

APPENDIX E - TRAFFIC ANALYSIS

PM Peak Existing No Build
1: Old Bath Road (S) & Route 1

8/15/2013

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | SEL | SER | NEL | NET | SWT | SWR |
| Lane Configurations |  | | |  |  | |
| Volume (veh/h) | 5 | 25 | 50 | 799 | 703 | 6 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.63 | 0.63 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 8 | 40 | 61 | 974 | 857 | 7 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1957 | 861 | 865 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1957 | 861 | 865 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 88 | 89 | 92 | | | |
| cM capacity (veh/h) | 65 | 352 | 787 | | | |
| Direction, Lane # | SE 1 | NE 1 | SW 1 | | | |
| Volume Total | 48 | 1035 | 865 | | | |
| Volume Left | 8 | 61 | 0 | | | |
| Volume Right | 40 | 0 | 7 | | | |
| cSH | 203 | 787 | 1700 | | | |
| Volume to Capacity | 0.23 | 0.08 | 0.51 | | | |
| Queue Length 95th (ft) | 22 | 6 | 0 | | | |
| Control Delay (s) | 28.0 | 2.3 | 0.0 | | | |
| Lane LOS | D | A | | | | |
| Approach Delay (s) | 28.0 | 2.3 | 0.0 | | | |
| Approach LOS | D | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 1.9 | | | |
| Intersection Capacity Utilization | | 93.0% | | ICU Level of Service | | F |
| Analysis Period (min) | | | 15 | | | |

PM Peak Existing No Build
4: Shopping Center & Route 1

8/15/2013

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | SEL | SET | SER | NWL | NWT | NWR | NEL | NET | NER | SWL | SWT | SWR |
| Lane Configurations | |  |  | |  |  | |  | |  |  | |
| Volume (veh/h) | 11 | 4 | 5 | 12 | 3 | 83 | 4 | 854 | 23 | 55 | 726 | 19 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.84 | 0.84 | 0.84 | 0.87 | 0.87 | 0.87 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 15 | 6 | 7 | 14 | 4 | 99 | 5 | 982 | 26 | 57 | 756 | 20 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | 1 | | | 2 | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1936 | 1898 | 766 | 1881 | 1895 | 995 | 776 | | | 1008 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1936 | 1898 | 766 | 1881 | 1895 | 995 | 776 | | | 1008 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 48 | 91 | 98 | 70 | 94 | 67 | 99 | | | 92 | | |
| cM capacity (veh/h) | 30 | 64 | 406 | 47 | 64 | 300 | 849 | | | 695 | | |
| Direction, Lane # | | | | | | | | | | | | |
| | SE 1 | NW 1 | NE 1 | SW 1 | SW 2 | | | | | | | |
| Volume Total | 28 | 117 | 1013 | 57 | 776 | | | | | | | |
| Volume Left | 15 | 14 | 5 | 57 | 0 | | | | | | | |
| Volume Right | 7 | 99 | 26 | 0 | 20 | | | | | | | |
| cSH | 49 | 330 | 849 | 695 | 1700 | | | | | | | |
| Volume to Capacity | 0.58 | 0.35 | 0.01 | 0.08 | 0.46 | | | | | | | |
| Queue Length 95th (ft) | 55 | 39 | 0 | 7 | 0 | | | | | | | |
| Control Delay (s) | 151.7 | 36.3 | 0.2 | 10.6 | 0.0 | | | | | | | |
| Lane LOS | F | E | A | B | | | | | | | | |
| Approach Delay (s) | 151.7 | 36.3 | 0.2 | 0.7 | | | | | | | | |
| Approach LOS | F | E | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 4.7 | | | | | | | | | |
| Intersection Capacity Utilization | | | 65.0% | | ICU Level of Service | | | | | C | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

PM Peak Existing No Build
8: Route 144 & Route 1

8/15/2013

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | WBL | WBR | NET | NER | SWL | SWT |
| Lane Configurations |  |  |  | |  |  |
| Volume (veh/h) | 52 | 76 | 920 | 52 | 70 | 679 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.86 | 0.86 | 0.95 | 0.95 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 60 | 88 | 968 | 55 | 76 | 738 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | 2 | | | | |
| Median type | | | None | | | None |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1886 | 996 | | | 1023 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1886 | 996 | | | 1023 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 12 | 70 | | | 89 | |
| cM capacity (veh/h) | 69 | 299 | | | 682 | |
| Direction, Lane # | WB 1 | NE 1 | SW 1 | SW 2 | | |
| Volume Total | 149 | 1023 | 76 | 738 | | |
| Volume Left | 60 | 0 | 76 | 0 | | |
| Volume Right | 88 | 55 | 0 | 0 | | |
| cSH | 147 | 1700 | 682 | 1700 | | |
| Volume to Capacity | 1.01 | 0.60 | 0.11 | 0.43 | | |
| Queue Length 95th (ft) | 189 | 0 | 9 | 0 | | |
| Control Delay (s) | 136.8 | 0.0 | 10.9 | 0.0 | | |
| Lane LOS | F | | B | | | |
| Approach Delay (s) | 136.8 | 0.0 | 1.0 | | | |
| Approach LOS | F | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 10.7 | | | |
| Intersection Capacity Utilization | | | 68.2% | | ICU Level of Service | C |
| Analysis Period (min) | | | 15 | | | |

PM Peak Existing No Build
11: Birch Point Road & Route 1

8/15/2013

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | NWL | NWR | NET | NER | SWL | SWT |
| Lane Configurations |  | |  | | |  |
| Volume (veh/h) | 5 | 33 | 976 | 17 | 51 | 788 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.73 | 0.73 | 0.85 | 0.85 | 0.97 | 0.97 |
| Hourly flow rate (vph) | 7 | 45 | 1148 | 20 | 53 | 812 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 2076 | 1158 | | | 1168 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2076 | 1158 | | | 1168 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 87 | 81 | | | 91 | |
| cM capacity (veh/h) | 55 | 241 | | | 605 | |
| Direction, Lane # | NW 1 | NE 1 | SW 1 | | | |
| Volume Total | 52 | 1168 | 865 | | | |
| Volume Left | 7 | 0 | 53 | | | |
| Volume Right | 45 | 20 | 0 | | | |
| cSH | 166 | 1700 | 605 | | | |
| Volume to Capacity | 0.31 | 0.69 | 0.09 | | | |
| Queue Length 95th (ft) | 31 | 0 | 7 | | | |
| Control Delay (s) | 36.2 | 0.0 | 2.5 | | | |
| Lane LOS | E | | A | | | |
| Approach Delay (s) | 36.2 | 0.0 | 2.5 | | | |
| Approach LOS | E | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 1.9 | | | |
| Intersection Capacity Utilization | | | 93.3% | ICU Level of Service | | F |
| Analysis Period (min) | | | 15 | | | |

PM Peak Existing No Build
13: Old Bath Road (N) & Route 1

8/15/2013

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | EBL | EBR | NEL | NET | SWT | SWR |
| Lane Configurations | ↘ | | | ↖ | ↗ | |
| Volume (veh/h) | 18 | 5 | 4 | 1028 | 836 | 22 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.72 | 0.72 | 0.91 | 0.91 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 25 | 7 | 4 | 1130 | 853 | 22 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 2003 | 864 | 876 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2003 | 864 | 876 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 62 | 98 | 99 | | | |
| cM capacity (veh/h) | 66 | 357 | 780 | | | |
| Direction, Lane # | EB 1 | NE 1 | SW 1 | | | |
| Volume Total | 32 | 1134 | 876 | | | |
| Volume Left | 25 | 4 | 0 | | | |
| Volume Right | 7 | 0 | 22 | | | |
| cSH | 80 | 780 | 1700 | | | |
| Volume to Capacity | 0.40 | 0.01 | 0.52 | | | |
| Queue Length 95th (ft) | 39 | 0 | 0 | | | |
| Control Delay (s) | 76.8 | 0.2 | 0.0 | | | |
| Lane LOS | F | A | | | | |
| Approach Delay (s) | 76.8 | 0.2 | 0.0 | | | |
| Approach LOS | F | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 1.3 | | | |
| Intersection Capacity Utilization | | | 67.3% | ICU Level of Service | | C |
| Analysis Period (min) | | | 15 | | | |

PM Peak Future No Build
1: Old Bath Road (S) & Route 1

8/15/2013

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | SEL | SER | NEL | NET | SWT | SWR |
| Lane Configurations | Y | | | 4 | 1 | |
| Volume (veh/h) | 17 | 29 | 60 | 905 | 830 | 23 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.63 | 0.63 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 27 | 46 | 73 | 1104 | 1012 | 28 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 2276 | 1026 | 1040 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2276 | 1026 | 1040 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 32 | 84 | 89 | | | |
| cM capacity (veh/h) | 40 | 282 | 676 | | | |
| Direction, Lane # | SE 1 | NE 1 | SW 1 | | | |
| Volume Total | 73 | 1177 | 1040 | | | |
| Volume Left | 27 | 73 | 0 | | | |
| Volume Right | 46 | 0 | 28 | | | |
| cSH | 87 | 676 | 1700 | | | |
| Volume to Capacity | 0.84 | 0.11 | 0.61 | | | |
| Queue Length 95th (ft) | 111 | 9 | 0 | | | |
| Control Delay (s) | 140.7 | 3.9 | 0.0 | | | |
| Lane LOS | F | A | | | | |
| Approach Delay (s) | 140.7 | 3.9 | 0.0 | | | |
| Approach LOS | F | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 6.5 | | | |
| Intersection Capacity Utilization | | | 106.9% | ICU Level of Service | | G |
| Analysis Period (min) | | | 15 | | | |

PM Peak Future No Build
4: Shopping Center & Route 1

8/15/2013

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | SEL | SET | SER | NWL | NWT | NWR | NEL | NET | NER | SWL | SWT | SWR |
| Lane Configurations | |  |  | |  |  | |  |  |  |  |  |
| Volume (veh/h) | 12 | 4 | 6 | 13 | 3 | 91 | 4 | 973 | 25 | 61 | 829 | 21 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.84 | 0.84 | 0.84 | 0.87 | 0.87 | 0.87 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 17 | 6 | 8 | 15 | 4 | 108 | 5 | 1118 | 29 | 64 | 864 | 22 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | 1 | | | 2 | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2199 | 2158 | 874 | 2140 | 2154 | 1133 | 885 | | | 1147 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2199 | 2158 | 874 | 2140 | 2154 | 1133 | 885 | | | 1147 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 87 | 98 | 47 | 92 | 57 | 99 | | | 90 | | |
| cM capacity (veh/h) | 16 | 43 | 352 | 29 | 43 | 249 | 773 | | | 616 | | |
| Direction, Lane # | SE 1 | NW 1 | NE 1 | SW 1 | SW 2 | | | | | | | |
| Volume Total | 31 | 127 | 1152 | 64 | 885 | | | | | | | |
| Volume Left | 17 | 15 | 5 | 64 | 0 | | | | | | | |
| Volume Right | 8 | 108 | 29 | 0 | 22 | | | | | | | |
| cSH | 27 | 212 | 773 | 616 | 1700 | | | | | | | |
| Volume to Capacity | 1.16 | 0.60 | 0.01 | 0.10 | 0.52 | | | | | | | |
| Queue Length 95th (ft) | 92 | 86 | 0 | 9 | 0 | | | | | | | |
| Control Delay (s) | 441.3 | 59.4 | 0.2 | 11.5 | 0.0 | | | | | | | |
| Lane LOS | F | F | A | B | | | | | | | | |
| Approach Delay (s) | 441.3 | 59.4 | 0.2 | 0.8 | | | | | | | | |
| Approach LOS | F | F | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 9.8 | | | | | | | | | |
| Intersection Capacity Utilization | | | 71.9% | | ICU Level of Service | | | | | C | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

PM Peak Future No Build
8: Route 144 & Route 1

8/15/2013

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | WBL | WBR | NET | NER | SWL | SWT |
| Lane Configurations |  |  |  | |  |  |
| Volume (veh/h) | 101 | 127 | 1028 | 67 | 77 | 754 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.86 | 0.86 | 0.95 | 0.95 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 117 | 148 | 1082 | 71 | 84 | 820 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | 2 | | | | |
| Median type | | | None | | | None |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 2104 | 1117 | | | 1153 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2104 | 1117 | | | 1153 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 0 | 42 | | | 86 | |
| cM capacity (veh/h) | 49 | 254 | | | 610 | |
| Direction, Lane # | WB 1 | NE 1 | SW 1 | SW 2 | | |
| Volume Total | 265 | 1153 | 84 | 820 | | |
| Volume Left | 117 | 0 | 84 | 0 | | |
| Volume Right | 148 | 71 | 0 | 0 | | |
| cSH | 90 | 1700 | 610 | 1700 | | |
| Volume to Capacity | 2.95 | 0.68 | 0.14 | 0.48 | | |
| Queue Length 95th (ft) | 644 | 0 | 12 | 0 | | |
| Control Delay (s) | 980.0 | 0.0 | 11.8 | 0.0 | | |
| Lane LOS | F | | B | | | |
| Approach Delay (s) | 980.0 | 0.0 | 1.1 | | | |
| Approach LOS | F | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 112.4 | | | |
| Intersection Capacity Utilization | | | 76.3% | | ICU Level of Service | D |
| Analysis Period (min) | | | 15 | | | |

PM Peak Future No Build
 11: Birch Point Road & Route 1

8/15/2013

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|-----------------------------------|------|------|--------|----------------------|------|------|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 40 | 122 | 1152 | 60 | 66 | 973 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.73 | 0.73 | 0.85 | 0.85 | 0.97 | 0.97 |
| Hourly flow rate (vph) | 55 | 167 | 1355 | 71 | 68 | 1003 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 2530 | 1391 | | | 1426 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2530 | 1391 | | | 1426 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 0 | 5 | | | 86 | |
| cM capacity (veh/h) | 26 | 176 | | | 483 | |
| Direction, Lane # | NW 1 | NE 1 | SW 1 | | | |
| Volume Total | 222 | 1426 | 1071 | | | |
| Volume Left | 55 | 0 | 68 | | | |
| Volume Right | 167 | 71 | 0 | | | |
| cSH | 73 | 1700 | 483 | | | |
| Volume to Capacity | 3.02 | 0.84 | 0.14 | | | |
| Queue Length 95th (ft) | Err | 0 | 12 | | | |
| Control Delay (s) | Err | 0.0 | 5.3 | | | |
| Lane LOS | F | | A | | | |
| Approach Delay (s) | Err | 0.0 | 5.3 | | | |
| Approach LOS | F | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 818.2 | | | |
| Intersection Capacity Utilization | | | 121.8% | ICU Level of Service | | H |
| Analysis Period (min) | | | 15 | | | |

PM Peak Future No Build
13: Old Bath Road (N) & Route 1

8/15/2013

| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | EBL | EBR | NEL | NET | SWT | SWR |
| Lane Configurations | Y | | | 4 | 4 | |
| Volume (veh/h) | 23 | 12 | 10 | 1243 | 982 | 29 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.72 | 0.72 | 0.91 | 0.91 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 32 | 17 | 11 | 1366 | 1002 | 30 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 2405 | 1017 | 1032 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2405 | 1017 | 1032 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 12 | 94 | 98 | | | |
| cM capacity (veh/h) | 36 | 291 | 681 | | | |
| Direction, Lane # | EB 1 | NE 1 | SW 1 | | | |
| Volume Total | 49 | 1377 | 1032 | | | |
| Volume Left | 32 | 11 | 0 | | | |
| Volume Right | 17 | 0 | 30 | | | |
| cSH | 52 | 681 | 1700 | | | |
| Volume to Capacity | 0.93 | 0.02 | 0.61 | | | |
| Queue Length 95th (ft) | 102 | 1 | 0 | | | |
| Control Delay (s) | 230.6 | 0.9 | 0.0 | | | |
| Lane LOS | F | A | | | | |
| Approach Delay (s) | 230.6 | 0.9 | 0.0 | | | |
| Approach LOS | F | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 5.1 | | | |
| Intersection Capacity Utilization | | | 83.4% | ICU Level of Service | | E |
| Analysis Period (min) | | | 15 | | | |

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NET | NER | SWL | SWT |
| Lane Configurations |  |  |  | |  |  |
| Volume (vph) | 101 | 127 | 1028 | 67 | 77 | 754 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 100 | | 0 | 175 | |
| Storage Lanes | 1 | 1 | | 0 | 1 | |
| Taper Length (ft) | 25 | 25 | | 25 | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frnt | | 0.850 | 0.992 | | | |
| Flt Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1752 | 1615 | 1847 | 0 | 1787 | 1845 |
| Flt Permitted | 0.950 | | | | 0.113 | |
| Satd. Flow (perm) | 1752 | 1615 | 1847 | 0 | 213 | 1845 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | 137 | 9 | | | |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 816 | | 834 | | | 1762 |
| Travel Time (s) | 18.5 | | 19.0 | | | 40.0 |
| Peak Hour Factor | 0.86 | 0.86 | 0.95 | 0.95 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 3% | 0% | 2% | 3% | 1% | 3% |
| Adj. Flow (vph) | 117 | 148 | 1082 | 71 | 84 | 820 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 117 | 148 | 1153 | 0 | 84 | 820 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 16 | | 16 | | | 16 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | | 1 | 2 |
| Detector Template | Left | Right | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | | 20 | 6 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | CI+Ex | | | CI+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | | Perm | | | Perm | |
| Protected Phases | 2 | | 4 | | | 8 |
| Permitted Phases | | 2 | | | 8 | |

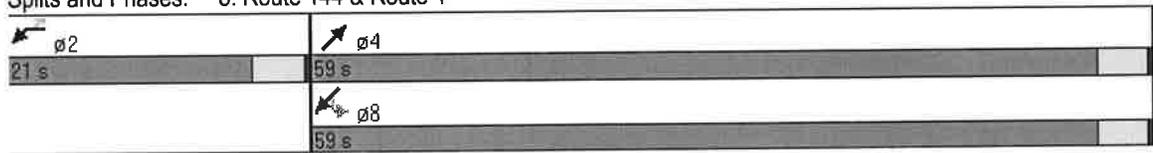


| Lane Group | WBL | WBR | NET | NER | SWL | SWT |
|-------------------------|-------|-------|-------|------|-------|-------|
| Detector Phase | 2 | 2 | 4 | | 8 | 8 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | | 20.0 | 20.0 |
| Total Split (s) | 21.0 | 21.0 | 59.0 | 0.0 | 59.0 | 59.0 |
| Total Split (%) | 26.3% | 26.3% | 73.8% | 0.0% | 73.8% | 73.8% |
| Maximum Green (s) | 17.0 | 17.0 | 55.0 | | 55.0 | 55.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | Min | Min | None | | None | None |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | 0 | 0 |
| Act Effect Green (s) | 10.1 | 10.1 | 49.9 | | 49.9 | 49.9 |
| Actuated g/C Ratio | 0.15 | 0.15 | 0.73 | | 0.73 | 0.73 |
| v/c Ratio | 0.45 | 0.42 | 0.85 | | 0.54 | 0.61 |
| Control Delay | 34.7 | 10.8 | 15.4 | | 21.4 | 7.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 34.7 | 10.8 | 15.4 | | 21.4 | 7.1 |
| LOS | C | B | B | | C | A |
| Approach Delay | 21.4 | | 15.4 | | | 8.4 |
| Approach LOS | C | | B | | | A |

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 68.3
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 13.3
 Intersection Capacity Utilization 76.3%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 8: Route 144 & Route 1



| |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|
| Movement | SEL | SER | NEL | NET | SWT | SWR |
| Lane Configurations |  |  |  |  |  |  |
| Volume (veh/h) | 17 | 29 | 60 | 905 | 830 | 23 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.63 | 0.63 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 27 | 46 | 73 | 1104 | 1012 | 28 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 2262 | 1012 | 1040 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2262 | 1012 | 1040 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 34 | 84 | 89 | | | |
| cM capacity (veh/h) | 41 | 288 | 676 | | | |
| Direction, Lane # | SE 1 | SE 2 | NE 1 | NE 2 | SW 1 | SW 2 |
| Volume Total | 27 | 46 | 73 | 1104 | 1012 | 28 |
| Volume Left | 27 | 0 | 73 | 0 | 0 | 0 |
| Volume Right | 0 | 46 | 0 | 0 | 0 | 28 |
| cSH | 41 | 288 | 676 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.66 | 0.16 | 0.11 | 0.65 | 0.60 | 0.02 |
| Queue Length 95th (ft) | 61 | 14 | 9 | 0 | 0 | 0 |
| Control Delay (s) | 197.2 | 19.9 | 11.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | F | C | B | | | |
| Approach Delay (s) | 85.4 | | 0.7 | 0.0 | | |
| Approach LOS | F | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 3.1 | | | |
| Intersection Capacity Utilization | | | 59.9% | ICU Level of Service | B | |
| Analysis Period (min) | | | 15 | | | |

Birch Point and Bath Road
11: Birch Point Road & Route 1

Future Build Intersection

8/23/2013

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | NWL | NWR | NET | NER | SWL | SWT |
| Lane Configurations |  |  |  | |  |  |
| Volume (vph) | 40 | 122 | 1152 | 60 | 66 | 973 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 150 | | 0 | 150 | |
| Storage Lanes | 1 | 1 | | 0 | 1 | |
| Taper Length (ft) | 25 | 25 | | 25 | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.993 | | | |
| Flt Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1805 | 1615 | 1869 | 0 | 1805 | 1881 |
| Flt Permitted | 0.950 | | | | 0.061 | |
| Satd. Flow (perm) | 1805 | 1615 | 1869 | 0 | 116 | 1881 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | 94 | 8 | | | |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 2039 | | 8162 | | | 3354 |
| Travel Time (s) | 46.3 | | 185.5 | | | 76.2 |
| Peak Hour Factor | 0.73 | 0.73 | 0.85 | 0.85 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 0% | 1% | 0% | 0% | 1% |
| Adj. Flow (vph) | 55 | 167 | 1355 | 71 | 68 | 1003 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 55 | 167 | 1426 | 0 | 68 | 1003 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 16 | | 16 | | | 16 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | | 1 | 2 |
| Detector Template | Left | Right | Thru | | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | | 20 | 6 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | CI+Ex | | | CI+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | | Perm | | | Perm | |
| Protected Phases | 2 | | 4 | | | 8 |
| Permitted Phases | | 2 | | | 8 | |

| |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|
| Lane Group | NWL | NWR | NET | NER | SWL | SWT |
| Detector Phase | 2 | 2 | 4 | | 8 | 8 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | | 20.0 | 20.0 |
| Total Split (s) | 20.0 | 20.0 | 70.0 | 0.0 | 70.0 | 70.0 |
| Total Split (%) | 22.2% | 22.2% | 77.8% | 0.0% | 77.8% | 77.8% |
| Maximum Green (s) | 16.0 | 16.0 | 66.0 | | 66.0 | 66.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Recall Mode | Min | Min | None | | None | None |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | | 0 | 0 |
| Act Effct Green (s) | 9.7 | 9.7 | 66.1 | | 66.1 | 66.1 |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.79 | | 0.79 | 0.79 |
| v/c Ratio | 0.26 | 0.62 | 0.97 | | 0.75 | 0.68 |
| Control Delay | 36.3 | 26.7 | 27.6 | | 58.7 | 7.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 36.3 | 26.7 | 27.6 | | 58.7 | 7.6 |
| LOS | D | C | C | | E | A |
| Approach Delay | 29.1 | | 27.6 | | | 10.9 |
| Approach LOS | C | | C | | | B |
| Queue Length 50th (ft) | 27 | 36 | 471 | | 13 | 170 |
| Queue Length 95th (ft) | 48 | 65 | #1023 | | #66 | 406 |
| Internal Link Dist (ft) | 1959 | | 8082 | | | 3274 |
| Turn Bay Length (ft) | | 150 | | | 150 | |
| Base Capacity (vph) | 321 | 364 | 1476 | | 91 | 1484 |
| Starvation Cap Reductn | 0 | 0 | 0 | | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | | 0 | 0 |
| Reduced v/c Ratio | 0.17 | 0.46 | 0.97 | | 0.75 | 0.68 |

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 83.8
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 21.1
 Intersection Capacity Utilization 78.5%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 11: Birch Point Road & Route 1

| | |
|--|--|
|  Ø2 20 s |  Ø4 70 s |
| |  Ø8 70 s |

Birch Point with Rt Turn and Bath Road
11: Birch Point Road & Route 1

Future Build Intersection
8/23/2013

| |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group | NWL | NWR | NET | NER | SWL | SWT |
| Lane Configurations |  |  |  |  |  |  |
| Volume (vph) | 40 | 122 | 1152 | 60 | 66 | 973 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 150 | | 0 | 150 | |
| Storage Lanes | 1 | 1 | | 1 | 1 | |
| Taper Length (ft) | 25 | 25 | | 25 | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | 0.850 | | 0.850 | | |
| Fl _t Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1805 | 1615 | 1881 | 1615 | 1805 | 1881 |
| Fl _t Permitted | 0.950 | | | | 0.062 | |
| Satd. Flow (perm) | 1805 | 1615 | 1881 | 1615 | 118 | 1881 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | | 90 | | 71 | | |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 2039 | | 8162 | | | 3354 |
| Travel Time (s) | 46.3 | | 185.5 | | | 76.2 |
| Peak Hour Factor | 0.73 | 0.73 | 0.85 | 0.85 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 0% | 1% | 0% | 0% | 1% |
| Adj. Flow (vph) | 55 | 167 | 1355 | 71 | 68 | 1003 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 55 | 167 | 1355 | 71 | 68 | 1003 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 | | 12 | | | 12 |
| Link Offset(ft) | 0 | | 0 | | | 0 |
| Crosswalk Width(ft) | 16 | | 16 | | | 16 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 | | 9 | 15 | |
| Number of Detectors | 1 | 1 | 2 | 1 | 1 | 2 |
| Detector Template | Left | Right | Thru | Right | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 | 20 | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 | 20 | 20 | 6 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) | | | 94 | | | 94 |
| Detector 2 Size(ft) | | | 6 | | | 6 |
| Detector 2 Type | | | CI+Ex | | | CI+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | | Perm | | Perm | Perm | |
| Protected Phases | 2 | | 4 | | | 8 |
| Permitted Phases | | 2 | | 4 | 8 | |

| |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|
| Lane Group | NWL | NWR | NET | NER | SWL | SWT |
| Detector Phase | 2 | 2 | 4 | 4 | 8 | 8 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 21.0 | 21.0 | 69.0 | 69.0 | 69.0 | 69.0 |
| Total Split (%) | 23.3% | 23.3% | 76.7% | 76.7% | 76.7% | 76.7% |
| Maximum Green (s) | 17.0 | 17.0 | 65.0 | 65.0 | 65.0 | 65.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | Min | Min | None | None | None | None |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 9.8 | 9.8 | 64.1 | 64.1 | 64.1 | 64.1 |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.78 | 0.78 | 0.78 | 0.78 |
| v/c Ratio | 0.26 | 0.61 | 0.92 | 0.06 | 0.74 | 0.68 |
| Control Delay | 35.5 | 27.0 | 20.7 | 0.9 | 57.3 | 7.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 35.5 | 27.0 | 20.7 | 0.9 | 57.3 | 7.8 |
| LOS | D | C | C | A | E | A |
| Approach Delay | 29.1 | | 19.8 | | | 11.0 |
| Approach LOS | C | | B | | | B |
| Queue Length 50th (ft) | 26 | 38 | 388 | 0 | 13 | 172 |
| Queue Length 95th (ft) | 48 | 66 | #931 | 8 | #64 | 410 |
| Internal Link Dist (ft) | 1959 | | 8082 | | | 3274 |
| Turn Bay Length (ft) | | 150 | | | 150 | |
| Base Capacity (vph) | 345 | 382 | 1477 | 1283 | 93 | 1477 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.16 | 0.44 | 0.92 | 0.06 | 0.73 | 0.68 |

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 81.9
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 17.1
 Intersection LOS: B
 Intersection Capacity Utilization 74.9%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 11: Birch Point Road & Route 1

| | |
|--|--|
|  Ø2 21 s |  Ø4 69 s |
| |  Ø8 69 s |

SB Future Volumes

HCS 2010: Two-Lane Highways Release 6.3

Phone:
E-Mail:

Fax:

Directional Two-Lane Highway Segment Analysis

Analyst A. Greenlaw
 Agency/Co. TYLI
 Date Performed 12/14/2012
 Analysis Time Period PM
 Highway Route 1
 From/To Route 144 to Flood Lane (N)
 Jurisdiction
 Analysis Year Existing
 Description

Input Data

| | | | | | |
|----------------|---------|----|-------------------------|------|-------|
| Highway class | Class 1 | | Peak hour factor, PHF | 0.88 | |
| Shoulder width | 6.0 | ft | % Trucks and buses | 2 | % |
| Lane width | 12.0 | ft | % Trucks crawling | 0.0 | % |
| Segment length | 0.0 | mi | Truck crawl speed | 0.0 | mi/hr |
| Terrain type | Level | | % Recreational vehicles | 2 | % |
| Grade: Length | - | mi | % No-passing zones | 88 | % |
| Up/down | - | % | Access point density | 39 | /mi |

Analysis direction volume, Vd 985 veh/h
 Opposing direction volume, Vo 1250 veh/h

Average Travel Speed

| Direction | Analysis(d) | Opposing (o) |
|--|-------------|--------------|
| PCE for trucks, ET | 1.0 | 1.0 |
| PCE for RVs, ER | 1.0 | 1.0 |
| Heavy-vehicle adj. factor,(note-5) fHV | 1.000 | 1.000 |
| Grade adj. factor,(note-1) fg | 1.00 | 1.00 |
| Directional flow rate,(note-2) vi | 1119 pc/h | 1420 pc/h |

Free-Flow Speed from Field Measurement:
 Field measured speed,(note-3) S FM - mi/h
 Observed total demand,(note-3) V - veh/h
 Estimated Free-Flow Speed:
 Base free-flow speed,(note-3) BFFS 60.0 mi/h
 Adj. for lane and shoulder width,(note-3) fLS 0.0 mi/h
 Adj. for access point density,(note-3) fA 9.8 mi/h
 Free-flow speed, FFSd 50.3 mi/h
 Adjustment for no-passing zones, fnp 0.7 mi/h
 Average travel speed, ATSD 29.8 mi/h
 Percent Free Flow Speed, PFFS 59.4 %

Percent Time-Spent-Following

SB Future Volumes

| Direction | Analysis(d) | Opposing (o) |
|--|-------------|--------------|
| PCE for trucks, ET | 1.0 | 1.0 |
| PCE for RVs, ER | 1.0 | 1.0 |
| Heavy-vehicle adjustment factor, fHV | 1.000 | 1.000 |
| Grade adjustment factor, (note-1) fg | 1.00 | 1.00 |
| Directional flow rate, (note-2) vi | 1119 pc/h | 1420 pc/h |
| Base percent time-spent-following, (note-4) BPTSFd | 84.2 % | |
| Adjustment for no-passing zones, fnp | 10.9 | |
| Percent time-spent-following, PTSFd | 89.0 % | |

Level of Service and Other Performance Measures

| | | |
|--|------|--------|
| Level of service, LOS | E | |
| Volume to capacity ratio, v/c | 0.66 | |
| Peak 15-min vehicle-miles of travel, VMT15 | 0 | veh-mi |
| Peak-hour vehicle-miles of travel, VMT60 | 0 | veh-mi |
| Peak 15-min total travel time, TT15 | 0.0 | veh-h |
| Capacity from ATS, CdATS | 1700 | veh/h |
| Capacity from PTSF, CdPTSF | 1700 | veh/h |
| Directional Capacity | 1700 | veh/h |

Passing Lane Analysis

| | | |
|---|------|------|
| Total length of analysis segment, Lt | 0.0 | mi |
| Length of two-lane highway upstream of the passing lane, Lu | - | mi |
| Length of passing lane including tapers, Lpl | - | mi |
| Average travel speed, ATSD (from above) | 29.8 | mi/h |
| Percent time-spent-following, PTSFd (from above) | 89.0 | |
| Level of service, LOSd (from above) | E | |

Average Travel Speed with Passing Lane

| | | |
|---|-----|----|
| Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde | - | mi |
| Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld | - | mi |
| Adj. factor for the effect of passing lane on average speed, fpl | - | |
| Average travel speed including passing lane, ATSp1 | - | |
| Percent free flow speed including passing lane, PFFSp1 | 0.0 | % |

Percent Time-Spent-Following with Passing Lane

| | | |
|---|---|----|
| Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde | - | mi |
| Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld | - | mi |
| Adj. factor for the effect of passing lane on percent time-spent-following, fpl | - | |
| Percent time-spent-following including passing lane, PTSFp1 | - | % |

Level of Service and Other Performance Measures with Passing Lane

| | | |
|--|---|-------|
| Level of service including passing lane, LOSp1 | E | |
| Peak 15-min total travel time, TT15 | - | veh-h |

Bicycle Level of Service

| | |
|---|----|
| Posted speed limit, Sp | 45 |
| Percent of segment with occupied on-highway parking | 0 |
| Pavement rating, P | 3 |

| | | |
|-------------------------------------|-------------------|--------|
| | SB Future Volumes | |
| Flow rate in outside lane, vOL | | 1119.3 |
| Effective width of outside lane, We | | 24.00 |
| Effective speed factor, St | | 4.42 |
| Bicycle LOS Score, BLOS | | 2.81 |
| Bicycle LOS | | C |

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

NB Existing Volumes
HCS 2010: Two-Lane Highways Release 6.3

Phone: _____ Fax: _____
E-Mail: _____

Directional Two-Lane Highway Segment Analysis

Analyst A. Greenlaw
Agency/Co. TYLI
Date Performed 12/14/2012
Analysis Time Period PM
Highway Route 1
From/To Route 144 to Flood Lane (N)
Jurisdiction
Analysis Year Existing
Description

Input Data

| | | | | | |
|----------------|---------|----|-------------------------|------|-------|
| Highway class | Class 1 | | Peak hour factor, PHF | 0.88 | |
| Shoulder width | 6.0 | ft | % Trucks and buses | 2 | % |
| Lane width | 12.0 | ft | % Trucks crawling | 0.0 | % |
| Segment length | 0.0 | mi | Truck crawl speed | 0.0 | mi/hr |
| Terrain type | Level | | % Recreational vehicles | 2 | % |
| Grade: Length | - | mi | % No-passing zones | 82 | % |
| Up/down | - | % | Access point density | 39 | /mi |

Analysis direction volume, vd 1030 veh/h
Opposing direction volume, vo 945 veh/h

Average Travel Speed

| Direction | Analysis(d) | Opposing (o) |
|---|-------------|--------------|
| PCE for trucks, ET | 1.0 | 1.0 |
| PCE for RVs, ER | 1.0 | 1.0 |
| Heavy-vehicle adj. factor, (note-5) fHV | 1.000 | 1.000 |
| Grade adj. factor, (note-1) fg | 1.00 | 1.00 |
| Directional flow rate, (note-2) vi | 1170 pc/h | 1074 pc/h |

Free-Flow Speed from Field Measurement:
Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:
Base free-flow speed, (note-3) BFFS 60.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 0.0 mi/h
Adj. for access point density, (note-3) fA 9.8 mi/h

Free-flow speed, FFSd 50.3 mi/h

Adjustment for no-passing zones, fnp 0.9 mi/h
Average travel speed, ATSD 32.0 mi/h
Percent Free Flow Speed, PFFS 63.6 %

Percent Time-Spent-Following

NB Existing Volumes

| Direction | Analysis(d) | Opposing (o) |
|--|-------------|--------------|
| PCE for trucks, ET | 1.0 | 1.0 |
| PCE for RVs, ER | 1.0 | 1.0 |
| Heavy-vehicle adjustment factor, fhv | 1.000 | 1.000 |
| Grade adjustment factor, (note-1) fg | 1.00 | 1.00 |
| Directional flow rate, (note-2) vi | 1170 pc/h | 1074 pc/h |
| Base percent time-spent-following, (note-4) BPTSfd | 83.0 % | |
| Adjustment for no-passing zones, fnp | 14.8 | |
| Percent time-spent-following, PTSFd | 90.7 % | |

_____Level of Service and Other Performance Measures_____

| | | |
|--|------|--------|
| Level of service, LOS | E | |
| Volume to capacity ratio, v/c | 0.69 | |
| Peak 15-min vehicle-miles of travel, VMT15 | 0 | veh-mi |
| Peak-hour vehicle-miles of travel, VMT60 | 0 | veh-mi |
| Peak 15-min total travel time, TT15 | 0.0 | veh-h |
| Capacity from ATS, CdATS | 1700 | veh/h |
| Capacity from PTSF, CdPTSF | 1700 | veh/h |
| Directional Capacity | 1700 | veh/h |

_____Passing Lane Analysis_____

| | | |
|---|------|------|
| Total length of analysis segment, Lt | 0.0 | mi |
| Length of two-lane highway upstream of the passing lane, Lu | - | mi |
| Length of passing lane including tapers, Lpl | - | mi |
| Average travel speed, ATSD (from above) | 32.0 | mi/h |
| Percent time-spent-following, PTSFd (from above) | 90.7 | |
| Level of service, LOSd (from above) | E | |

_____Average Travel Speed with Passing Lane_____

| | | |
|---|-----|----|
| Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde | - | mi |
| Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld | - | mi |
| Adj. factor for the effect of passing lane on average speed, fpl | - | |
| Average travel speed including passing lane, ATSp1 | - | |
| Percent free flow speed including passing lane, PFFSp1 | 0.0 | % |

_____Percent Time-Spent-Following with Passing Lane_____

| | | |
|---|---|----|
| Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde | - | mi |
| Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld | - | mi |
| Adj. factor for the effect of passing lane on percent time-spent-following, fpl | - | |
| Percent time-spent-following including passing lane, PTSFp1 | - | % |

_____Level of Service and Other Performance Measures with Passing Lane_____

| | | |
|--|---|-------|
| Level of service including passing lane, LOSp1 | E | |
| Peak 15-min total travel time, TT15 | - | veh-h |

_____Bicycle Level of Service_____

| | |
|---|----|
| Posted speed limit, Sp | 45 |
| Percent of segment with occupied on-highway parking | 0 |
| Pavement rating, P | 3 |

NB Existing Volumes

| | |
|-------------------------------------|--------|
| Flow rate in outside lane, vOL | 1170.5 |
| Effective width of outside lane, We | 24.00 |
| Effective speed factor, St | 4.42 |
| Bicycle LOS Score, BLOS | 2.83 |
| Bicycle LOS | C |

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) \geq 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

SB Existing Volumes

HCS 2010: Two-Lane Highways Release 6.3

Phone:
E-Mail:

Fax:

Directional Two-Lane Highway Segment Analysis

Analyst A. Greenlaw
 Agency/Co. TYLI
 Date Performed 12/14/2012
 Analysis Time Period PM
 Highway Route 1
 From/To Route 144 to Flood Lane (N)
 Jurisdiction
 Analysis Year Existing
 Description

Input Data

| | | | | | |
|----------------|---------|----|-------------------------|------|-------|
| Highway class | Class 1 | | Peak hour factor, PHF | 0.88 | |
| Shoulder width | 6.0 | ft | % Trucks and buses | 2 | % |
| Lane width | 12.0 | ft | % Trucks crawling | 0.0 | % |
| Segment length | 0.0 | mi | Truck crawl speed | 0.0 | mi/hr |
| Terrain type | Level | | % Recreational vehicles | 2 | % |
| Grade: Length | - | mi | % No-passing zones | 88 | % |
| Up/down | - | % | Access point density | 39 | /mi |

Analysis direction volume, Vd 945 veh/h
 Opposing direction volume, Vo 1030 veh/h

Average Travel Speed

| Direction | Analysis(d) | Opposing (o) |
|--|-------------|--------------|
| PCE for trucks, ET | 1.0 | 1.0 |
| PCE for RVs, ER | 1.0 | 1.0 |
| Heavy-vehicle adj. factor,(note-5) fHV | 1.000 | 1.000 |
| Grade adj. factor,(note-1) fg | 1.00 | 1.00 |
| Directional flow rate,(note-2) vi | 1074 pc/h | 1170 pc/h |

Free-Flow Speed from Field Measurement:
 Field measured speed,(note-3) S FM - mi/h
 Observed total demand,(note-3) V - veh/h
 Estimated Free-Flow Speed:
 Base free-flow speed,(note-3) BFFS 60.0 mi/h
 Adj. for lane and shoulder width,(note-3) fLS 0.0 mi/h
 Adj. for access point density,(note-3) fA 9.8 mi/h
 Free-flow speed, FFSd 50.3 mi/h
 Adjustment for no-passing zones, fnp 0.9 mi/h
 Average travel speed, ATSD 31.9 mi/h
 Percent Free Flow Speed, PFFS 63.6 %

Percent Time-Spent-Following

SB Existing Volumes

| Direction | Analysis(d) | Opposing (o) |
|--|-------------|--------------|
| PCE for trucks, ET | 1.0 | 1.0 |
| PCE for RVs, ER | 1.0 | 1.0 |
| Heavy-vehicle adjustment factor, fhv | 1.000 | 1.000 |
| Grade adjustment factor, (note-1) fg | 1.00 | 1.00 |
| Directional flow rate, (note-2) vi | 1074 pc/h | 1170 pc/h |
| Base percent time-spent-following, (note-4) BPTSfd | 81.5 % | |
| Adjustment for no-passing zones, fnp | 14.9 | |
| Percent time-spent-following, PTSFd | 88.6 % | |

Level of Service and Other Performance Measures

| | | |
|--|------|--------|
| Level of service, LOS | E | |
| Volume to capacity ratio, v/c | 0.63 | |
| Peak 15-min vehicle-miles of travel, VMT15 | 0 | veh-mi |
| Peak-hour vehicle-miles of travel, VMT60 | 0 | veh-mi |
| Peak 15-min total travel time, TT15 | 0.0 | veh-h |
| Capacity from ATS, CdATS | 1700 | veh/h |
| Capacity from PTSF, CdPTSF | 1700 | veh/h |
| Directional Capacity | 1700 | veh/h |

Passing Lane Analysis

| | | |
|---|------|------|
| Total length of analysis segment, Lt | 0.0 | mi |
| Length of two-lane highway upstream of the passing lane, Lu | - | mi |
| Length of passing lane including tapers, Lpl | - | mi |
| Average travel speed, ATSD (from above) | 31.9 | mi/h |
| Percent time-spent-following, PTSFd (from above) | 88.6 | |
| Level of service, LOSd (from above) | E | |

Average Travel Speed with Passing Lane

| | | |
|---|-----|----|
| Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde | - | mi |
| Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld | - | mi |
| Adj. factor for the effect of passing lane on average speed, fpl | - | |
| Average travel speed including passing lane, ATSp1 | - | |
| Percent free flow speed including passing lane, PFFSp1 | 0.0 | % |

Percent Time-Spent-Following with Passing Lane

| | | |
|---|---|----|
| Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde | - | mi |
| Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld | - | mi |
| Adj. factor for the effect of passing lane on percent time-spent-following, fpl | - | |
| Percent time-spent-following including passing lane, PTSFp1 | - | % |

Level of Service and Other Performance Measures with Passing Lane

| | | |
|--|---|-------|
| Level of service including passing lane, LOSp1 | E | |
| Peak 15-min total travel time, TT15 | - | veh-h |

Bicycle Level of Service

| | |
|---|----|
| Posted speed limit, Sp | 45 |
| Percent of segment with occupied on-highway parking | 0 |
| Pavement rating, P | 3 |

| | SB Existing Volumes |
|-------------------------------------|---------------------|
| Flow rate in outside lane, VOL | 1073.9 |
| Effective width of outside lane, We | 24.00 |
| Effective speed factor, St | 4.42 |
| Bicycle LOS Score, BLOS | 2.79 |
| Bicycle LOS | C |

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) \geq 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

NB Future Volumes

HCS 2010: Two-Lane Highways Release 6.3

Phone:
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Directional Two-Lane Highway Segment Analysis

Analyst A. Greenlaw
 Agency/Co. TYLI
 Date Performed 12/14/2012
 Analysis Time Period PM
 Highway Route 1
 From/To Route 144 to Flood Lane (N)
 Jurisdiction
 Analysis Year Existing
 Description

Input Data

| | | | | | |
|----------------|---------|----|-------------------------|------|-------|
| Highway class | Class 1 | | Peak hour factor, PHF | 0.88 | |
| Shoulder width | 6.0 | ft | % Trucks and buses | 2 | % |
| Lane width | 12.0 | ft | % Trucks crawling | 0.0 | % |
| Segment length | 0.0 | mi | Truck crawl speed | 0.0 | mi/hr |
| Terrain type | Level | | % Recreational vehicles | 2 | % |
| Grade: Length | - | mi | % No-passing zones | 82 | % |
| Up/down | - | % | Access point density | 39 | /mi |

Analysis direction volume, vd 1250 veh/h
 Opposing direction volume, vo 985 veh/h

Average Travel Speed

| Direction | Analysis(d) | Opposing (o) |
|--|-------------|--------------|
| PCE for trucks, ET | 1.0 | 1.0 |
| PCE for RVs, ER | 1.0 | 1.0 |
| Heavy-vehicle adj. factor,(note-5) fHV | 1.000 | 1.000 |
| Grade adj. factor,(note-1) fg | 1.00 | 1.00 |
| Directional flow rate,(note-2) vi | 1420 pc/h | 1119 pc/h |

Free-Flow Speed from Field Measurement:
 Field measured speed,(note-3) S FM - mi/h
 Observed total demand,(note-3) V - veh/h
 Estimated Free-Flow Speed:
 Base free-flow speed,(note-3) BFFS 60.0 mi/h
 Adj. for lane and shoulder width,(note-3) fLS 0.0 mi/h
 Adj. for access point density,(note-3) fA 9.8 mi/h
 Free-flow speed, FFSD 50.3 mi/h
 Adjustment for no-passing zones, fnp 0.9 mi/h
 Average travel speed, ATSD 29.7 mi/h
 Percent Free Flow Speed, PFFS 59.1 %

Percent Time-Spent-Following

NB Future Volumes

| Direction | Analysis(d) | Opposing (o) | |
|--|-------------|--------------|--|
| PCE for trucks, ET | 1.0 | 1.0 | |
| PCE for RVs, ER | 1.0 | 1.0 | |
| Heavy-vehicle adjustment factor, fHV | 1.000 | 1.000 | |
| Grade adjustment factor, (note-1) fg | 1.00 | 1.00 | |
| Directional flow rate, (note-2) vi | 1420 pc/h | 1119 pc/h | |
| Base percent time-spent-following, (note-4) BPTSFd | 87.8 % | | |
| Adjustment for no-passing zones, fnp | 10.8 | | |
| Percent time-spent-following, PTSFd | 93.8 % | | |

Level of Service and Other Performance Measures

| | | |
|--|------|--------|
| Level of service, LOS | E | |
| Volume to capacity ratio, v/c | 0.84 | |
| Peak 15-min vehicle-miles of travel, VMT15 | 0 | veh-mi |
| Peak-hour vehicle-miles of travel, VMT60 | 0 | veh-mi |
| Peak 15-min total travel time, TT15 | 0.0 | veh-h |
| Capacity from ATS, CdATS | 1700 | veh/h |
| Capacity from PTSF, CdPTSF | 1700 | veh/h |
| Directional Capacity | 1700 | veh/h |

Passing Lane Analysis

| | | |
|---|------|------|
| Total length of analysis segment, Lt | 0.0 | mi |
| Length of two-lane highway upstream of the passing lane, Lu | - | mi |
| Length of passing lane including tapers, Lpl | - | mi |
| Average travel speed, ATSD (from above) | 29.7 | mi/h |
| Percent time-spent-following, PTSFd (from above) | 93.8 | |
| Level of service, LOSd (from above) | E | |

Average Travel Speed with Passing Lane

| | | |
|---|-----|----|
| Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde | - | mi |
| Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld | - | mi |
| Adj. factor for the effect of passing lane on average speed, fpl | - | |
| Average travel speed including passing lane, ATSp1 | - | |
| Percent free flow speed including passing lane, PFFSp1 | 0.0 | % |

Percent Time-Spent-Following with Passing Lane

| | | |
|---|---|----|
| Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde | - | mi |
| Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld | - | mi |
| Adj. factor for the effect of passing lane on percent time-spent-following, fpl | - | |
| Percent time-spent-following including passing lane, PTSFP1 | - | % |

Level of Service and Other Performance Measures with Passing Lane

| | | |
|--|---|-------|
| Level of service including passing lane, LOSp1 | E | |
| Peak 15-min total travel time, TT15 | - | veh-h |

Bicycle Level of Service

| | |
|---|----|
| Posted speed limit, Sp | 45 |
| Percent of segment with occupied on-highway parking | 0 |
| Pavement rating, P | 3 |

| | NB Future Volumes | |
|-------------------------------------|-------------------|--------|
| Flow rate in outside lane, vOL | | 1420.5 |
| Effective width of outside lane, we | | 24.00 |
| Effective speed factor, St | | 4.42 |
| Bicycle LOS Score, BLOS | | 2.93 |
| Bicycle LOS | | C |

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.