnGrp LOS                    |                                                                                    |      |     | D     |      | F     | D    | A    |      |      | C    | D    |
| Approach Vol, veh/h          |                                                                                    |      |     | 643   |      |       |      | 2275 |      |      |      | 1637 |
| Approach Delay, s/veh        |                                                                                    |      |     | 132.3 |      |       |      | 14.5 |      |      |      | 31.7 |
| Approach LOS                 |                                                                                    |      |     | F     |      |       |      | B    |      |      |      | C    |
| Timer - Assigned Phs         | 1                                                                                  | 2    |     |       |      | 6     |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 37.2                                                                               | 82.8 |     |       |      | 120.0 |      | 40.0 |      |      |      |      |
| Change Period (Y+Rc), s      | 7.9                                                                                | 7.5  |     |       |      | 7.5   |      | 7.0  |      |      |      |      |
| Max Green Setting (Gmax), s  | 45.1                                                                               | 59.5 |     |       |      | 112.5 |      | 33.0 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 27.3                                                                               | 36.6 |     |       |      | 2.0   |      | 35.0 |      |      |      |      |
| Green Ext Time (p_c), s      | 1.9                                                                                | 14.1 |     |       |      | 22.6  |      | 0.0  |      |      |      |      |
| <b>Intersection Summary</b>  |                                                                                    |      |     |       |      |       |      |      |      |      |      |      |
| HCM 7th Control Delay, s/veh |                                                                                    |      |     | 37.3  |      |       |      |      |      |      |      |      |
| HCM 7th LOS                  |                                                                                    |      |     | D     |      |       |      |      |      |      |      |      |

Lanes, Volumes, Timings

2-2027 NO BUILD AM PEAK HOUR

11: N. Courtenay Pkwy & Proposed Dwy 1

|                                         |  |  |  |  |  |  |
|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                              | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations                     |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)                    | 0                                                                                 | 0                                                                                 | 1335                                                                              | 0                                                                                 | 0                                                                                 | 1808                                                                              |
| Future Volume (vph)                     | 0                                                                                 | 0                                                                                 | 1335                                                                              | 0                                                                                 | 0                                                                                 | 1808                                                                              |
| Peak Hour Factor                        | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |
| Shared Lane Traffic (%)                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)                   | 0                                                                                 | 0                                                                                 | 1451                                                                              | 0                                                                                 | 0                                                                                 | 1965                                                                              |
| Sign Control                            | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type: Unsignalized              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization 53.3% |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                   |
| Analysis Period (min) 15                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

HCM 7th TWSC  
11: N. Courtenay Pkwy & Proposed Dwy 1

2-2027 NO BUILD AM PEAK HOUR

| Intersection               |        |                                |      |        |      |      |
|----------------------------|--------|--------------------------------|------|--------|------|------|
| Int Delay, s/veh           | 0      |                                |      |        |      |      |
| Movement                   | WBL    | WBR                            | NBT  | NBR    | SBL  | SBT  |
| Lane Configurations        |        | ↗                              | ↗↗   |        |      | ↗↗   |
| Traffic Vol, veh/h         | 0      | 0                              | 1335 | 0      | 0    | 1808 |
| Future Vol, veh/h          | 0      | 0                              | 1335 | 0      | 0    | 1808 |
| Conflicting Peds. #/hr     | 0      | 0                              | 0    | 0      | 0    | 0    |
| Sign Control               | Stop   | Stop                           | Free | Free   | Free | Free |
| RT Channelized             | -      | None                           | -    | None   | -    | None |
| Storage Length             | -      | 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                  | 0      | 0                              | 1451 | 0      | 0    | 1965 |
|                            |        |                                |      |        |      |      |
| Major/Minor                | Minor1 | Major1                         |      | Major2 |      |      |
| Conflicting Flow All       | -      | 726                            | 0    | 0      | -    | -    |
| Stage 1                    | -      | -                              | -    | -      | -    | -    |
| Stage 2                    | -      | -                              | -    | -      | -    | -    |
| Critical Hdwy              | -      | 6.94                           | -    | -      | -    | -    |
| Critical Hdwy Stg 1        | -      | -                              | -    | -      | -    | -    |
| Critical Hdwy Stg 2        | -      | -                              | -    | -      | -    | -    |
| Follow-up Hdwy             | -      | 3.32                           | -    | -      | -    | -    |
| Pot Cap-1 Maneuver         | 0      | *716                           | -    | -      | 0    | -    |
| Stage 1                    | 0      | -                              | -    | -      | 0    | -    |
| Stage 2                    | 0      | -                              | -    | -      | 0    | -    |
| Platoon blocked, %         |        | 0                              | -    | -      | -    | -    |
| Mov Cap-1 Maneuver         | -      | *716                           | -    | -      | -    | -    |
| Mov Cap-2 Maneuver         | -      | -                              | -    | -      | -    | -    |
| Stage 1                    | -      | -                              | -    | -      | -    | -    |
| Stage 2                    | -      | -                              | -    | -      | -    | -    |
|                            |        |                                |      |        |      |      |
| Approach                   | WB     | NB                             |      | SB     |      |      |
| HCM Ctrl Dly, s/v          | 0      | 0                              |      | 0      |      |      |
| HCM LOS                    | A      |                                |      |        |      |      |
|                            |        |                                |      |        |      |      |
| Minor Lane/Major Mvmt      | NBT    | NBRWBLn1                       | SBT  |        |      |      |
| Capacity (veh/h)           | -      | -                              | -    | -      |      |      |
| HCM Lane V/C Ratio         | -      | -                              | -    | -      |      |      |
| HCM Ctrl Dly (s/v)         | -      | -                              | 0    | -      |      |      |
| HCM Lane LOS               | -      | -                              | A    | -      |      |      |
| HCM 95th %tile Q(veh)      | -      | -                              | -    | -      |      |      |
| Notes                      |        |                                |      |        |      |      |
| ~: Volume exceeds capacity |        | \$: Delay exceeds 300s         |      |        |      |      |
| +: Computation Not Defined |        | *: All major volume in platoon |      |        |      |      |

Synchro 12 Report