

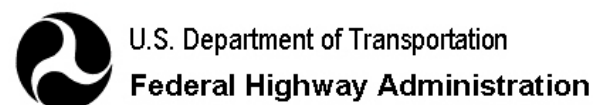
# TOLL FEASIBILITY STUDY

## Traffic Impacts Appendices

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**Toll Feasibility Study**  
**Appendix G**  
Revenue Optimized Tolls – Level-of-Service

Note: Definition of Project Scenarios:

| Features                              | Project Scenario #1                                                                 | Project Scenario #2                                                                 | Project Scenario #3                                                 |
|---------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Projects                              | <ul style="list-style-type: none"><li>• HRX</li></ul>                               | <ul style="list-style-type: none"><li>• Improved HRBT (1)</li></ul>                 | <ul style="list-style-type: none"><li>• Midtown &amp; MLK</li></ul> |
| Existing/Unimproved, Tolloed Roadways | <ul style="list-style-type: none"><li>• MMBT</li><li>• JRB</li><li>• HRBT</li></ul> | <ul style="list-style-type: none"><li>• MMBT</li><li>• JRB</li><li>• HRBT</li></ul> | <ul style="list-style-type: none"><li>• Downtown Tunnel</li></ul>   |

(1) Hampton Roads Crossing Study, Alternative #1  
MMBT – Monitor Merrimac Bridge Tunnel  
JRB – James River Bridge  
HRBT – Hampton Roads Bridge Tunnel

The LOS analyses were performed using the Highway Capacity Software (HCS 2000 4.1e) based on the Highway Capacity Manual. Four (4) HCS modules were used for the various analyses as follows:

- Directional Two Lane Highway Segment Analysis (Two Lane);
- Arterials Planning Analysis (Arterials);
- Multilane Highways Planning Analysis (Multilane); and
- Basic Freeway Segments Operational Analysis Planning (Freeway)

Typical roadway, network and traffic flow characteristics are required as inputs for the various analyses. These include volume, peak hour factor (PHF), K factor, D factor, saturation flow rate, free flow speed, truck percentages, percent no passing zones, number of access locations, number of signals, and basic signal timing parameters. The majority of this data was derived from various studies conducted by the Hampton Roads Planning District Commission (HRPDC) as regional planning documents or on behalf of the local governments. These studies included:

1. *Norfolk Level of Service Study* (January 2000),
2. *Newport News Level of Service Study* (April 2001),
3. *Chesapeake Level of Service Study* (June 2003),
4. *2026 Regional Transportation Plan Technical Document* (July 2004), and
5. *2026 Regional Transportation Plan Technical Document Appendices* (July 2004).

This information was supplemented by data from other studies conducted in Virginia Beach including Elbow Road Phase IIA, Elbow Road Phase II, I-264/Lynnhaven Parkway/Great Neck Road Interchange Improvements and the Virginia Beach Convention Center. Considerable data collection efforts were undertaken as part of these studies and the data was used to derive the necessary data for LOS evaluation of segments in Virginia Beach. In addition, field verification of data was necessary for segments in Virginia Beach and along Route 460 to satisfy data requirements. Analysis results are shown in the following tables and figures.

Table G-1 Year 2026 Level-of-Service

|                   |                                                           | No Build |                                                                               |                       |                     |                                                                          |                       |             | Hampton Roads Crossing - Full |                                                                               |                       |                     |                                                                          |                       |             |
|-------------------|-----------------------------------------------------------|----------|-------------------------------------------------------------------------------|-----------------------|---------------------|--------------------------------------------------------------------------|-----------------------|-------------|-------------------------------|-------------------------------------------------------------------------------|-----------------------|---------------------|--------------------------------------------------------------------------|-----------------------|-------------|
| Planning Analysis | Segments                                                  | ADT      | AM Peak                                                                       | AM                    | AM                  | PM Peak Hour                                                             | PM                    | PM Peak     | ADT                           | AM Peak                                                                       | AM                    | AM                  | PM Peak Hour                                                             | PM                    | PM Peak     |
|                   |                                                           |          | Hour Criteria<br>(Density <sup>4</sup><br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc. | Peak<br>Hour<br>LOS | Criteria<br>(Density <sup>4</sup><br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc. | Hour<br>LOS |                               | Hour Criteria<br>(Density <sup>4</sup><br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc. | Peak<br>Hour<br>LOS | Criteria<br>(Density <sup>4</sup><br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc. | Hour<br>LOS |
|                   | <i>A Hampton Roads Beltway (17 Segments)</i>              |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Freeway           | A1 I-64, I-664 to Armistead Ave                           | 132,900  |                                                                               |                       |                     | 38.1                                                                     | 12,000                | E           | 131,700                       |                                                                               |                       |                     | 36.8                                                                     | 11,900                | E           |
| Freeway           | A2 I-64, Armistead Ave to Hampton Roads Bridge Tunnel     | 109,700  |                                                                               |                       |                     | 27.2                                                                     | 9,900                 | D           | 113,400                       |                                                                               |                       |                     | 28.5                                                                     | 10,200                | D           |
| Freeway           | A3 Hampton Roads Bridge Tunnel                            | 101,000  |                                                                               |                       |                     | *                                                                        | 9,100                 | F           | 101,800                       |                                                                               |                       |                     | *                                                                        | 9,200                 | F           |
| Freeway           | A4 I-64, Hampton Roads Bridge Tunnel to I-564             | 99,700   |                                                                               |                       |                     | *                                                                        | 9,000                 | F           | 96,800                        |                                                                               |                       |                     | *                                                                        | 8,700                 | F           |
| Freeway           | A5 I-64, I-564 to Chesapeake Blvd                         | 161,300  |                                                                               |                       |                     | *                                                                        | 14,500                | F           | 163,100                       |                                                                               |                       |                     | *                                                                        | 14,700                | F           |
| Freeway           | A6 I-64, Chesapeake Blvd to Northampton Blvd              | 181,100  |                                                                               |                       |                     | *                                                                        | 16,300                | F           | 172,800                       |                                                                               |                       |                     | *                                                                        | 15,600                | F           |
| Freeway           | A7 I-64, Northampton Blvd to I-264                        | 184,000  |                                                                               |                       |                     | 40.8                                                                     | 16,600                | E           | 176,900                       |                                                                               |                       |                     | 37.5                                                                     | 15,900                | E           |
| Freeway           | A8 I-64, I-264 to Indian River Rd                         | 163,200  |                                                                               |                       |                     | 32.0                                                                     | 14,700                | D           | 161,000                       |                                                                               |                       |                     | 31.4                                                                     | 14,500                | D           |
| Freeway           | A9 I-64, Indian River Rd to Greenbrier Pkwy               | 147,000  |                                                                               |                       |                     | 27.4                                                                     | 13,200                | D           | 148,700                       |                                                                               |                       |                     | 27.8                                                                     | 13,400                | D           |
| Freeway           | A10 I-64, Greenbrier Pkwy to I-464                        | 127,300  |                                                                               |                       |                     | 23.0                                                                     | 11,500                | C           | 131,000                       |                                                                               |                       |                     | 23.8                                                                     | 11,800                | C           |
| Freeway           | A11 I-64, I-464 to I-264                                  | 92,000   |                                                                               |                       |                     | 42.1                                                                     | 8,300                 | E           | 82,800                        |                                                                               |                       |                     | 32.9                                                                     | 7,400                 | D           |
| Freeway           | A12 I-664, I-264 to Route 58                              | 129,700  |                                                                               |                       |                     | 23.5                                                                     | 11,700                | C           | 89,800                        |                                                                               |                       |                     | 16.3                                                                     | 8,100                 | B           |
| Freeway           | A13 I-664, Route 58 to Route 164/Western Frwy             | 79,800   |                                                                               |                       |                     | 30.9                                                                     | 7,200                 | D           | 34,700                        |                                                                               |                       |                     | 12.5                                                                     | 3,100                 | B           |
| Freeway           | A14 I-664, Route 164/Western Frwy to proposed EW Conn.    | 65,000   |                                                                               |                       |                     | 23.9                                                                     | 5,900                 | C           | 22,000                        |                                                                               |                       |                     | 8.0                                                                      | 2,000                 | A           |
| Freeway           | A15 I-664, proposed EW Conn. to 23rd St                   | 82,200   |                                                                               |                       |                     | 32.5                                                                     | 7,400                 | D           | 39,900                        |                                                                               |                       |                     | 14.5                                                                     | 3,600                 | B           |
| Freeway           | A16 I-664, 23rd St to Aberdeen Rd                         | 77,200   |                                                                               |                       |                     | 29.4                                                                     | 6,900                 | D           | 29,000                        |                                                                               |                       |                     | 10.5                                                                     | 2,600                 | A           |
| Freeway           | A17 I-664, Aberdeen Rd to I-64                            | 85,600   |                                                                               |                       |                     | 34.9                                                                     | 7,700                 | D           | 41,100                        |                                                                               |                       |                     | 15.2                                                                     | 3,700                 | B           |
|                   | <i>B Midtown Tunnel area (3 segments)</i>                 |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Two-Lane          | B1 Midtown Tunnel                                         | 53,600   |                                                                               |                       |                     |                                                                          |                       | F           | 47,500                        |                                                                               |                       |                     | -                                                                        |                       | F           |
| Freeway           | B2 MLK Frwy, High St to Pinner's Point Conn.              |          |                                                                               |                       |                     |                                                                          |                       |             | 30,800                        |                                                                               |                       |                     | 13.2                                                                     | 2,800                 | B           |
| Freeway           | B3 Western Frwy (Route 164, Town Point Rd to MLK Frwy     | 74,500   |                                                                               |                       |                     | 28.1                                                                     | 6,700                 | D           | 65,400                        |                                                                               |                       |                     | 23.7                                                                     | 5,900                 | C           |
|                   | <i>C Route 460 (6 segments)</i>                           |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Multi-Lane        | C1 I-664 to Route 58 Bypass                               | 84,900   |                                                                               | 6,600                 | D                   |                                                                          | 7,100                 | C           | 77,000                        | -                                                                             | 6,000                 | C                   | -                                                                        | 6,500                 | C           |
| Freeway           | C2 Route 58 Bypass                                        |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Multi-Lane        | C3 Route 58 Bypass to Windsor                             |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Multi-Lane        | C4 Windsor to Waverly                                     |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Multi-Lane        | C5 Waverly to Route 156                                   |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Multi-Lane        | C6 Route 156 to I-295                                     |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
|                   | <i>D Oak Grove Conn. &amp; Dominion Blvd (4 segments)</i> |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Two-Lane          | D1 Dominion Blvd, Route 17 to Cedar Rd                    | 13,200   |                                                                               | 800                   | E                   |                                                                          | 1,000                 | E           | 13,100                        | -                                                                             | 800                   | E                   | -                                                                        | 1,000                 | E           |
| Arterial          | D2 Dominion Blvd, Cedar Rd to Bainbridge Blvd             | 39,500   | 2.4                                                                           | 3,100                 | F                   | 2.7                                                                      | 3,300                 | F           | 35,500                        | 2.9                                                                           | 2,800                 | F                   | 3.2                                                                      | 3,000                 | F           |
| Arterial          | D3 Dominion Blvd, Bainbridge Blvd to Great Bridge Blvd    | 30,600   | 6.4                                                                           | 2,300                 | F                   | 8.2                                                                      | 2,400                 | F           |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Freeway           | D4 Oak Grove Conn. (from I-64 to Battlefield Blvd)        | 117,300  |                                                                               |                       |                     | *                                                                        | 10,600                | F           | 129,700                       |                                                                               |                       |                     | *                                                                        | 11,700                | F           |
|                   | <i>E Hampton Blvd &amp; Brambleton Ave (5 segments)</i>   |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Arterial          | E1 Brambleton Ave to 21st St                              | 38,600   | 7.3                                                                           | 2,700                 | F                   | 5.1                                                                      | 2,900                 | F           | 36,500                        | 10.2                                                                          | 2,500                 | F                   | 6.6                                                                      | 2,700                 | F           |
| Arterial          | E2 38th St to Little Creek Rd                             | 34,800   | 19.1                                                                          | 2,300                 | D                   | 18.5                                                                     | 2,700                 | D           | 39,400                        | 18.6                                                                          | 2,600                 | D                   | 17.9                                                                     | 3,100                 | D           |
| Arterial          | E3 Little Creek Rd to proposed EW Conn.                   | 30,700   | 21.1                                                                          | 2,100                 | D                   | 21.7                                                                     | 2,400                 | D           | 36,100                        | 20.1                                                                          | 2,500                 | D                   | 20.9                                                                     | 2,800                 | D           |
| Arterial          | E4 Proposed EW Conn. to Adm Taussig Blvd                  | 32,700   | 17.5                                                                          | 2,500                 | D                   | 18.4                                                                     | 2,500                 | D           | 34,200                        | 17.2                                                                          | 2,600                 | D                   | 18.2                                                                     | 2,600                 | D           |
| Arterial          | E5 Brambleton Ave, Colley Ave to Boush St                 | 65,900   | 4.0                                                                           | 5,300                 | F                   | 3.4                                                                      | 5,500                 | F           | 65,600                        | 4.1                                                                           | 5,300                 | F                   | 3.4                                                                      | 5,500                 | F           |
|                   | <i>F Downtown Tunnel Area (5 segments)</i>                |          |                                                                               |                       |                     |                                                                          |                       |             |                               |                                                                               |                       |                     |                                                                          |                       |             |
| Freeway           | F1 Downtown Tunnel (I-264 from Portsmouth to I-464)       | 120,600  |                                                                               |                       |                     | *                                                                        | 10,900                | F           | 110,100                       |                                                                               |                       |                     | *                                                                        | 9,900                 | F           |
| Freeway           | F2 Berkley Bridge (I-264 from Waterside to I-464)         | 123,100  |                                                                               |                       |                     | 28.2                                                                     | 11,100                | D           | 130,800                       |                                                                               |                       |                     | 30.0                                                                     | 11,800                | D           |
| Two-Lane          | F3 Jordan Bridge(Poindexter from Portsmouth to I-464)     | 5,200    |                                                                               |                       |                     |                                                                          |                       | E           | 12,600                        |                                                                               |                       |                     | -                                                                        |                       | E           |
| Arterial          | F4 Effingham St, I-264 to South St                        | 38,500   | 1.8                                                                           | 3,800                 | F                   | 1.8                                                                      | 3,800                 | F           | 37,300                        | 1.9                                                                           | 3,700                 | F                   | 1.9                                                                      | 3,700                 | F           |
| Arterial          | F5 Frederick Blvd, I-264 to Turnpike Rd                   | 46,600   | 2.6                                                                           | 4,700                 | F                   | 2.6                                                                      | 4,700                 | F           | 49,300                        | 2.3                                                                           | 4,900                 | F                   | 2.3                                                                      | 4,900                 | F           |

|                   |                                                                 | No Build |                                                                                 |                                 |                              |                                                                            |                                 | Hampton Roads Crossing - Full |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
|-------------------|-----------------------------------------------------------------|----------|---------------------------------------------------------------------------------|---------------------------------|------------------------------|----------------------------------------------------------------------------|---------------------------------|-------------------------------|---------|---------------------------------------------------------------------------------|---------------------------------|------------------------------|----------------------------------------------------------------------------|---------------------------------|----------------------|
| Planning Analysis | Segments                                                        | ADT      | AM Peak                                                                         | AM                              | AM                           | PM Peak Hour                                                               | PM                              | PM Peak                       | ADT     | AM Peak                                                                         | AM                              | AM                           | PM Peak Hour                                                               | PM                              | PM Peak              |
|                   |                                                                 |          | Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc.<br>Volume | Peak<br>Hour<br>LOS<br>(HCS) | Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc.<br>Volume | Hour<br>LOS<br>(HCS)          |         | Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc.<br>Volume | Peak<br>Hour<br>LOS<br>(HCS) | Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc.<br>Volume | Hour<br>LOS<br>(HCS) |
|                   | <i>G I-64 (on the Peninsula) (5 segments)</i>                   |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| Freeway           | G1 New Kent County Line to Route 30 (Exit 227)                  | 9,600    |                                                                                 |                                 |                              | 3.5                                                                        | 900                             | A                             | 9,600   |                                                                                 |                                 |                              | 3.5                                                                        | 900                             | A                    |
| Freeway           | G2 Route 30 (Exit 220) to Croaker Rd (Exit 231)                 | 67,700   |                                                                                 |                                 |                              | 24.7                                                                       | 6,100                           | C                             | 68,300  |                                                                                 |                                 |                              | 25.0                                                                       | 6,200                           | C                    |
| Freeway           | G3 Croaker Rd (Exit 231) to Route 199 @ Lightfoot (Exit 234)    | 83,900   |                                                                                 |                                 |                              | 33.6                                                                       | 7,600                           | D                             | 84,400  |                                                                                 |                                 |                              | 34.0                                                                       | 7,600                           | D                    |
| Freeway           | G4 Route 199 @ Lightfoot (Exit 234) to Camp Peary Rd (Exit 238) | 77,000   |                                                                                 |                                 |                              | 29.3                                                                       | 6,900                           | D                             | 76,900  |                                                                                 |                                 |                              | 29.2                                                                       | 6,900                           | D                    |
| Freeway           | G5 Camp Peary Rd (Exit 238) to Route 199 @ Kingsmill (Exit 242) | 80,100   |                                                                                 |                                 |                              | 31.1                                                                       | 7,200                           | D                             | 81,200  |                                                                                 |                                 |                              | 31.9                                                                       | 7,300                           | D                    |
|                   | <i>H I-264 (4 segments)</i>                                     |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| Freeway           | H1 Witchduck Rd to Independence Blvd                            | 222,100  |                                                                                 |                                 |                              | *                                                                          | 20,000                          | F                             | 223,600 |                                                                                 |                                 |                              | *                                                                          | 20,100                          | F                    |
| Freeway           | H2 Independence Blvd to Rosemont Rd                             | 181,100  |                                                                                 |                                 |                              | 40.1                                                                       | 16,300                          | E                             | 182,100 |                                                                                 |                                 |                              | 39.8                                                                       | 16,400                          | E                    |
| Freeway           | H3 Rosemont Rd to Lynnhaven Pkwy                                | 152,200  |                                                                                 |                                 |                              | 28.8                                                                       | 13,700                          | D                             | 154,000 |                                                                                 |                                 |                              | 29.4                                                                       | 13,900                          | D                    |
| Freeway           | H4 First Colonial Rd to proposed Southeastern Pkwy              | 59,800   |                                                                                 |                                 |                              | 14.5                                                                       | 5,400                           | B                             | 61,500  |                                                                                 |                                 |                              | 14.7                                                                       | 5,500                           | B                    |
|                   | <i>I Dam Neck Rd (2 segments)</i>                               |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| Arterial          | I1 Holland Rd to London Bridge Ext                              | 44,800   |                                                                                 |                                 |                              | 13.3                                                                       | 4,000                           | F                             | 42,000  |                                                                                 |                                 |                              | 15.7                                                                       | 3,800                           | F                    |
| Arterial          | I2 Proposed Southeastern Pkwy to Gen Booth Blvd                 | 27,000   |                                                                                 |                                 |                              | 22.2                                                                       | 2,400                           | D                             | 27,100  |                                                                                 |                                 |                              | 21.9                                                                       | 2,400                           | D                    |
|                   | <i>J Birdneck Rd ( 2 segments)</i>                              |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| Arterial          | J1 I-264 to VA Beach Blvd                                       | 28,500   |                                                                                 |                                 |                              | 14.0                                                                       | 2,600                           | E                             | 27,600  |                                                                                 |                                 |                              | 14.2                                                                       | 2,500                           | E                    |
| Arterial          | J2 Gen Booth Blvd to Norfolk Ave                                | 7,900    |                                                                                 |                                 |                              | 28.5                                                                       | 700                             | B                             | 8,300   |                                                                                 |                                 |                              | 28.5                                                                       | 700                             | B                    |
|                   | <i>K Battlefield Blvd (2 segments)</i>                          |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| Arterial          | K1 Great Bridge Bypass to Volvo Pkwy                            | 59,200   | 19.7                                                                            | 4,100                           | E                            | 20.4                                                                       | 4,800                           | E                             | 48,900  | 23.1                                                                            | 3,400                           | D                            | 23.2                                                                       | 4,000                           | D                    |
| Arterial          | K2 Cedar Rd to Mt Pleasant Rd                                   | 35,100   | 13.8                                                                            | 2,400                           | E                            | 13.8                                                                       | 2,600                           | E                             | 34,000  | 14.0                                                                            | 2,300                           | E                            | 13.4                                                                       | 2,500                           | E                    |
|                   | <i>L Kempsville Rd (2 segments)</i>                             |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| Arterial          | L1 Centreville Tpk to Indian River Rd                           | 31,800   | 16.4                                                                            | 2,400                           | E                            | 14.8                                                                       | 2,800                           | F                             | 31,200  | 16.5                                                                            | 2,300                           | E                            | 15.0                                                                       | 2,800                           | F                    |
| Arterial          | L2 Great Bridge Bypass to Greenbrier Pkwy                       | 41,300   | 24.2                                                                            | 3,100                           | D                            | 22.7                                                                       | 4,000                           | D                             | 38,600  | 24.5                                                                            | 2,900                           | D                            | 23.1                                                                       | 3,700                           | D                    |
|                   | <i>M Indian River Rd (2 segments)</i>                           |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| Arterial          | M1 I-64 to Centreville Tpk                                      | 106,000  |                                                                                 |                                 |                              | 2.9                                                                        | 9,500                           | F                             | 101,600 |                                                                                 |                                 |                              | 3.2                                                                        | 9,100                           | F                    |
| Arterial          | M2 Independence Blvd to Elbow Rd                                | 19,200   |                                                                                 |                                 |                              | 29.7                                                                       | 1,700                           | C                             | 18,500  |                                                                                 |                                 |                              | 29.9                                                                       | 1,700                           | C                    |
|                   | <i>N Oceana Blvd (2 segments)</i>                               |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| Arterial          | N1 Gen Booth Blvd to Tomcat Blvd/proposed Southeastern Pkwy     | 42,300   |                                                                                 |                                 |                              | 4.9                                                                        | 3,800                           | F                             | 39,800  |                                                                                 |                                 |                              | 6.2                                                                        | 3,600                           | F                    |
| Arterial          | N2 Tomcat Blvd/proposed Southeastern Pkwy to VA Beach Blvd      | 42,000   |                                                                                 |                                 |                              | 23.7                                                                       | 3,800                           | D                             | 41,400  |                                                                                 |                                 |                              | 24.5                                                                       | 3,700                           | D                    |
|                   | <b>BUILD SCENARIO - ALL ABOVE SEGMENTS, PLUS:</b>               |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
|                   | <i>O Hampton Roads Crossing Segment 1 (2 segments)</i>          |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| Freeway           | O1 Proposed EW Conn., I-564 to Hampton Blvd                     |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| Freeway           | O2 Proposed EW Conn., Hampton Blvd to I-664                     |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
|                   | <i>P Hampton Roads Crossing (4 segments)</i>                    |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
| P1/O1             | Proposed EW Conn., I-564 to Hampton Blvd                        |          |                                                                                 |                                 |                              |                                                                            |                                 |                               | 21,200  |                                                                                 |                                 |                              | 7.7                                                                        | 1,900                           | A                    |
|                   | P2 Proposed EW Conn., Hampton Blvd to Craney Island Conn.       |          |                                                                                 |                                 |                              |                                                                            |                                 |                               | 36,300  |                                                                                 |                                 |                              | 13.0                                                                       | 3,300                           | B                    |
|                   | P3 Proposed EW Conn., Craney Island Conn. to I-664              |          |                                                                                 |                                 |                              |                                                                            |                                 |                               | 26,500  |                                                                                 |                                 |                              | 9.5                                                                        | 2,400                           | A                    |
|                   | P4 Proposed Craney Island Conn.                                 |          |                                                                                 |                                 |                              |                                                                            |                                 |                               | 9,800   |                                                                                 |                                 |                              | 3.6                                                                        | 900                             | A                    |
|                   | <i>Q Midtown Tunnel and MLK Frwy Extension (1 segment)</i>      |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |
|                   | Q1 MLK Frwy, I-264 to High St                                   |          |                                                                                 |                                 |                              |                                                                            |                                 |                               |         |                                                                                 |                                 |                              |                                                                            |                                 |                      |

Planning  
Analysis

Segments

R New Alignment Route 460 (4 segments)  
R1 Route 58 Bypass to Windsor town limits  
R2 Windsor town limits to Ivor  
R3 Ivor to Wakefield  
R4 Wakefield to Waverly  
R5 Waverly to Route 625  
R6 Route 625 to Route 156  
R7 Route 156 to I-295

S Southeastern Parkway (6 segments)  
S1 Great Bridge Bypass to Centreville Tpk  
S2 Centreville Tpk to Indian River Rd  
S3 Indian River Rd to Princess Anne Rd  
S4 Princess Anne Rd to Dam Neck Rd  
S5 Dam Neck Rd to Oceana Blvd  
S6 Oceana Blvd to I-264

No Build

|     | AM Peak<br>Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | AM<br>Peak<br>Hour<br>Calc.<br>Volume | AM<br>Peak<br>Hour<br>LOS<br>(HCS) | PM Peak Hour<br>Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | PM<br>Peak<br>Hour<br>Calc.<br>Volume | PM Peak<br>Hour<br>LOS<br>(HCS) |
|-----|--------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------|
| ADT |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |

Hampton Roads Crossing - Full

|     | AM Peak<br>Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | AM<br>Peak<br>Hour<br>Calc.<br>Volume | AM<br>Peak<br>Hour<br>LOS<br>(HCS) | PM Peak Hour<br>Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | PM<br>Peak<br>Hour<br>Calc.<br>Volume | PM Peak<br>Hour<br>LOS<br>(HCS) |
|-----|--------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------|
| ADT |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |

LEVEL OF SERVICE

|                                                      | A    | B       | C       | D       | E       | F    |
|------------------------------------------------------|------|---------|---------|---------|---------|------|
| <u>FREEWAY (Density pc/mi/ln)</u>                    | 0-11 | > 11-18 | > 18-26 | > 26-35 | > 35-45 | >45  |
| <u>ARTERIAL - CLASS 1 (Average Travel Speed mph)</u> | >42  | >34-42  | >27-34  | >21-27  | >16-21  | <=16 |
| <u>ARTERIAL - CLASS 2 (Average Travel Speed mph)</u> | >35  | >28-35  | >22-28  | >17-22  | >13-17  | <=13 |
| <u>ARTERIAL - CLASS 3 (Average Travel Speed mph)</u> | >30  | >24-30  | >18-24  | >14-18  | >10-14  | <=10 |

Notes\*

- 1. PHF based on data from studies:Norfolk LOS study, Newport etc.
- 2. K factor based on HRPDC
- 3. D Factor based on HRPDC & Studies: etc.
- 4. Density for Freeway Segments (pc/mi/ln)
- 5. Average Travel Speed for Arterial Segments (mph)

\*I-264 Corridor Study completed by URS.  
Elbow Road Study completed by FHI.  
I-264 Lynnhaven/Great Neck Interchange Study completed by FHI.

|                   |                                                        | Hampton Roads Crossing - Segment 1 |                                                             |                 |              |                                                             |                 |              | Midtown Tunnel & MLK Extension |                                                             |                 |              |                                                             |                 |              |
|-------------------|--------------------------------------------------------|------------------------------------|-------------------------------------------------------------|-----------------|--------------|-------------------------------------------------------------|-----------------|--------------|--------------------------------|-------------------------------------------------------------|-----------------|--------------|-------------------------------------------------------------|-----------------|--------------|
| Planning Analysis | Segments                                               | ADT                                | AM Peak Hour Criteria                                       | AM Peak Hour    | AM Peak Hour | PM Peak Hour Criteria                                       | PM Peak Hour    | PM Peak Hour | ADT                            | AM Peak Hour Criteria                                       | AM Peak Hour    | AM Peak Hour | PM Peak Hour Criteria                                       | PM Peak Hour    | PM Peak Hour |
|                   |                                                        |                                    | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc.<br>Volume | LOS<br>(HCS) | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc.<br>Volume | LOS<br>(HCS) |                                | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc.<br>Volume | LOS<br>(HCS) | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc.<br>Volume | LOS<br>(HCS) |
|                   | A Hampton Roads Beltway (17 Segments)                  |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Freeway           | A1 I-64, I-664 to Armistead Ave                        | 130,500                            |                                                             |                 |              | 36.3                                                        | 11,700          | E            | 135,600                        |                                                             |                 |              | 39.3                                                        | 12,200          | E            |
| Freeway           | A2 I-64, Armistead Ave to Hampton Roads Bridge Tunnel  | 106,400                            |                                                             |                 |              | 26.2                                                        | 9,600           | D            | 112,100                        |                                                             |                 |              | 28.0                                                        | 10,100          | D            |
| Freeway           | A3 Hampton Roads Bridge Tunnel                         | 91,900                             |                                                             |                 |              | 40.6                                                        | 8,300           | E            | 100,100                        |                                                             |                 |              | *                                                           | 9,000           | F            |
| Freeway           | A4 I-64, Hampton Roads Bridge Tunnel to I-564          | 90,300                             |                                                             |                 |              | 41.2                                                        | 8,100           | E            | 94,200                         |                                                             |                 |              | 44.5                                                        | 8,500           | E            |
| Freeway           | A5 I-64, I-564 to Chesapeake Blvd                      | 160,400                            |                                                             |                 |              | *                                                           | 14,400          | F            | 159,200                        |                                                             |                 |              | *                                                           | 14,300          | F            |
| Freeway           | A6 I-64, Chesapeake Blvd to Northampton Blvd           | 171,700                            |                                                             |                 |              | *                                                           | 15,500          | F            | 169,900                        |                                                             |                 |              | *                                                           | 15,300          | F            |
| Freeway           | A7 I-64, Northampton Blvd to I-264                     | 176,400                            |                                                             |                 |              | 37.2                                                        | 15,900          | E            | 174,100                        |                                                             |                 |              | 36.1                                                        | 15,700          | E            |
| Freeway           | A8 I-64, I-264 to Indian River Rd                      | 158,000                            |                                                             |                 |              | 30.4                                                        | 14,200          | D            | 158,600                        |                                                             |                 |              | 30.6                                                        | 14,300          | D            |
| Freeway           | A9 I-64, Indian River Rd to Greenbrier Pkwy            | 145,600                            |                                                             |                 |              | 27.0                                                        | 13,100          | D            | 146,700                        |                                                             |                 |              | 27.3                                                        | 13,200          | D            |
| Freeway           | A10 I-64, Greenbrier Pkwy to I-464                     | 129,900                            |                                                             |                 |              | 23.5                                                        | 11,700          | C            | 132,100                        |                                                             |                 |              | 23.9                                                        | 11,900          | C            |
| Freeway           | A11 I-64, I-464 to I-264                               | 91,200                             |                                                             |                 |              | 40.1                                                        | 8,200           | E            | 94,800                         |                                                             |                 |              | 44.4                                                        | 8,500           | E            |
| Freeway           | A12 I-664, I-264 to Route 58                           | 132,200                            |                                                             |                 |              | 24.0                                                        | 11,900          | C            | 134,000                        |                                                             |                 |              | 24.5                                                        | 12,100          | C            |
| Freeway           | A13 I-664, Route 58 to Route 164/Western Frwy          | 86,100                             |                                                             |                 |              | 35.3                                                        | 7,700           | E            | 87,600                         |                                                             |                 |              | 36.6                                                        | 7,900           | E            |
| Freeway           | A14 I-664, Route 164/Western Frwy to proposed EW Conn. | 66,600                             |                                                             |                 |              | 24.4                                                        | 6,000           | C            | 68,500                         |                                                             |                 |              | 25.1                                                        | 6,200           | C            |
| Freeway           | A15 I-664, proposed EW Conn. to 23rd St                | 81,100                             |                                                             |                 |              | 32.0                                                        | 7,300           | D            | 81,500                         |                                                             |                 |              | 32.2                                                        | 7,300           | D            |
| Freeway           | A16 I-664, 23rd St to Aberdeen Rd                      | 84,300                             |                                                             |                 |              | 34.1                                                        | 7,600           | D            | 80,000                         |                                                             |                 |              | 31.2                                                        | 7,200           | D            |
| Freeway           | A17 I-664, Aberdeen Rd to I-64                         | 93,400                             |                                                             |                 |              | 44.2                                                        | 8,400           | E            | 90,500                         |                                                             |                 |              | 40.7                                                        | 8,100           | E            |
|                   | B Midtown Tunnel area (3 segments)                     |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Two-Lane          | B1 Midtown Tunnel                                      | 49,100                             |                                                             |                 |              |                                                             |                 | F            | 23,600                         |                                                             |                 |              | -                                                           |                 | E            |
| Freeway           | B2 MLK Frwy, High St to Pinner's Point Conn.           |                                    |                                                             |                 |              |                                                             |                 |              | 33,700                         |                                                             |                 |              | 14.5                                                        | 3,000           | B            |
| Freeway           | B3 Western Frwy (Route 164, Town Point Rd to MLK Frwy  | 67,300                             |                                                             |                 |              | 24.6                                                        | 6,100           | C            | 68,900                         |                                                             |                 |              | 25.3                                                        | 6,200           | C            |
|                   | C Route 460 (6 segments)                               |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Multi-Lane        | C1 I-664 to Route 58 Bypass                            | 86,000                             |                                                             | 6,700           | D            |                                                             | 7,200           | D            | 85,700                         | -                                                           | 6,700           | D            | -                                                           | 7,200           | D            |
| Freeway           | C2 Route 58 Bypass                                     |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Multi-Lane        | C3 Route 58 Bypass to Windsor                          |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Multi-Lane        | C4 Windsor to Waverly                                  |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Multi-Lane        | C5 Waverly to Route 156                                |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Multi-Lane        | C6 Route 156 to I-295                                  |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
|                   | D Oak Grove Conn. & Dominion Blvd (4 segments)         |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Two-Lane          | D1 Dominion Blvd, Route 17 to Cedar Rd                 | 12,300                             |                                                             | 800             | E            |                                                             | 1,000           | E            | 12,200                         | -                                                           | 800             | E            | -                                                           | 1,000           | E            |
| Arterial          | D2 Dominion Blvd, Cedar Rd to Bainbridge Blvd          | 36,400                             | 2.8                                                         | 2,800           | F            | 3.1                                                         | 3,100           | F            | 36,800                         | 2.7                                                         | 2,900           | F            | 3.0                                                         | 3,100           | F            |
| Arterial          | D3 Dominion Blvd, Bainbridge Blvd to Great Bridge Blvd |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Freeway           | D4 Oak Grove Conn. (from I-64 to Battlefield Blvd)     | 129,100                            |                                                             |                 |              | *                                                           | 11,600          | F            | 131,500                        |                                                             |                 |              | *                                                           | 11,800          | F            |
|                   | E Hampton Blvd & Brambleton Ave (5 segments)           |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Arterial          | E1 Brambleton Ave to 21st St                           | 36,700                             | 9.9                                                         | 2,500           | F            | 6.4                                                         | 2,800           | F            | 27,100                         | 13.9                                                        | 1,900           | E            | 13.5                                                        | 2,000           | E            |
| Arterial          | E2 38th St to Little Creek Rd                          | 35,800                             | 19.0                                                        | 2,400           | D            | 18.4                                                        | 2,800           | D            | 34,700                         | 19.1                                                        | 2,300           | D            | 18.5                                                        | 2,700           | D            |
| Arterial          | E3 Little Creek Rd to proposed EW Conn.                | 32,800                             | 20.8                                                        | 2,300           | D            | 21.4                                                        | 2,500           | D            | 33,200                         | 20.7                                                        | 2,300           | D            | 21.4                                                        | 2,600           | D            |
| Arterial          | E4 Proposed EW Conn. to Adm Taussig Blvd               | 34,700                             | 17.2                                                        | 2,700           | D            | 18.2                                                        | 2,600           | D            | 33,800                         | 17.3                                                        | 2,600           | D            | 18.3                                                        | 2,600           | D            |
| Arterial          | E5 Brambleton Ave, Colley Ave to Boush St              | 65,500                             | 4.1                                                         | 5,300           | F            | 3.5                                                         | 5,500           | F            | 54,800                         | 6.6                                                         | 4,400           | F            | 5.3                                                         | 4,600           | F            |
|                   | F Downtown Tunnel Area (5 segments)                    |                                    |                                                             |                 |              |                                                             |                 |              |                                |                                                             |                 |              |                                                             |                 |              |
| Freeway           | F1 Downtown Tunnel (I-264 from Portsmouth to I-464)    | 111,700                            |                                                             |                 |              | *                                                           | 10,000          | F            | 120,300                        |                                                             |                 |              | *                                                           | 10,800          | F            |
| Freeway           | F2 Berkley Bridge (I-264 from Waterside to I-464)      | 124,500                            |                                                             |                 |              | 28.4                                                        | 11,200          | D            | 131,800                        |                                                             |                 |              | 30.1                                                        | 11,900          | D            |
| Two-Lane          | F3 Jordan Bridge(Poindexter from Portsmouth to I-464)  | 12,500                             |                                                             |                 |              |                                                             |                 | E            | 15,800                         |                                                             |                 |              | -                                                           |                 | E            |
| Arterial          | F4 Effingham St, I-264 to South St                     | 38,000                             | 1.8                                                         | 3,800           | F            | 1.8                                                         | 3,800           | F            | 35,700                         | 2.2                                                         | 3,600           | F            | 2.2                                                         | 3,600           | F            |
| Arterial          | F5 Frederick Blvd, I-264 to Turnpike Rd                | 47,400                             | 2.5                                                         | 4,700           | F            | 2.5                                                         | 4,700           | F            | 42,900                         | 3.1                                                         | 4,300           | F            | 3.1                                                         | 4,300           | F            |

|                   |                                                                 | Hampton Roads Crossing - Segment 1 |                                                             |              |              |                                                             |              |              | Midtown Tunnel & MLK Extension |                                                             |              |              |                                                             |              |              |
|-------------------|-----------------------------------------------------------------|------------------------------------|-------------------------------------------------------------|--------------|--------------|-------------------------------------------------------------|--------------|--------------|--------------------------------|-------------------------------------------------------------|--------------|--------------|-------------------------------------------------------------|--------------|--------------|
| Planning Analysis | Segments                                                        | ADT                                | AM Peak Hour Criteria                                       | AM Peak Hour | AM Peak Hour | PM Peak Hour Criteria                                       | PM Peak Hour | PM Peak Hour | ADT                            | AM Peak Hour Criteria                                       | AM Peak Hour | AM Peak Hour | PM Peak Hour Criteria                                       | PM Peak Hour | PM Peak Hour |
|                   |                                                                 |                                    | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc. Volume | LOS (HCS)    | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc. Volume | LOS (HCS)    |                                | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc. Volume | LOS (HCS)    | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc. Volume | LOS (HCS)    |
|                   | G I-64 (on the Peninsula) (5 segments)                          |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
| Freeway           | G1 New Kent County Line to Route 30 (Exit 227)                  | 9,600                              |                                                             |              |              | 3.5                                                         | 900          | A            | 9,600                          |                                                             |              |              | 3.5                                                         | 900          | A            |
| Freeway           | G2 Route 30 (Exit 220) to Croaker Rd (Exit 231)                 | 68,400                             |                                                             |              |              | 25.0                                                        | 6,200        | C            | 68,400                         |                                                             |              |              | 25.0                                                        | 6,200        | C            |
| Freeway           | G3 Croaker Rd (Exit 231) to Route 199 @ Lightfoot (Exit 234)    | 84,500                             |                                                             |              |              | 34.0                                                        | 7,600        | D            | 84,500                         |                                                             |              |              | 34.1                                                        | 7,600        | D            |
| Freeway           | G4 Route 199 @ Lightfoot (Exit 234) to Camp Peary Rd (Exit 238) | 76,800                             |                                                             |              |              | 29.2                                                        | 6,900        | D            | 76,800                         |                                                             |              |              | 29.2                                                        | 6,900        | D            |
| Freeway           | G5 Camp Peary Rd (Exit 238) to Route 199 @ Kingsmill (Exit 242) | 81,300                             |                                                             |              |              | 31.9                                                        | 7,300        | D            | 81,100                         |                                                             |              |              | 31.8                                                        | 7,300        | D            |
|                   | H I-264 (4 segments)                                            |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
| Freeway           | H1 Witchduck Rd to Independence Blvd                            | 225,600                            |                                                             |              |              | *                                                           | 20,300       | F            | 223,400                        |                                                             |              |              | *                                                           | 20,100       | F            |
| Freeway           | H2 Independence Blvd to Rosemont Rd                             | 182,200                            |                                                             |              |              | 39.7                                                        | 16,400       | E            | 181,200                        |                                                             |              |              | 39.4                                                        | 16,300       | E            |
| Freeway           | H3 Rosemont Rd to Lynnhaven Pkwy                                | 154,000                            |                                                             |              |              | 29.4                                                        | 13,900       | D            | 153,800                        |                                                             |              |              | 29.2                                                        | 13,800       | D            |
| Freeway           | H4 First Colonial Rd to proposed Southeastern Pkwy              | 61,900                             |                                                             |              |              | 14.8                                                        | 5,600        | B            | 61,700                         |                                                             |              |              | 14.7                                                        | 5,600        | B            |
|                   | I Dam Neck Rd (2 segments)                                      |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
| Arterial          | I1 Holland Rd to London Bridge Ext                              | 42,300                             |                                                             |              |              | 15.5                                                        | 3,800        | F            | 42,100                         |                                                             |              |              | 15.7                                                        | 3,800        | F            |
| Arterial          | I2 Proposed Southeastern Pkwy to Gen Booth Blvd                 | 27,100                             |                                                             |              |              | 21.9                                                        | 2,400        | D            | 27,100                         |                                                             |              |              | 21.9                                                        | 2,400        | D            |
|                   | J Birdneck Rd ( 2 segments)                                     |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
| Arterial          | J1 I-264 to VA Beach Blvd                                       | 27,700                             |                                                             |              |              | 14.1                                                        | 2,500        | E            | 27,600                         |                                                             |              |              | 14.2                                                        | 2,500        | E            |
| Arterial          | J2 Gen Booth Blvd to Norfolk Ave                                | 8,400                              |                                                             |              |              | 28.4                                                        | 800          | B            | 8,400                          |                                                             |              |              | 28.5                                                        | 800          | B            |
|                   | K Battlefield Blvd (2 segments)                                 |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
| Arterial          | K1 Great Bridge Bypass to Volvo Pkwy                            | 48,000                             | 23.3                                                        | 3,300        | D            | 23.3                                                        | 3,900        | D            | 49,400                         | 23.0                                                        | 3,400        | D            | 23.1                                                        | 4,000        | D            |
| Arterial          | K2 Cedar Rd to Mt Pleasant Rd                                   | 33,700                             | 14.0                                                        | 2,300        | E            | 13.5                                                        | 2,500        | E            | 35,200                         | 13.8                                                        | 2,400        | E            | 13.2                                                        | 2,600        | E            |
|                   | L Kempsville Rd (2 segments)                                    |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
| Arterial          | L1 Centreville Tpk to Indian River Rd                           | 31,300                             | 16.4                                                        | 2,300        | E            | 14.9                                                        | 2,800        | F            | 31,300                         | 16.4                                                        | 2,300        | E            | 14.9                                                        | 2,800        | F            |
| Arterial          | L2 Great Bridge Bypass to Greenbrier Pkwy                       | 38,500                             | 24.5                                                        | 2,900        | D            | 23.1                                                        | 3,700        | D            | 38,700                         | 24.5                                                        | 2,900        | D            | 23.1                                                        | 3,700        | D            |
|                   | M Indian River Rd (2 segments)                                  |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
| Arterial          | M1 I-64 to Centreville Tpk                                      | 101,100                            |                                                             |              |              | 3.3                                                         | 9,100        | F            | 101,400                        |                                                             |              |              | 3.3                                                         | 9,100        | F            |
| Arterial          | M2 Independence Blvd to Elbow Rd                                | 18,400                             |                                                             |              |              | 29.9                                                        | 1,700        | C            | 18,300                         |                                                             |              |              | 29.9                                                        | 1,700        | C            |
|                   | N Oceana Blvd (2 segments)                                      |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
| Arterial          | N1 Gen Booth Blvd to Tomcat Blvd/proposed Southeastern Pkwy     | 39,800                             |                                                             |              |              | 6.2                                                         | 3,600        | F            | 39,900                         |                                                             |              |              | 6.1                                                         | 3,600        | F            |
| Arterial          | N2 Tomcat Blvd/proposed Southeastern Pkwy to VA Beach Blvd      | 41,600                             |                                                             |              |              | 24.2                                                        | 3,700        | D            | 41,500                         |                                                             |              |              | 24.3                                                        | 3,700        | D            |
|                   | BUILD SCENARIO - ALL ABOVE SEGMENTS, PLUS:                      |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
|                   | O Hampton Roads Crossing Segment 1 (2 segments)                 |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
| Freeway           | O1 Proposed EW Conn., I-564 to Hampton Blvd                     | 17,800                             |                                                             |              |              | 12.7                                                        | 1,600        | B            |                                |                                                             |              |              |                                                             |              |              |
| Freeway           | O2 Proposed EW Conn., Hampton Blvd to I-664                     | 29,300                             |                                                             |              |              | 20.9                                                        | 2,600        | C            |                                |                                                             |              |              |                                                             |              |              |
|                   | P Hampton Roads Crossing (4 segments)                           |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
|                   | P1/O1 Proposed EW Conn., I-564 to Hampton Blvd                  |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
|                   | P2 Proposed EW Conn., Hampton Blvd to Craney Island Conn.       |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
|                   | P3 Proposed EW Conn., Craney Island Conn. to I-664              |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
|                   | P4 Proposed Craney Island Conn.                                 |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
|                   | Q Midtown Tunnel and MLK Frwy Extension (1 segment)             |                                    |                                                             |              |              |                                                             |              |              |                                |                                                             |              |              |                                                             |              |              |
|                   | Q1 MLK Frwy, I-264 to High St                                   |                                    |                                                             |              |              |                                                             |              |              | 11,000                         |                                                             |              |              | 3.9                                                         | 1,000        | A            |

Planning  
Analysis

Segments

- R*    *New Alignment Route 460 (4 segments)*
- R1 Route 58 Bypass to Windsor town limits
- R2 Windsor town limits to Ivor
- R3 Ivor to Wakefield
- R4 Wakefield to Waverly
- R5 Waverly to Route 625
- R6 Route 625 to Route 156
- R7 Route 156 to I-295
- S*    *Southeastern Parkway (6 segments)*
- S1 Great Bridge Bypass to Centreville Tpk
- S2 Centreville Tpk to Indian River Rd
- S3 Indian River Rd to Princess Anne Rd
- S4 Princess Anne Rd to Dam Neck Rd
- S5 Dam Neck Rd to Oceana Blvd
- S6 Oceana Blvd to I-264

Hampton Roads Crossing - Segment 1

|     | AM Peak<br>Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | AM<br>Peak<br>Hour<br>Calc.<br>Volume | AM<br>Peak<br>Hour<br>LOS<br>(HCS) | PM Peak Hour<br>Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | PM<br>Peak<br>Hour<br>Calc.<br>Volume | PM Peak<br>Hour<br>LOS<br>(HCS) |
|-----|--------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------|
| ADT |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |

Midtown Tunnel & MLK Extension

|     | AM Peak<br>Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | AM<br>Peak<br>Hour<br>Calc.<br>Volume | AM<br>Peak<br>Hour<br>LOS<br>(HCS) | PM Peak Hour<br>Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | PM<br>Peak<br>Hour<br>Calc.<br>Volume | PM Peak<br>Hour<br>LOS<br>(HCS) |
|-----|--------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------|
| ADT |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |

LEVEL OF SERVICE

|                                                      | A    | B       | C       | D       | E       | F    |
|------------------------------------------------------|------|---------|---------|---------|---------|------|
| <u>FREEWAY (Density pc/mi/ln)</u>                    | 0-11 | > 11-18 | > 18-26 | > 26-35 | > 35-45 | >45  |
| <u>ARTERIAL - CLASS 1 (Average Travel Speed mph)</u> | >42  | >34-42  | >27-34  | >21-27  | >16-21  | <=16 |
| <u>ARTERIAL - CLASS 2 (Average Travel Speed mph)</u> | >35  | >28-35  | >22-28  | >17-22  | >13-17  | <=13 |
| <u>ARTERIAL - CLASS 3 (Average Travel Speed mph)</u> | >30  | >24-30  | >18-24  | >14-18  | >10-14  | <=10 |

Notes\*

1. PHF based on data from studies:Norfolk LOS study, Newport etc.
2. K factor based on HRPDC
3. D Factor based on HRPDC & Studies: etc.
4. Density for Freeway Segments (pc/mi/ln)
5. Average Travel Speed for Arterial Segments (mph)

\*I-264 Corridor Study completed by URS.  
Elbow Road Study completed by FHI.  
I-264 Lynnhaven/Great Neck Interchange Study completed by FHI.

|                   |                                                        | Southeastern Parkway & Greenbelt |                                                                                 |                                 |                              |                                                                            |                                 |         | Route 460 Realignment |                      |                                                                                 |                                 |                              |                                                                            |         |
|-------------------|--------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------|---------------------------------|------------------------------|----------------------------------------------------------------------------|---------------------------------|---------|-----------------------|----------------------|---------------------------------------------------------------------------------|---------------------------------|------------------------------|----------------------------------------------------------------------------|---------|
| Planning Analysis | Segments                                               | ADT                              | AM Peak                                                                         | AM                              | AM                           | PM Peak Hour                                                               | PM                              | PM Peak | ADT                   | AM Peak              | AM                                                                              | AM                              | PM Peak Hour                 | PM                                                                         | PM Peak |
|                   |                                                        |                                  | Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc.<br>Volume | Peak<br>Hour<br>LOS<br>(HCS) | Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc.<br>Volume |         |                       | Hour<br>LOS<br>(HCS) | Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc.<br>Volume | Peak<br>Hour<br>LOS<br>(HCS) | Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) |         |
|                   | A Hampton Roads Beltway (17 Segments)                  |                                  |                                                                                 |                                 |                              |                                                                            |                                 |         |                       |                      |                                                                                 |                                 |                              |                                                                            |         |
| Freeway           | A1 I-64, I-664 to Armistead Ave                        | 135,500                          |                                                                                 |                                 |                              | 39.1                                                                       | 12,200                          | E       | 130,800               |                      |                                                                                 |                                 | 36.4                         | 11,800                                                                     | E       |
| Freeway           | A2 I-64, Armistead Ave to Hampton Roads Bridge Tunnel  | 111,400                          |                                                                                 |                                 |                              | 27.8                                                                       | 10,000                          | D       | 106,200               |                      |                                                                                 |                                 | 26.1                         | 9,600                                                                      | D       |
| Freeway           | A3 Hampton Roads Bridge Tunnel                         | 99,300                           |                                                                                 |                                 |                              | *                                                                          | 8,900                           | F       | 92,900                |                      |                                                                                 |                                 | 41.9                         | 8,400                                                                      | E       |
| Freeway           | A4 I-64, Hampton Roads Bridge Tunnel to I-564          | 95,000                           |                                                                                 |                                 |                              | 44.2                                                                       | 8,500                           | E       | 90,700                |                      |                                                                                 |                                 | 41.3                         | 8,200                                                                      | E       |
| Freeway           | A5 I-64, I-564 to Chesapeake Blvd                      | 159,900                          |                                                                                 |                                 |                              | *                                                                          | 14,400                          | F       | 151,700               |                      |                                                                                 |                                 | *                            | 13,700                                                                     | F       |
| Freeway           | A6 I-64, Chesapeake Blvd to Northampton Blvd           | 172,100                          |                                                                                 |                                 |                              | *                                                                          | 15,500                          | F       | 164,600               |                      |                                                                                 |                                 | *                            | 14,800                                                                     | F       |
| Freeway           | A7 I-64, Northampton Blvd to I-264                     | 175,800                          |                                                                                 |                                 |                              | 36.8                                                                       | 15,800                          | E       | 168,100               |                      |                                                                                 |                                 | 34.1                         | 15,100                                                                     | D       |
| Freeway           | A8 I-64, I-264 to Indian River Rd                      | 154,700                          |                                                                                 |                                 |                              | 29.5                                                                       | 13,900                          | D       | 156,700               |                      |                                                                                 |                                 | 30.1                         | 14,100                                                                     | D       |
| Freeway           | A9 I-64, Indian River Rd to Greenbrier Pkwy            | 130,600                          |                                                                                 |                                 |                              | 23.9                                                                       | 11,800                          | C       | 147,000               |                      |                                                                                 |                                 | 27.4                         | 13,200                                                                     | D       |
| Freeway           | A10 I-64, Greenbrier Pkwy to I-464                     | 109,700                          |                                                                                 |                                 |                              | 20.3                                                                       | 9,900                           | C       | 130,500               |                      |                                                                                 |                                 | 23.7                         | 11,700                                                                     | C       |
| Freeway           | A11 I-64, I-464 to I-264                               | 92,000                           |                                                                                 |                                 |                              | 42.1                                                                       | 8,300                           | E       | 94,400                |                      |                                                                                 |                                 | 43.5                         | 8,500                                                                      | E       |
| Freeway           | A12 I-664, I-264 to Route 58                           | 135,100                          |                                                                                 |                                 |                              | 24.6                                                                       | 12,200                          | C       | 154,000               |                      |                                                                                 |                                 | 29.4                         | 13,900                                                                     | D       |
| Freeway           | A13 I-664, Route 58 to Route 164/Western Frwy          | 88,400                           |                                                                                 |                                 |                              | 37.2                                                                       | 8,000                           | E       | 83,300                |                      |                                                                                 |                                 | 33.2                         | 7,500                                                                      | D       |
| Freeway           | A14 I-664, Route 164/Western Frwy to proposed EW Conn. | 68,800                           |                                                                                 |                                 |                              | 25.3                                                                       | 6,200                           | C       | 62,800                |                      |                                                                                 |                                 | 22.7                         | 5,600                                                                      | C       |
| Freeway           | A15 I-664, proposed EW Conn. to 23rd St                | 81,700                           |                                                                                 |                                 |                              | 32.2                                                                       | 7,400                           | D       | 74,200                |                      |                                                                                 |                                 | 27.8                         | 6,700                                                                      | D       |
| Freeway           | A16 I-664, 23rd St to Aberdeen Rd                      | 80,300                           |                                                                                 |                                 |                              | 31.2                                                                       | 7,200                           | D       | 74,300                |                      |                                                                                 |                                 | 28.1                         | 6,700                                                                      | D       |
| Freeway           | A17 I-664, Aberdeen Rd to I-64                         | 91,100                           |                                                                                 |                                 |                              | 41.2                                                                       | 8,200                           | E       | 86,300                |                      |                                                                                 |                                 | 36.6                         | 7,800                                                                      | E       |
|                   | B Midtown Tunnel area (3 segments)                     |                                  |                                                                                 |                                 |                              |                                                                            |                                 |         |                       |                      |                                                                                 |                                 |                              |                                                                            |         |
| Two-Lane          | B1 Midtown Tunnel                                      | 52,200                           |                                                                                 |                                 |                              | -                                                                          |                                 | F       | 52,800                |                      |                                                                                 |                                 | -                            |                                                                            | F       |
| Freeway           | B2 MLK Frwy, High St to Pinner's Point Conn.           | 29,600                           |                                                                                 |                                 |                              | 12.7                                                                       | 2,700                           | B       |                       |                      |                                                                                 |                                 |                              |                                                                            |         |
| Freeway           | B3 Western Frwy (Route 164, Town Point Rd to MLK Frwy  | 74,900                           |                                                                                 |                                 |                              | 28.4                                                                       | 6,700                           | D       | 72,400                |                      |                                                                                 |                                 | 27.1                         | 6,500                                                                      | D       |
|                   | C Route 460 (6 segments)                               |                                  |                                                                                 |                                 |                              |                                                                            |                                 |         |                       |                      |                                                                                 |                                 |                              |                                                                            |         |
| Multi-Lane        | C1 I-664 to Route 58 Bypass                            | 86,100                           | -                                                                               | 6,700                           | D                            | -                                                                          | 7,200                           | D       | 110,900               | -                    | 8,600                                                                           | E                               | -                            | 9,300                                                                      | E       |
| Freeway           | C2 Route 58 Bypass                                     |                                  |                                                                                 |                                 |                              |                                                                            |                                 |         | 25,100                | -                    | 1,800                                                                           | B                               | -                            | 2,400                                                                      | B       |
| Multi-Lane        | C3 Route 58 Bypass to Windsor                          |                                  |                                                                                 |                                 |                              |                                                                            |                                 |         | 24,200                | -                    | 1,700                                                                           | B                               | -                            | 2,300                                                                      | B       |
| Multi-Lane        | C4 Windsor to Waverly                                  |                                  |                                                                                 |                                 |                              |                                                                            |                                 |         | 23,600                | -                    | 1,700                                                                           | B                               | -                            | 2,300                                                                      | B       |
| Multi-Lane        | C5 Waverly to Route 156                                |                                  |                                                                                 |                                 |                              |                                                                            |                                 |         | 23,900                | -                    | 1,700                                                                           | B                               | -                            | 2,300                                                                      | B       |
|                   | D Oak Grove Conn. & Dominion Blvd (4 segments)         |                                  |                                                                                 |                                 |                              |                                                                            |                                 |         |                       |                      |                                                                                 |                                 |                              |                                                                            |         |
| Two-Lane          | D1 Dominion Blvd, Route 17 to Cedar Rd                 | 11,900                           | -                                                                               | 700                             | E                            | -                                                                          | 900                             | E       | 12,400                | -                    | 800                                                                             | E                               | -                            | 1,000                                                                      | E       |
| Arterial          | D2 Dominion Blvd, Cedar Rd to Bainbridge Blvd          | 20,700                           | 8.8                                                                             | 1,600                           | F                            | 10.7                                                                       | 1,700                           | F       | 36,800                | 2.7                  | 2,900                                                                           | F                               | 3.0                          | 3,100                                                                      | F       |
| Arterial          | D3 Dominion Blvd, Bainbridge Blvd to Great Bridge Blvd | 25,900                           | 8.8                                                                             | 1,900                           | F                            | 11.9                                                                       | 2,100                           | F       |                       |                      |                                                                                 |                                 |                              |                                                                            |         |
| Freeway           | D4 Oak Grove Conn. (from I-64 to Battlefield Blvd)     | 112,400                          |                                                                                 |                                 |                              | *                                                                          | 10,100                          | F       | 128,500               |                      |                                                                                 |                                 | *                            | 11,600                                                                     | F       |
|                   | E Hampton Blvd & Brambleton Ave (5 segments)           |                                  |                                                                                 |                                 |                              |                                                                            |                                 |         |                       |                      |                                                                                 |                                 |                              |                                                                            |         |
| Arterial          | E1 Brambleton Ave to 21st St                           | 39,000                           | 6.9                                                                             | 2,700                           | F                            | 4.8                                                                        | 2,900                           | F       | 39,600                | 6.3                  | 2,700                                                                           | F                               | 4.5                          | 3,000                                                                      | F       |
| Arterial          | E2 38th St to Little Creek Rd                          | 37,000                           | 18.9                                                                            | 2,400                           | D                            | 18.2                                                                       | 2,900                           | D       | 36,800                | 18.9                 | 2,400                                                                           | D                               | 18.2                         | 2,900                                                                      | D       |
| Arterial          | E3 Little Creek Rd to proposed EW Conn.                | 33,900                           | 20.5                                                                            | 2,400                           | D                            | 21.3                                                                       | 2,600                           | D       | 34,400                | 20.4                 | 2,400                                                                           | D                               | 21.2                         | 2,600                                                                      | D       |
| Arterial          | E4 Proposed EW Conn. to Adm Taussig Blvd               | 34,200                           | 17.2                                                                            | 2,600                           | D                            | 18.2                                                                       | 2,600                           | D       | 34,700                | 17.2                 | 2,700                                                                           | D                               | 18.2                         | 2,600                                                                      | D       |
| Arterial          | E5 Brambleton Ave, Colley Ave to Boush St              | 65,900                           | 4.0                                                                             | 5,300                           | F                            | 3.4                                                                        | 5,500                           | F       | 61,700                | 4.7                  | 5,000                                                                           | F                               | 3.9                          | 5,200                                                                      | F       |
|                   | F Downtown Tunnel Area (5 segments)                    |                                  |                                                                                 |                                 |                              |                                                                            |                                 |         |                       |                      |                                                                                 |                                 |                              |                                                                            |         |
| Freeway           | F1 Downtown Tunnel (I-264 from Portsmouth to I-464)    | 114,200                          |                                                                                 |                                 |                              | *                                                                          | 10,300                          | F       | 118,800               |                      |                                                                                 |                                 | *                            | 10,700                                                                     | F       |
| Freeway           | F2 Berkley Bridge (I-264 from Waterside to I-464)      | 120,800                          |                                                                                 |                                 |                              | 27.7                                                                       | 10,900                          | D       | 128,500               |                      |                                                                                 |                                 | 29.3                         | 11,600                                                                     | D       |
| Two-Lane          | F3 Jordan Bridge(Poindexter from Portsmouth to I-464)  | 13,500                           |                                                                                 |                                 |                              | -                                                                          |                                 | E       | 14,200                |                      |                                                                                 |                                 | -                            |                                                                            | E       |
| Arterial          | F4 Effingham St, I-264 to South St                     | 39,800                           | 1.6                                                                             | 4,000                           | F                            | 1.6                                                                        | 4,000                           | F       | 37,700                | 1.9                  | 3,800                                                                           | F                               | 1.9                          | 3,800                                                                      | F       |
| Arterial          | F5 Frederick Blvd, I-264 to Turnpike Rd                | 47,600                           | 2.4                                                                             | 4,800                           | F                            | 2.4                                                                        | 4,800                           | F       | 47,700                | 2.4                  | 4,800                                                                           | F                               | 2.4                          | 4,800                                                                      | F       |

|                   |                                                                 | Southeastern Parkway & Greenbelt |                                                                                      |                           |                        |                                                                                      |                           |                        | Route 460 Realignment |                                                                                      |                           |                        |                                                                                      |                           |                        |
|-------------------|-----------------------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------|---------------------------|------------------------|--------------------------------------------------------------------------------------|---------------------------|------------------------|-----------------------|--------------------------------------------------------------------------------------|---------------------------|------------------------|--------------------------------------------------------------------------------------|---------------------------|------------------------|
| Planning Analysis | Segments                                                        | ADT                              | AM Peak Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | AM Peak Hour Calc. Volume | AM Peak Hour LOS (HCS) | PM Peak Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | PM Peak Hour Calc. Volume | PM Peak Hour LOS (HCS) | ADT                   | AM Peak Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | AM Peak Hour Calc. Volume | AM Peak Hour LOS (HCS) | PM Peak Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | PM Peak Hour Calc. Volume | PM Peak Hour LOS (HCS) |
|                   |                                                                 |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
|                   | G I-64 (on the Peninsula) (5 segments)                          |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
| Freeway           | G1 New Kent County Line to Route 30 (Exit 227)                  | 9,600                            |                                                                                      |                           |                        | 3.5                                                                                  | 900                       | A                      | 10,800                |                                                                                      |                           |                        | 3.9                                                                                  | 1,000                     | A                      |
| Freeway           | G2 Route 30 (Exit 220) to Croaker Rd (Exit 231)                 | 68,400                           |                                                                                      |                           |                        | 25.0                                                                                 | 6,200                     | C                      | 55,000                |                                                                                      |                           |                        | 19.8                                                                                 | 5,000                     | C                      |
| Freeway           | G3 Croaker Rd (Exit 231) to Route 199 @ Lightfoot (Exit 234)    | 84,500                           |                                                                                      |                           |                        | 34.1                                                                                 | 7,600                     | D                      | 72,500                |                                                                                      |                           |                        | 26.9                                                                                 | 6,500                     | D                      |
| Freeway           | G4 Route 199 @ Lightfoot (Exit 234) to Camp Peary Rd (Exit 238) | 76,800                           |                                                                                      |                           |                        | 29.1                                                                                 | 6,900                     | D                      | 66,600                |                                                                                      |                           |                        | 24.2                                                                                 | 6,000                     | C                      |
| Freeway           | G5 Camp Peary Rd (Exit 238) to Route 199 @ Kingsmill (Exit 242) | 81,400                           |                                                                                      |                           |                        | 32.0                                                                                 | 7,300                     | D                      | 68,900                |                                                                                      |                           |                        | 25.2                                                                                 | 6,200                     | C                      |
|                   | H I-264 (4 segments)                                            |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
| Freeway           | H1 Witchduck Rd to Independence Blvd                            | 218,200                          |                                                                                      |                           |                        | *                                                                                    | 19,600                    | F                      | 218,400               |                                                                                      |                           |                        | *                                                                                    | 19,700                    | F                      |
| Freeway           | H2 Independence Blvd to Rosemont Rd                             | 176,900                          |                                                                                      |                           |                        | 37.2                                                                                 | 15,900                    | E                      | 175,700               |                                                                                      |                           |                        | 37.1                                                                                 | 15,800                    | E                      |
| Freeway           | H3 Rosemont Rd to Lynnhaven Pkwy                                | 151,600                          |                                                                                      |                           |                        | 28.7                                                                                 | 13,600                    | D                      | 149,400               |                                                                                      |                           |                        | 28.1                                                                                 | 13,400                    | D                      |
| Freeway           | H4 First Colonial Rd to proposed Southeastern Pkwy              | 73,400                           |                                                                                      |                           |                        | 17.6                                                                                 | 6,600                     | B                      | 57,600                |                                                                                      |                           |                        | 13.8                                                                                 | 5,200                     | B                      |
|                   | I Dam Neck Rd (2 segments)                                      |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
| Arterial          | I1 Holland Rd to London Bridge Ext                              | 37,300                           |                                                                                      |                           |                        | 22.9                                                                                 | 3,400                     | D                      | 41,500                |                                                                                      |                           |                        | 16.4                                                                                 | 3,700                     | E                      |
| Arterial          | I2 Proposed Southeastern Pkwy to Gen Booth Blvd                 | 39,600                           |                                                                                      |                           |                        | 8.9                                                                                  | 3,600                     | F                      | 26,800                |                                                                                      |                           |                        | 22.0                                                                                 | 2,400                     | D                      |
|                   | J Birdneck Rd ( 2 segments)                                     |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
| Arterial          | J1 I-264 to VA Beach Blvd                                       | 23,400                           |                                                                                      |                           |                        | 15.0                                                                                 | 2,100                     | E                      | 27,100                |                                                                                      |                           |                        | 14.3                                                                                 | 2,400                     | E                      |
| Arterial          | J2 Gen Booth Blvd to Norfolk Ave                                | 3,800                            |                                                                                      |                           |                        | 29.1                                                                                 | 300                       | B                      | 8,100                 |                                                                                      |                           |                        | 28.5                                                                                 | 700                       | B                      |
|                   | K Battlefield Blvd (2 segments)                                 |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
| Arterial          | K1 Great Bridge Bypass to Volvo Pkwy                            | 74,000                           | 7.0                                                                                  | 5,100                     | F                      | 7.2                                                                                  | 6,000                     | F                      | 47,400                | 23.3                                                                                 | 3,300                     | D                      | 23.4                                                                                 | 3,800                     | D                      |
| Arterial          | K2 Cedar Rd to Mt Pleasant Rd                                   | 33,800                           | 14.0                                                                                 | 2,300                     | E                      | 13.5                                                                                 | 2,500                     | E                      | 35,100                | 13.8                                                                                 | 2,400                     | E                      | 13.2                                                                                 | 2,600                     | E                      |
|                   | L Kempsville Rd (2 segments)                                    |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
| Arterial          | L1 Centreville Tpk to Indian River Rd                           | 32,900                           | 16.2                                                                                 | 2,400                     | E                      | 14.6                                                                                 | 2,900                     | F                      | 30,900                | 16.5                                                                                 | 2,300                     | E                      | 15.0                                                                                 | 2,700                     | F                      |
| Arterial          | L2 Great Bridge Bypass to Greenbrier Pkwy                       | 40,100                           | 24.4                                                                                 | 3,000                     | D                      | 22.9                                                                                 | 3,800                     | D                      | 38,700                | 24.5                                                                                 | 2,900                     | D                      | 23.1                                                                                 | 3,700                     | D                      |
|                   | M Indian River Rd (2 segments)                                  |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
| Arterial          | M1 I-64 to Centreville Tpk                                      | 100,600                          |                                                                                      |                           |                        | 3.3                                                                                  | 9,100                     | F                      | 100,600               |                                                                                      |                           |                        | 3.3                                                                                  | 9,100                     | F                      |
| Arterial          | M2 Independence Blvd to Elbow Rd                                | 17,500                           |                                                                                      |                           |                        | 30.1                                                                                 | 1,600                     | C                      | 18,400                |                                                                                      |                           |                        | 29.9                                                                                 | 1,700                     | C                      |
|                   | N Oceana Blvd (2 segments)                                      |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
| Arterial          | N1 Gen Booth Blvd to Tomcat Blvd/proposed Southeastern Pkwy     | 43,200                           |                                                                                      |                           |                        | 4.6                                                                                  | 3,900                     | F                      | 39,700                |                                                                                      |                           |                        | 6.3                                                                                  | 3,600                     | F                      |
| Arterial          | N2 Tomcat Blvd/proposed Southeastern Pkwy to VA Beach Blvd      | 31,100                           |                                                                                      |                           |                        | 40.9                                                                                 | 2,800                     | B                      | 41,000                |                                                                                      |                           |                        | 25.0                                                                                 | 3,700                     | D                      |
|                   | BUILD SCENARIO - ALL ABOVE SEGMENTS, PLUS:                      |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
|                   | O Hampton Roads Crossing Segment 1 (2 segments)                 |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
| Freeway           | O1 Proposed EW Conn., I-564 to Hampton Blvd                     |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
| Freeway           | O2 Proposed EW Conn., Hampton Blvd to I-664                     |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
|                   | P Hampton Roads Crossing (4 segments)                           |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
|                   | P1/O1 Proposed EW Conn., I-564 to Hampton Blvd                  |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
|                   | P2 Proposed EW Conn., Hampton Blvd to Craney Island Conn.       |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
|                   | P3 Proposed EW Conn., Craney Island Conn. to I-664              |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
|                   | P4 Proposed Craney Island Conn.                                 |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
|                   | Q Midtown Tunnel and MLK Frwy Extension (1 segment)             |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |
|                   | Q1 MLK Frwy, I-264 to High St                                   |                                  |                                                                                      |                           |                        |                                                                                      |                           |                        |                       |                                                                                      |                           |                        |                                                                                      |                           |                        |

Planning  
Analysis

| Segments |                                        |
|----------|----------------------------------------|
| R        | New Alignment Route 460 (4 segments)   |
| R1       | Route 58 Bypass to Windsor town limits |
| R2       | Windsor town limits to Ivor            |
| R3       | Ivor to Wakefield                      |
| R4       | Wakefield to Waverly                   |
| R5       | Waverly to Route 625                   |
| R6       | Route 625 to Route 156                 |
| R7       | Route 156 to I-295                     |
| S        | Southeastern Parkway (6 segments)      |
| S1       | Great Bridge Bypass to Centreville Tpk |
| S2       | Centreville Tpk to Indian River Rd     |
| S3       | Indian River Rd to Princess Anne Rd    |
| S4       | Princess Anne Rd to Dam Neck Rd        |
| S5       | Dam Neck Rd to Oceana Blvd             |
| S6       | Oceana Blvd to I-264                   |

| Southeastern Parkway & Greenbelt |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 | Route 460 Realignment |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |
|----------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------|-----------------------|--------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------|
|                                  | AM Peak<br>Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | AM<br>Peak<br>Hour<br>Calc.<br>Volume | AM<br>Peak<br>Hour<br>LOS<br>(HCS) | PM Peak Hour<br>Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | PM<br>Peak<br>Hour<br>Calc.<br>Volume | PM Peak<br>Hour<br>LOS<br>(HCS) |                       | AM Peak<br>Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | AM<br>Peak<br>Hour<br>Calc.<br>Volume | AM<br>Peak<br>Hour<br>LOS<br>(HCS) | PM Peak Hour<br>Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | PM<br>Peak<br>Hour<br>Calc.<br>Volume | PM Peak<br>Hour<br>LOS<br>(HCS) |
|                                  |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 | ADT                   |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |
|                                  |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 | 20,700                |                                                                                            |                                       |                                    | 7.4                                                                                        | 1,900                                 | A                               |
|                                  |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 | 15,100                |                                                                                            |                                       |                                    | 5.4                                                                                        | 1,400                                 | A                               |
|                                  |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 | 15,700                |                                                                                            |                                       |                                    | 5.6                                                                                        | 1,400                                 | A                               |
|                                  |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 | 15,000                |                                                                                            |                                       |                                    | 5.4                                                                                        | 1,400                                 | A                               |
|                                  |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 | 8,600                 |                                                                                            |                                       |                                    | 3.1                                                                                        | 800                                   | A                               |
|                                  |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 | 9,500                 |                                                                                            |                                       |                                    | 3.4                                                                                        | 900                                   | A                               |
|                                  |                                                                                            |                                       |                                    |                                                                                            |                                       | 9,600                           |                       |                                                                                            |                                       | 3.6                                | 900                                                                                        | A                                     |                                 |
| 35,000                           |                                                                                            |                                       |                                    | 12.6                                                                                       | 3,200                                 | B                               |                       |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |
| 34,400                           |                                                                                            |                                       |                                    | 12.4                                                                                       | 3,100                                 | B                               |                       |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |
| 14,100                           |                                                                                            |                                       |                                    | 5.1                                                                                        | 1,300                                 | A                               |                       |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |
| 16,100                           |                                                                                            |                                       |                                    | 5.8                                                                                        | 1,500                                 | A                               |                       |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |
| 9,400                            |                                                                                            |                                       |                                    | 3.4                                                                                        | 800                                   | A                               |                       |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |
| 25,000                           |                                                                                            |                                       |                                    | 8.9                                                                                        | 2,300                                 | A                               |                       |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |

| LEVEL OF SERVICE                                     | A    | B       | C       | D       | E       | F    |
|------------------------------------------------------|------|---------|---------|---------|---------|------|
| <u>FREEWAY (Density pc/mi/ln)</u>                    | 0-11 | > 11-18 | > 18-26 | > 26-35 | > 35-45 | >45  |
| <u>ARTERIAL - CLASS 1 (Average Travel Speed mph)</u> | >42  | >34-42  | >27-34  | >21-27  | >16-21  | <=16 |
| <u>ARTERIAL - CLASS 2 (Average Travel Speed mph)</u> | >35  | >28-35  | >22-28  | >17-22  | >13-17  | <=13 |
| <u>ARTERIAL - CLASS 3 (Average Travel Speed mph)</u> | >30  | >24-30  | >18-24  | >14-18  | >10-14  | <=10 |

- Notes\*
- 1. PHF based on data from studies:Norfolk LOS study, Newport etc.
  - 2. K factor based on HRPDC
  - 3. D Factor based on HRPDC & Studies: etc.
  - 4. Density for Freeway Segments (pc/mi/ln)
  - 5. Average Travel Speed for Arterial Segments (mph)

\*I-264 Corridor Study completed by URS.  
Elbow Road Study completed by FHI.  
I-264 Lynnhaven/Great Neck Interchange Study completed by FHI.

| Planning Analysis                              |                                                        | Project Scenario 1 |      |                                                                                 |                                 |                              |                                                                            |                                 | Project Scenario 2 |         |                      |                                                                                 |                                 |                              |                                                                            |         |
|------------------------------------------------|--------------------------------------------------------|--------------------|------|---------------------------------------------------------------------------------|---------------------------------|------------------------------|----------------------------------------------------------------------------|---------------------------------|--------------------|---------|----------------------|---------------------------------------------------------------------------------|---------------------------------|------------------------------|----------------------------------------------------------------------------|---------|
|                                                |                                                        | Segments           | ADT  | AM Peak                                                                         | AM                              | AM                           | PM Peak Hour                                                               | PM                              | PM Peak            | ADT     | AM Peak              | AM                                                                              | AM                              | PM Peak Hour                 | PM                                                                         | PM Peak |
|                                                |                                                        |                    |      | Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc.<br>Volume | Peak<br>Hour<br>LOS<br>(HCS) | Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc.<br>Volume |                    |         | Hour<br>LOS<br>(HCS) | Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | Peak<br>Hour<br>Calc.<br>Volume | Peak<br>Hour<br>LOS<br>(HCS) | Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) |         |
|                                                |                                                        |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| A Hampton Roads Beltway (17 Segments)          |                                                        |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Freeway                                        | A1 I-64, I-664 to Armistead Ave                        | 115,500            |      |                                                                                 |                                 |                              | 29.2                                                                       | 10,400                          | D                  | 85,400  |                      |                                                                                 |                                 | 20.7                         | 7,700                                                                      | C       |
| Freeway                                        | A2 I-64, Armistead Ave to Hampton Roads Bridge Tunnel  | 90,700             |      |                                                                                 |                                 |                              | 21.7                                                                       | 8,200                           | C                  | 58,100  |                      |                                                                                 |                                 | 13.9                         | 5,200                                                                      | B       |
| Freeway                                        | A3 Hampton Roads Bridge Tunnel                         | 66,800             |      |                                                                                 |                                 |                              | 24.4                                                                       | 6,000                           | C                  | 64,300  |                      |                                                                                 |                                 | 23.3                         | 5,800                                                                      | C       |
| Freeway                                        | A4 I-64, Hampton Roads Bridge Tunnel to I-564          | 74,200             |      |                                                                                 |                                 |                              | 28.8                                                                       | 6,700                           | D                  | 26,600  |                      |                                                                                 |                                 | 10.0                         | 2,400                                                                      | A       |
| Freeway                                        | A5 I-64, I-564 to Chesapeake Blvd                      | 151,800            |      |                                                                                 |                                 |                              | *                                                                          | 13,700                          | F                  | 140,700 |                      |                                                                                 |                                 | 42.8                         | 12,700                                                                     | E       |
| Freeway                                        | A6 I-64, Chesapeake Blvd to Northampton Blvd           | 162,200            |      |                                                                                 |                                 |                              | *                                                                          | 14,600                          | F                  | 158,100 |                      |                                                                                 |                                 | *                            | 14,200                                                                     | F       |
| Freeway                                        | A7 I-64, Northampton Blvd to I-264                     | 169,700            |      |                                                                                 |                                 |                              | 34.7                                                                       | 15,300                          | D                  | 166,300 |                      |                                                                                 |                                 | 33.4                         | 15,000                                                                     | D       |
| Freeway                                        | A8 I-64, I-264 to Indian River Rd                      | 152,600            |      |                                                                                 |                                 |                              | 29.0                                                                       | 13,700                          | D                  | 149,100 |                      |                                                                                 |                                 | 28.1                         | 13,400                                                                     | D       |
| Freeway                                        | A9 I-64, Indian River Rd to Greenbrier Pkwy            | 143,800            |      |                                                                                 |                                 |                              | 26.6                                                                       | 12,900                          | D                  | 142,700 |                      |                                                                                 |                                 | 26.4                         | 12,800                                                                     | D       |
| Freeway                                        | A10 I-64, Greenbrier Pkwy to I-464                     | 131,500            |      |                                                                                 |                                 |                              | 23.9                                                                       | 11,800                          | C                  | 131,900 |                      |                                                                                 |                                 | 24.0                         | 11,900                                                                     | C       |
| Freeway                                        | A11 I-64, I-464 to I-264                               | 82,100             |      |                                                                                 |                                 |                              | 32.3                                                                       | 7,400                           | D                  | 92,400  |                      |                                                                                 |                                 | 41.2                         | 8,300                                                                      | E       |
| Freeway                                        | A12 I-664, I-264 to Route 58                           | 85,000             |      |                                                                                 |                                 |                              | 15.4                                                                       | 7,600                           | B                  | 129,000 |                      |                                                                                 |                                 | 23.5                         | 11,600                                                                     | C       |
| Freeway                                        | A13 I-664, Route 58 to Route 164/Western Frwy          | 30,400             |      |                                                                                 |                                 |                              | 10.9                                                                       | 2,700                           | A                  | 83,900  |                      |                                                                                 |                                 | 33.8                         | 7,500                                                                      | D       |
| Freeway                                        | A14 I-664, Route 164/Western Frwy to proposed EW Conn. | 15,500             |      |                                                                                 |                                 |                              | 5.7                                                                        | 1,400                           | A                  | 60,400  |                      |                                                                                 |                                 | 21.7                         | 5,400                                                                      | C       |
| Freeway                                        | A15 I-664, proposed EW Conn. to 23rd St                | 32,300             |      |                                                                                 |                                 |                              | 11.7                                                                       | 2,900                           | B                  | 71,100  |                      |                                                                                 |                                 | 26.4                         | 6,400                                                                      | D       |
| Freeway                                        | A16 I-664, 23rd St to Aberdeen Rd                      | 17,200             |      |                                                                                 |                                 |                              | 6.9                                                                        | 1,500                           | A                  | 75,500  |                      |                                                                                 |                                 | 29.1                         | 6,800                                                                      | D       |
| Freeway                                        | A17 I-664, Aberdeen Rd to I-64                         | 28,000             |      |                                                                                 |                                 |                              | 10.4                                                                       | 2,500                           | A                  | 87,800  |                      |                                                                                 |                                 | 39.0                         | 7,900                                                                      | E       |
| B Midtown Tunnel area (3 segments)             |                                                        |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Two-Lane                                       | B1 Midtown Tunnel                                      | 45,100             |      |                                                                                 |                                 |                              | -                                                                          |                                 | F                  | 50,800  |                      |                                                                                 |                                 | -                            |                                                                            | F       |
| Freeway                                        | B2 MLK Frwy, High St to Pinner's Point Conn.           | 32,000             |      |                                                                                 |                                 |                              | 11.7                                                                       | 2,900                           | B                  |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Freeway                                        | B3 Western Frwy (Route 164, Town Point Rd to MLK Frwy  | 70,900             |      |                                                                                 |                                 |                              | 26.3                                                                       | 6,400                           | D                  | 76,400  |                      |                                                                                 |                                 | 29.0                         | 6,900                                                                      | D       |
| C Route 460 (6 segments)                       |                                                        |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Multi-Lane                                     | C1 I-664 to Route 58 Bypass                            | 77,600             | -    | 6,100                                                                           | C                               | -                            |                                                                            | 6,500                           | C                  | 85,000  | -                    | 6,600                                                                           | D                               | -                            | 7,100                                                                      | C       |
| Freeway                                        | C2 Route 58 Bypass                                     |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Multi-Lane                                     | C3 Route 58 Bypass to Windsor                          |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Multi-Lane                                     | C4 Windsor to Waverly                                  |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Multi-Lane                                     | C5 Waverly to Route 156                                |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Multi-Lane                                     | C6 Route 156 to I-295                                  |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| D Oak Grove Conn. & Dominion Blvd (4 segments) |                                                        |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Two-Lane                                       | D1 Dominion Blvd, Route 17 to Cedar Rd                 | 12,800             | -    | 800                                                                             | E                               | -                            |                                                                            | 1,000                           | E                  | 12,700  | -                    | 800                                                                             | E                               | -                            | 1,000                                                                      | E       |
| Arterial                                       | D2 Dominion Blvd, Cedar Rd to Bainbridge Blvd          | 36,900             | 2.7  | 2,900                                                                           | F                               | 3.0                          |                                                                            | 3,100                           | F                  | 37,300  | 2.7                  | 2,900                                                                           | F                               | 3.0                          | 3,100                                                                      | F       |
| Arterial                                       | D3 Dominion Blvd, Bainbridge Blvd to Great Bridge Blvd |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Freeway                                        | D4 Oak Grove Conn. (from I-64 to Battlefield Blvd)     | 130,700            |      |                                                                                 |                                 | *                            |                                                                            | 11,800                          | F                  | 132,600 |                      |                                                                                 |                                 | *                            | 11,900                                                                     | F       |
| E Hampton Blvd & Brambleton Ave (5 segments)   |                                                        |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Arterial                                       | E1 Brambleton Ave to 21st St                           | 34,200             | 12.4 | 2,400                                                                           | F                               | 9.8                          |                                                                            | 2,600                           | F                  | 36,800  | 9.7                  | 2,500                                                                           | F                               | 6.3                          | 2,800                                                                      | F       |
| Arterial                                       | E2 38th St to Little Creek Rd                          | 36,600             | 18.9 | 2,400                                                                           | D                               | 18.2                         |                                                                            | 2,900                           | D                  | 34,600  | 19.1                 | 2,300                                                                           | D                               | 18.5                         | 2,700                                                                      | D       |
| Arterial                                       | E3 Little Creek Rd to proposed EW Conn.                | 34,700             | 20.4 | 2,400                                                                           | D                               | 21.1                         |                                                                            | 2,700                           | D                  | 31,700  | 21.0                 | 2,200                                                                           | D                               | 21.6                         | 2,400                                                                      | D       |
| Arterial                                       | E4 Proposed EW Conn. to Adm Taussig Blvd               | 29,700             | 18.0 | 2,300                                                                           | D                               | 18.8                         |                                                                            | 2,300                           | D                  | 32,500  | 17.5                 | 2,500                                                                           | D                               | 18.4                         | 2,500                                                                      | D       |
| Arterial                                       | E5 Brambleton Ave, Colley Ave to Boush St              | 67,800             | 3.8  | 5,500                                                                           | F                               | 3.2                          |                                                                            | 5,700                           | F                  | 69,600  | 3.6                  | 5,600                                                                           | F                               | 3.0                          | 5,800                                                                      | F       |
| F Downtown Tunnel Area (5 segments)            |                                                        |                    |      |                                                                                 |                                 |                              |                                                                            |                                 |                    |         |                      |                                                                                 |                                 |                              |                                                                            |         |
| Freeway                                        | F1 Downtown Tunnel (I-264 from Portsmouth to I-464)    | 106,000            |      |                                                                                 |                                 | *                            |                                                                            | 9,500                           | F                  | 113,300 |                      |                                                                                 |                                 | *                            | 10,200                                                                     | F       |
| Freeway                                        | F2 Berkley Bridge (I-264 from Waterside to I-464)      | 132,900            |      |                                                                                 |                                 | 30.4                         |                                                                            | 12,000                          | D                  | 136,000 |                      |                                                                                 |                                 | 31.1                         | 12,200                                                                     | D       |
| Two-Lane                                       | F3 Jordan Bridge(Poindexter from Portsmouth to I-464)  | 18,000             |      |                                                                                 |                                 | -                            |                                                                            |                                 | E                  | 21,000  |                      |                                                                                 |                                 | -                            |                                                                            | E       |
| Arterial                                       | F4 Effingham St, I-264 to South St                     | 37,600             | 1.9  | 3,800                                                                           | F                               | 1.9                          |                                                                            | 3,800                           | F                  | 38,900  | 1.7                  | 3,900                                                                           | F                               | 1.7                          | 3,900                                                                      | F       |
| Arterial                                       | F5 Frederick Blvd, I-264 to Turnpike Rd                | 46,700             | 2.6  | 4,700                                                                           | F                               | 2.6                          |                                                                            | 4,700                           | F                  | 46,100  | 2.6                  | 4,600                                                                           | F                               | 2.6                          | 4,600                                                                      | F       |

|                   |                                                                 | Project Scenario 1 |                                                             |              |              |                                                             |              |              | Project Scenario 2 |                                                             |              |              |                                                             |              |              |
|-------------------|-----------------------------------------------------------------|--------------------|-------------------------------------------------------------|--------------|--------------|-------------------------------------------------------------|--------------|--------------|--------------------|-------------------------------------------------------------|--------------|--------------|-------------------------------------------------------------|--------------|--------------|
| Planning Analysis | Segments                                                        | ADT                | AM Peak Hour Criteria                                       | AM Peak Hour | AM Peak Hour | PM Peak Hour Criteria                                       | PM Peak Hour | PM Peak Hour | ADT                | AM Peak Hour Criteria                                       | AM Peak Hour | AM Peak Hour | PM Peak Hour Criteria                                       | PM Peak Hour | PM Peak Hour |
|                   |                                                                 |                    | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc. Volume | LOS (HCS)    | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc. Volume | LOS (HCS)    |                    | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc. Volume | LOS (HCS)    | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc. Volume | LOS (HCS)    |
|                   | G I-64 (on the Peninsula) (5 segments)                          |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
| Freeway           | G1 New Kent County Line to Route 30 (Exit 227)                  | 9,600              |                                                             |              |              | 3.5                                                         | 900          | A            | 9,600              |                                                             |              |              | 3.5                                                         | 900          | A            |
| Freeway           | G2 Route 30 (Exit 220) to Croaker Rd (Exit 231)                 | 67,700             |                                                             |              |              | 24.7                                                        | 6,100        | C            | 67,700             |                                                             |              |              | 24.7                                                        | 6,100        | C            |
| Freeway           | G3 Croaker Rd (Exit 231) to Route 199 @ Lightfoot (Exit 234)    | 81,400             |                                                             |              |              | 31.9                                                        | 7,300        | D            | 81,500             |                                                             |              |              | 32.0                                                        | 7,300        | D            |
| Freeway           | G4 Route 199 @ Lightfoot (Exit 234) to Camp Peary Rd (Exit 238) | 71,700             |                                                             |              |              | 26.5                                                        | 6,500        | D            | 72,100             |                                                             |              |              | 26.7                                                        | 6,500        | D            |
| Freeway           | G5 Camp Peary Rd (Exit 238) to Route 199 @ Kingsmill (Exit 242) | 75,500             |                                                             |              |              | 28.5                                                        | 6,800        | D            | 75,900             |                                                             |              |              | 28.7                                                        | 6,800        | D            |
|                   | H I-264 (4 segments)                                            |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
| Freeway           | H1 Witchduck Rd to Independence Blvd                            | 215,700            |                                                             |              |              | *                                                           | 19,400       | F            | 214,500            |                                                             |              |              | *                                                           | 19,300       | F            |
| Freeway           | H2 Independence Blvd to Rosemont Rd                             | 176,600            |                                                             |              |              | 37.8                                                        | 15,900       | E            | 176,100            |                                                             |              |              | 37.5                                                        | 15,800       | E            |
| Freeway           | H3 Rosemont Rd to Lynnhaven Pkwy                                | 150,300            |                                                             |              |              | 28.2                                                        | 13,500       | D            | 150,200            |                                                             |              |              | 28.2                                                        | 13,500       | D            |
| Freeway           | H4 First Colonial Rd to proposed Southeastern Pkwy              | 63,600             |                                                             |              |              | 15.2                                                        | 5,700        | B            | 63,800             |                                                             |              |              | 15.3                                                        | 5,700        | B            |
|                   | I Dam Neck Rd (2 segments)                                      |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
| Arterial          | I1 Holland Rd to London Bridge Ext                              | 42,200             |                                                             |              |              | 15.6                                                        | 3,800        | F            | 42,300             |                                                             |              |              | 15.5                                                        | 3,800        | F            |
| Arterial          | I2 Proposed Southeastern Pkwy to Gen Booth Blvd                 | 28,000             |                                                             |              |              | 21.7                                                        | 2,500        | D            | 27,900             |                                                             |              |              | 21.7                                                        | 2,500        | D            |
|                   | J Birdneck Rd ( 2 segments)                                     |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
| Arterial          | J1 I-264 to VA Beach Blvd                                       | 27,000             |                                                             |              |              | 14.3                                                        | 2,400        | E            | 26,900             |                                                             |              |              | 14.3                                                        | 2,400        | E            |
| Arterial          | J2 Gen Booth Blvd to Norfolk Ave                                | 9,800              |                                                             |              |              | 28.2                                                        | 900          | B            | 9,800              |                                                             |              |              | 28.2                                                        | 900          | B            |
|                   | K Battlefield Blvd (2 segments)                                 |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
| Arterial          | K1 Great Bridge Bypass to Volvo Pkwy                            | 49,200             | 23.1                                                        | 3,400        | D            | 23.1                                                        | 4,000        | D            | 48,900             | 23.1                                                        | 3,400        | D            | 23.2                                                        | 4,000        | D            |
| Arterial          | K2 Cedar Rd to Mt Pleasant Rd                                   | 42,500             | 11.8                                                        | 2,800        | F            | 6.3                                                         | 3,100        | F            | 42,200             | 12.0                                                        | 2,800        | F            | 6.6                                                         | 3,100        | F            |
|                   | L Kempsville Rd (2 segments)                                    |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
| Arterial          | L1 Centreville Tpk to Indian River Rd                           | 32,900             | 16.2                                                        | 2,400        | E            | 14.9                                                        | 2,900        | F            | 32,700             | 16.2                                                        | 2,400        | E            | 14.6                                                        | 2,900        | F            |
| Arterial          | L2 Great Bridge Bypass to Greenbrier Pkwy                       | 38,100             | 24.6                                                        | 2,800        | D            | 23.2                                                        | 3,700        | D            | 37,800             | 24.6                                                        | 2,800        | D            | 23.2                                                        | 3,600        | D            |
|                   | M Indian River Rd (2 segments)                                  |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
| Arterial          | M1 I-64 to Centreville Tpk                                      | 100,500            |                                                             |              |              | 3.3                                                         | 9,000        | F            | 101,000            |                                                             |              |              | 3.3                                                         | 9,100        | F            |
| Arterial          | M2 Independence Blvd to Elbow Rd                                | 18,300             |                                                             |              |              | 30.0                                                        | 1,600        | C            | 18,400             |                                                             |              |              | 29.9                                                        | 1,700        | C            |
|                   | N Oceana Blvd (2 segments)                                      |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
| Arterial          | N1 Gen Booth Blvd to Tomcat Blvd/proposed Southeastern Pkwy     | 38,400             |                                                             |              |              | 7.2                                                         | 3,500        | F            | 38,200             |                                                             |              |              | 7.4                                                         | 3,400        | F            |
| Arterial          | N2 Tomcat Blvd/proposed Southeastern Pkwy to VA Beach Blvd      | 39,400             |                                                             |              |              | 27.4                                                        | 3,500        | C            | 39,400             |                                                             |              |              | 27.4                                                        | 3,500        | C            |
|                   | BUILD SCENARIO - ALL ABOVE SEGMENTS, PLUS:                      |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
|                   | O Hampton Roads Crossing Segment 1 (2 segments)                 |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
| Freeway           | O1 Proposed EW Conn., I-564 to Hampton Blvd                     |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
| Freeway           | O2 Proposed EW Conn., Hampton Blvd to I-664                     |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
|                   | P Hampton Roads Crossing (4 segments)                           |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
|                   | P1/O1 Proposed EW Conn., I-564 to Hampton Blvd                  | 19,500             |                                                             |              |              | 7.2                                                         | 1,800        | A            |                    |                                                             |              |              |                                                             |              |              |
|                   | P2 Proposed EW Conn., Hampton Blvd to Craney Island Conn.       | 33,000             |                                                             |              |              | 11.9                                                        | 3,000        | B            |                    |                                                             |              |              |                                                             |              |              |
|                   | P3 Proposed EW Conn., Craney Island Conn. to I-664              | 25,100             |                                                             |              |              | 9.1                                                         | 2,300        | A            |                    |                                                             |              |              |                                                             |              |              |
|                   | P4 Proposed Craney Island Conn.                                 | 7,900              |                                                             |              |              | 2.8                                                         | 700          | A            |                    |                                                             |              |              |                                                             |              |              |
|                   | Q Midtown Tunnel and MLK Frwy Extension (1 segment)             |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |
|                   | Q1 MLK Frwy, I-264 to High St                                   |                    |                                                             |              |              |                                                             |              |              |                    |                                                             |              |              |                                                             |              |              |

Planning  
Analysis

Segments

- R*    *New Alignment Route 460 (4 segments)*
- R1 Route 58 Bypass to Windsor town limits
- R2 Windsor town limits to Ivor
- R3 Ivor to Wakefield
- R4 Wakefield to Waverly
- R5 Waverly to Route 625
- R6 Route 625 to Route 156
- R7 Route 156 to I-295
- S*    *Southeastern Parkway (6 segments)*
- S1 Great Bridge Bypass to Centreville Tpk
- S2 Centreville Tpk to Indian River Rd
- S3 Indian River Rd to Princess Anne Rd
- S4 Princess Anne Rd to Dam Neck Rd
- S5 Dam Neck Rd to Oceana Blvd
- S6 Oceana Blvd to I-264

Project Scenario 1

|     | AM Peak<br>Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | AM<br>Peak<br>Hour<br>Calc.<br>Volume | AM<br>Peak<br>Hour<br>LOS<br>(HCS) | PM Peak Hour<br>Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | PM<br>Peak<br>Hour<br>Calc.<br>Volume | PM Peak<br>Hour<br>LOS<br>(HCS) |
|-----|--------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------|
| ADT |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |

Project Scenario 2

|     | AM Peak<br>Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | AM<br>Peak<br>Hour<br>Calc.<br>Volume | AM<br>Peak<br>Hour<br>LOS<br>(HCS) | PM Peak Hour<br>Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | PM<br>Peak<br>Hour<br>Calc.<br>Volume | PM Peak<br>Hour<br>LOS<br>(HCS) |
|-----|--------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------|
| ADT |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |

LEVEL OF SERVICE

|                                                      | A    | B       | C       | D       | E       | F    |
|------------------------------------------------------|------|---------|---------|---------|---------|------|
| <u>FREEWAY (Density pc/mi/ln)</u>                    | 0-11 | > 11-18 | > 18-26 | > 26-35 | > 35-45 | >45  |
| <u>ARTERIAL - CLASS 1 (Average Travel Speed mph)</u> | >42  | >34-42  | >27-34  | >21-27  | >16-21  | <=16 |
| <u>ARTERIAL - CLASS 2 (Average Travel Speed mph)</u> | >35  | >28-35  | >22-28  | >17-22  | >13-17  | <=13 |
| <u>ARTERIAL - CLASS 3 (Average Travel Speed mph)</u> | >30  | >24-30  | >18-24  | >14-18  | >10-14  | <=10 |

Notes\*

1. PHF based on data from studies:Norfolk LOS study, Newport etc.
2. K factor based on HRPDC
3. D Factor based on HRPDC & Studies: etc.
4. Density for Freeway Segments (pc/mi/ln)
5. Average Travel Speed for Arterial Segments (mph)

\*I-264 Corridor Study completed by URS.  
Elbow Road Study completed by FHI.  
I-264 Lynnhaven/Great Neck Interchange Study completed by FHI.

| Planning Analysis                              |                                                        | Project Scenario 3 |      |                         |        |       |                         |        |         |      |
|------------------------------------------------|--------------------------------------------------------|--------------------|------|-------------------------|--------|-------|-------------------------|--------|---------|------|
|                                                |                                                        | Segments           | ADT  | AM Peak                 | AM     | AM    | PM Peak Hour            | PM     | PM Peak |      |
|                                                |                                                        |                    |      | Hour Criteria           | Peak   | Peak  | Criteria                | Peak   |         | Hour |
|                                                |                                                        |                    |      | (Density <sup>4</sup> ) | Hour   | Hour  | (Density <sup>4</sup> ) | Hour   |         | Hour |
|                                                |                                                        |                    |      | (Avg Travel             | Calc.  | LOS   | (Avg Travel             | Calc.  | LOS     |      |
|                                                |                                                        |                    |      | Speed <sup>5</sup> )    | Volume | (HCS) | Speed <sup>5</sup> )    | Volume | (HCS)   |      |
| A Hampton Roads Beltway (17 Segments)          |                                                        |                    |      |                         |        |       |                         |        |         |      |
| Freeway                                        | A1 I-64, I-664 to Armistead Ave                        | 133,300            |      |                         |        |       | 38.1                    | 12,000 | E       |      |
| Freeway                                        | A2 I-64, Armistead Ave to Hampton Roads Bridge Tunnel  | 112,000            |      |                         |        |       | 28.1                    | 10,100 | D       |      |
| Freeway                                        | A3 Hampton Roads Bridge Tunnel                         | 104,400            |      |                         |        |       | *                       | 9,400  | F       |      |
| Freeway                                        | A4 I-64, Hampton Roads Bridge Tunnel to I-564          | 93,500             |      |                         |        |       | 42.6                    | 8,400  | E       |      |
| Freeway                                        | A5 I-64, I-564 to Chesapeake Blvd                      | 155,200            |      |                         |        |       | *                       | 14,000 | F       |      |
| Freeway                                        | A6 I-64, Chesapeake Blvd to Northampton Blvd           | 163,600            |      |                         |        |       | *                       | 14,700 | F       |      |
| Freeway                                        | A7 I-64, Northampton Blvd to I-264                     | 171,200            |      |                         |        |       | 35.1                    | 15,400 | E       |      |
| Freeway                                        | A8 I-64, I-264 to Indian River Rd                      | 158,100            |      |                         |        |       | 30.5                    | 14,200 | D       |      |
| Freeway                                        | A9 I-64, Indian River Rd to Greenbrier Pkwy            | 154,800            |      |                         |        |       | 29.6                    | 13,900 | D       |      |
| Freeway                                        | A10 I-64, Greenbrier Pkwy to I-464                     | 144,200            |      |                         |        |       | 26.8                    | 13,000 | D       |      |
| Freeway                                        | A11 I-64, I-464 to I-264                               | 115,200            |      |                         |        |       | *                       | 10,400 | F       |      |
| Freeway                                        | A12 I-664, I-264 to Route 58                           | 125,300            |      |                         |        |       | 22.8                    | 11,300 | C       |      |
| Freeway                                        | A13 I-664, Route 58 to Route 164/Western Frwy          | 88,300             |      |                         |        |       | 37.4                    | 7,900  | E       |      |
| Freeway                                        | A14 I-664, Route 164/Western Frwy to proposed EW Conn. | 64,300             |      |                         |        |       | 23.3                    | 5,800  | C       |      |
| Freeway                                        | A15 I-664, proposed EW Conn. to 23rd St                | 79,000             |      |                         |        |       | 30.6                    | 7,100  | D       |      |
| Freeway                                        | A16 I-664, 23rd St to Aberdeen Rd                      | 80,300             |      |                         |        |       | 32.5                    | 7,200  | D       |      |
| Freeway                                        | A17 I-664, Aberdeen Rd to I-64                         | 83,900             |      |                         |        |       | 35.9                    | 7,500  | E       |      |
| B Midtown Tunnel area (3 segments)             |                                                        |                    |      |                         |        |       |                         |        |         |      |
| Two-Lane                                       | B1 Midtown Tunnel                                      | 23,800             |      |                         |        |       | -                       |        | E       |      |
| Freeway                                        | B2 MLK Frwy, High St to Pinner's Point Conn.           |                    |      |                         |        |       |                         |        |         |      |
| Freeway                                        | B3 Western Frwy (Route 164, Town Point Rd to MLK Frwy  | 62,600             |      |                         |        |       | 22.6                    | 5,600  | C       |      |
| C Route 460 (6 segments)                       |                                                        |                    |      |                         |        |       |                         |        |         |      |
| Multi-Lane                                     | C1 I-664 to Route 58 Bypass                            | 84,800             | -    | 6,600                   | D      |       | -                       | 7,100  | C       |      |
| Freeway                                        | C2 Route 58 Bypass                                     |                    |      |                         |        |       |                         |        |         |      |
| Multi-Lane                                     | C3 Route 58 Bypass to Windsor                          |                    |      |                         |        |       |                         |        |         |      |
| Multi-Lane                                     | C4 Windsor to Waverly                                  |                    |      |                         |        |       |                         |        |         |      |
| Multi-Lane                                     | C5 Waverly to Route 156                                |                    |      |                         |        |       |                         |        |         |      |
| Multi-Lane                                     | C6 Route 156 to I-295                                  |                    |      |                         |        |       |                         |        |         |      |
| D Oak Grove Conn. & Dominion Blvd (4 segments) |                                                        |                    |      |                         |        |       |                         |        |         |      |
| Two-Lane                                       | D1 Dominion Blvd, Route 17 to Cedar Rd                 | 13,000             | -    | 800                     | E      |       | -                       | 1,000  | E       |      |
| Arterial                                       | D2 Dominion Blvd, Cedar Rd to Bainbridge Blvd          | 36,900             | 2.7  | 2,900                   | F      |       | 3.0                     | 3,100  | F       |      |
| Arterial                                       | D3 Dominion Blvd, Bainbridge Blvd to Great Bridge Blvd |                    |      |                         |        |       |                         |        |         |      |
| Freeway                                        | D4 Oak Grove Conn. (from I-64 to Battlefield Blvd)     | 146,800            |      |                         |        |       | *                       | 13,200 | F       |      |
| E Hampton Blvd & Brambleton Ave (5 segments)   |                                                        |                    |      |                         |        |       |                         |        |         |      |
| Arterial                                       | E1 Brambleton Ave to 21st St                           | 25,300             | 14.3 | 1,700                   | E      |       | 13.9                    | 1,900  | E       |      |
| Arterial                                       | E2 38th St to Little Creek Rd                          | 36,800             | 18.9 | 2,400                   | D      |       | 18.2                    | 2,900  | D       |      |
| Arterial                                       | E3 Little Creek Rd to proposed EW Conn.                | 33,900             | 20.5 | 2,400                   | D      |       | 21.3                    | 2,600  | D       |      |
| Arterial                                       | E4 Proposed EW Conn. to Adm Taussig Blvd               | 34,100             | 17.3 | 2,600                   | D      |       | 18.3                    | 2,600  | D       |      |
| Arterial                                       | E5 Brambleton Ave, Colley Ave to Boush St              | 65,000             | 4.2  | 5,300                   | F      |       | 3.5                     | 5,500  | F       |      |
| F Downtown Tunnel Area (5 segments)            |                                                        |                    |      |                         |        |       |                         |        |         |      |
| Freeway                                        | F1 Downtown Tunnel (I-264 from Portsmouth to I-464)    | 39,800             |      |                         |        |       | 18.9                    | 3,600  | C       |      |
| Freeway                                        | F2 Berkley Bridge (I-264 from Waterside to I-464)      | 104,200            |      |                         |        |       | 23.8                    | 9,400  | C       |      |
| Two-Lane                                       | F3 Jordan Bridge(Poindexter from Portsmouth to I-464)  | 34,600             |      |                         |        |       | -                       |        | F       |      |
| Arterial                                       | F4 Effingham St, I-264 to South St                     | 24,400             | 10.0 | 2,400                   | F      |       | 10.0                    | 2,400  | F       |      |
| Arterial                                       | F5 Frederick Blvd, I-264 to Turnpike Rd                | 40,700             | 3.5  | 4,100                   | F      |       | 3.5                     | 4,100  | F       |      |

|                   |                                                                 |         | Project Scenario 3                                          |              |              |                                                             |              |              |
|-------------------|-----------------------------------------------------------------|---------|-------------------------------------------------------------|--------------|--------------|-------------------------------------------------------------|--------------|--------------|
| Planning Analysis | Segments                                                        | ADT     | AM Peak Hour Criteria                                       | AM Peak Hour | AM Peak Hour | PM Peak Hour Criteria                                       | PM Peak Hour | PM Peak Hour |
|                   |                                                                 |         | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc. Volume | LOS (HCS)    | (Density <sup>4</sup> )<br>(Avg Travel Speed <sup>5</sup> ) | Calc. Volume | LOS (HCS)    |
|                   | <i>G I-64 (on the Peninsula) (5 segments)</i>                   |         |                                                             |              |              |                                                             |              |              |
| Freeway           | G1 New Kent County Line to Route 30 (Exit 227)                  | 9,600   |                                                             |              |              | 3.5                                                         | 900          | A            |
| Freeway           | G2 Route 30 (Exit 220) to Croaker Rd (Exit 231)                 | 67,800  |                                                             |              |              | 24.7                                                        | 6,100        | C            |
| Freeway           | G3 Croaker Rd (Exit 231) to Route 199 @ Lightfoot (Exit 234)    | 81,900  |                                                             |              |              | 32.2                                                        | 7,400        | D            |
| Freeway           | G4 Route 199 @ Lightfoot (Exit 234) to Camp Peary Rd (Exit 238) | 72,900  |                                                             |              |              | 27.1                                                        | 6,600        | D            |
| Freeway           | G5 Camp Peary Rd (Exit 238) to Route 199 @ Kingsmill (Exit 242) | 77,100  |                                                             |              |              | 29.4                                                        | 6,900        | D            |
|                   | <i>H I-264 (4 segments)</i>                                     |         |                                                             |              |              |                                                             |              |              |
| Freeway           | H1 Witchduck Rd to Independence Blvd                            | 218,000 |                                                             |              |              | *                                                           | 19,600       | F            |
| Freeway           | H2 Independence Blvd to Rosemont Rd                             | 177,600 |                                                             |              |              | 38.4                                                        | 16,000       | E            |
| Freeway           | H3 Rosemont Rd to Lynnhaven Pkwy                                | 150,700 |                                                             |              |              | 28.3                                                        | 13,600       | D            |
| Freeway           | H4 First Colonial Rd to proposed Southeastern Pkwy              | 63,900  |                                                             |              |              | 15.3                                                        | 5,800        | B            |
|                   | <i>I Dam Neck Rd (2 segments)</i>                               |         |                                                             |              |              |                                                             |              |              |
| Arterial          | I1 Holland Rd to London Bridge Ext                              | 42,400  |                                                             |              |              | 15.4                                                        | 3,800        | F            |
| Arterial          | I2 Proposed Southeastern Pkwy to Gen Booth Blvd                 | 28,200  |                                                             |              |              | 21.6                                                        | 2,500        | D            |
|                   | <i>J Birdneck Rd ( 2 segments)</i>                              |         |                                                             |              |              |                                                             |              |              |
| Arterial          | J1 I-264 to VA Beach Blvd                                       | 27,100  |                                                             |              |              | 14.3                                                        | 2,400        | E            |
| Arterial          | J2 Gen Booth Blvd to Norfolk Ave                                | 9,800   |                                                             |              |              | 28.2                                                        | 900          | B            |
|                   | <i>K Battlefield Blvd (2 segments)</i>                          |         |                                                             |              |              |                                                             |              |              |
| Arterial          | K1 Great Bridge Bypass to Volvo Pkwy                            | 49,300  | 23.1                                                        | 3,400        | D            | 23.1                                                        | 4,000        | D            |
| Arterial          | K2 Cedar Rd to Mt Pleasant Rd                                   | 42,300  | 11.9                                                        | 2,800        | F            | 6.4                                                         | 3,100        | F            |
|                   | <i>L Kempsville Rd (2 segments)</i>                             |         |                                                             |              |              |                                                             |              |              |
| Arterial          | L1 Centreville Tpk to Indian River Rd                           | 33,800  | 16.1                                                        | 2,500        | E            | 14.3                                                        | 3,000        | F            |
| Arterial          | L2 Great Bridge Bypass to Greenbrier Pkwy                       | 39,400  | 24.4                                                        | 2,900        | D            | 23.0                                                        | 3,800        | D            |
|                   | <i>M Indian River Rd (2 segments)</i>                           |         |                                                             |              |              |                                                             |              |              |
| Arterial          | M1 I-64 to Centreville Tpk                                      | 101,900 |                                                             |              |              | 3.2                                                         | 9,200        | F            |
| Arterial          | M2 Independence Blvd to Elbow Rd                                | 18,500  |                                                             |              |              | 29.9                                                        | 1,700        | C            |
|                   | <i>N Oceana Blvd (2 segments)</i>                               |         |                                                             |              |              |                                                             |              |              |
| Arterial          | N1 Gen Booth Blvd to Tomcat Blvd/proposed Southeastern Pkwy     | 38,200  |                                                             |              |              | 7.4                                                         | 3,400        | F            |
| Arterial          | N2 Tomcat Blvd/proposed Southeastern Pkwy to VA Beach Blvd      | 39,500  |                                                             |              |              | 27.2                                                        | 3,600        | C            |
|                   | <b>BUILD SCENARIO - ALL ABOVE SEGMENTS, PLUS:</b>               |         |                                                             |              |              |                                                             |              |              |
|                   | <i>O Hampton Roads Crossing Segment 1 (2 segments)</i>          |         |                                                             |              |              |                                                             |              |              |
| Freeway           | O1 Proposed EW Conn., I-564 to Hampton Blvd                     |         |                                                             |              |              |                                                             |              |              |
| Freeway           | O2 Proposed EW Conn., Hampton Blvd to I-664                     |         |                                                             |              |              |                                                             |              |              |
|                   | <i>P Hampton Roads Crossing (4 segments)</i>                    |         |                                                             |              |              |                                                             |              |              |
| P1/O1             | Proposed EW Conn., I-564 to Hampton Blvd                        |         |                                                             |              |              |                                                             |              |              |
|                   | P2 Proposed EW Conn., Hampton Blvd to Craney Island Conn.       |         |                                                             |              |              |                                                             |              |              |
|                   | P3 Proposed EW Conn., Craney Island Conn. to I-664              |         |                                                             |              |              |                                                             |              |              |
|                   | P4 Proposed Craney Island Conn.                                 |         |                                                             |              |              |                                                             |              |              |
|                   | <i>Q Midtown Tunnel and MLK Frwy Extension (1 segment)</i>      |         |                                                             |              |              |                                                             |              |              |
|                   | Q1 MLK Frwy, I-264 to High St                                   |         |                                                             |              |              |                                                             |              |              |

Planning  
Analysis

Segments

- RNew Alignment Route 460 (4 segments)
- R1Route 58 Bypass to Windsor town limits
- R2Windsor town limits to Ivor
- R3Ivor to Wakefield
- R4Wakefield to Waverly
- R5Waverly to Route 625
- R6Route 625 to Route 156
- R7Route 156 to I-295
- SSoutheastern Parkway (6 segments)
- S1Great Bridge Bypass to Centreville Tpk
- S2Centreville Tpk to Indian River Rd
- S3Indian River Rd to Princess Anne Rd
- S4Princess Anne Rd to Dam Neck Rd
- S5Dam Neck Rd to Oceana Blvd
- S6Oceana Blvd to I-264

Project Scenario 3

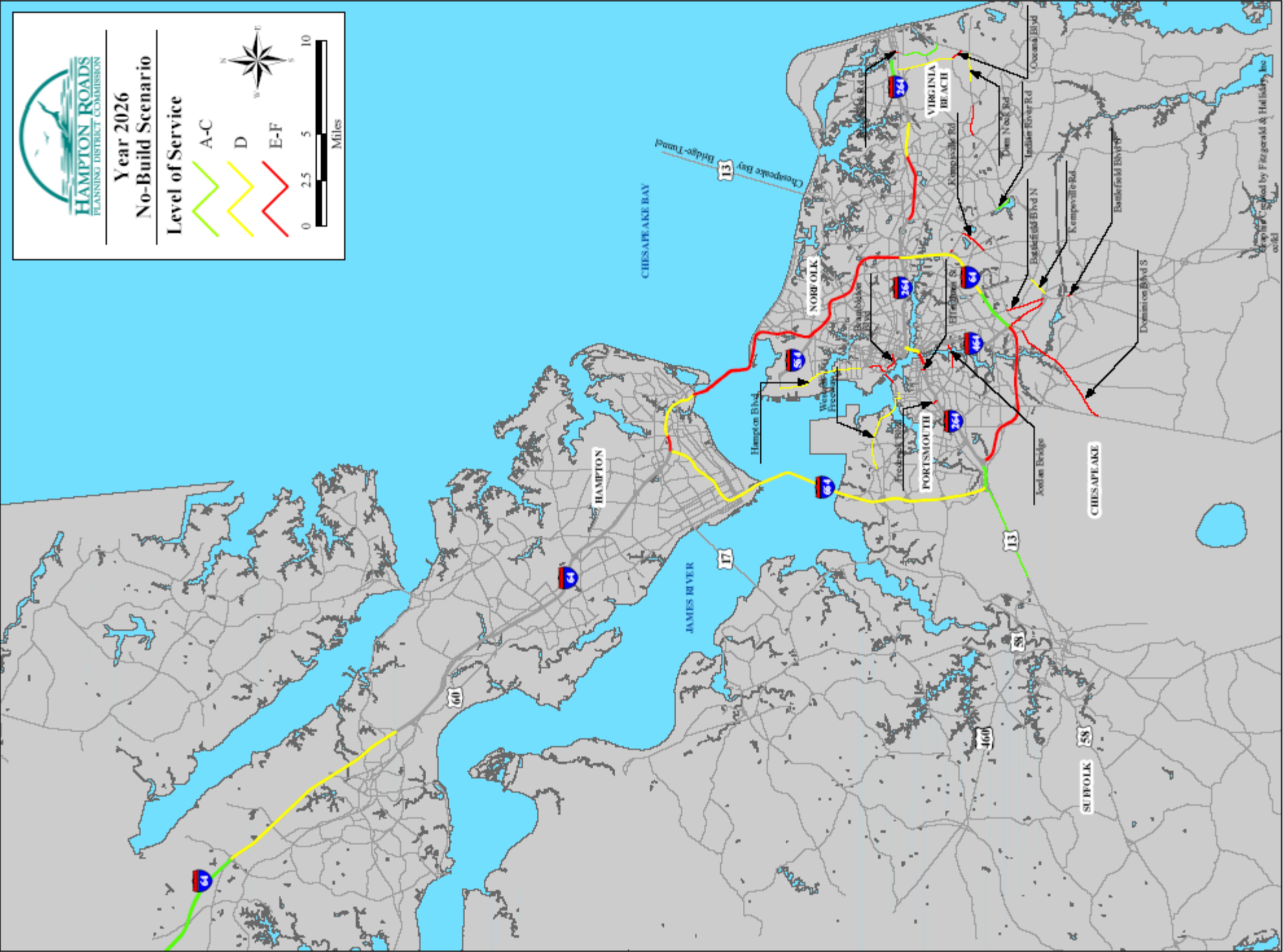
|     | AM Peak<br>Hour Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | AM<br>Peak<br>Hour<br>Calc.<br>Volume | AM<br>Peak<br>Hour<br>LOS<br>(HCS) | PM Peak Hour<br>Criteria<br>(Density <sup>4</sup> )<br>(Avg Travel<br>Speed <sup>5</sup> ) | PM<br>Peak<br>Hour<br>Calc.<br>Volume | PM Peak<br>Hour<br>LOS<br>(HCS) |
|-----|--------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------|
| ADT |                                                                                            |                                       |                                    |                                                                                            |                                       |                                 |

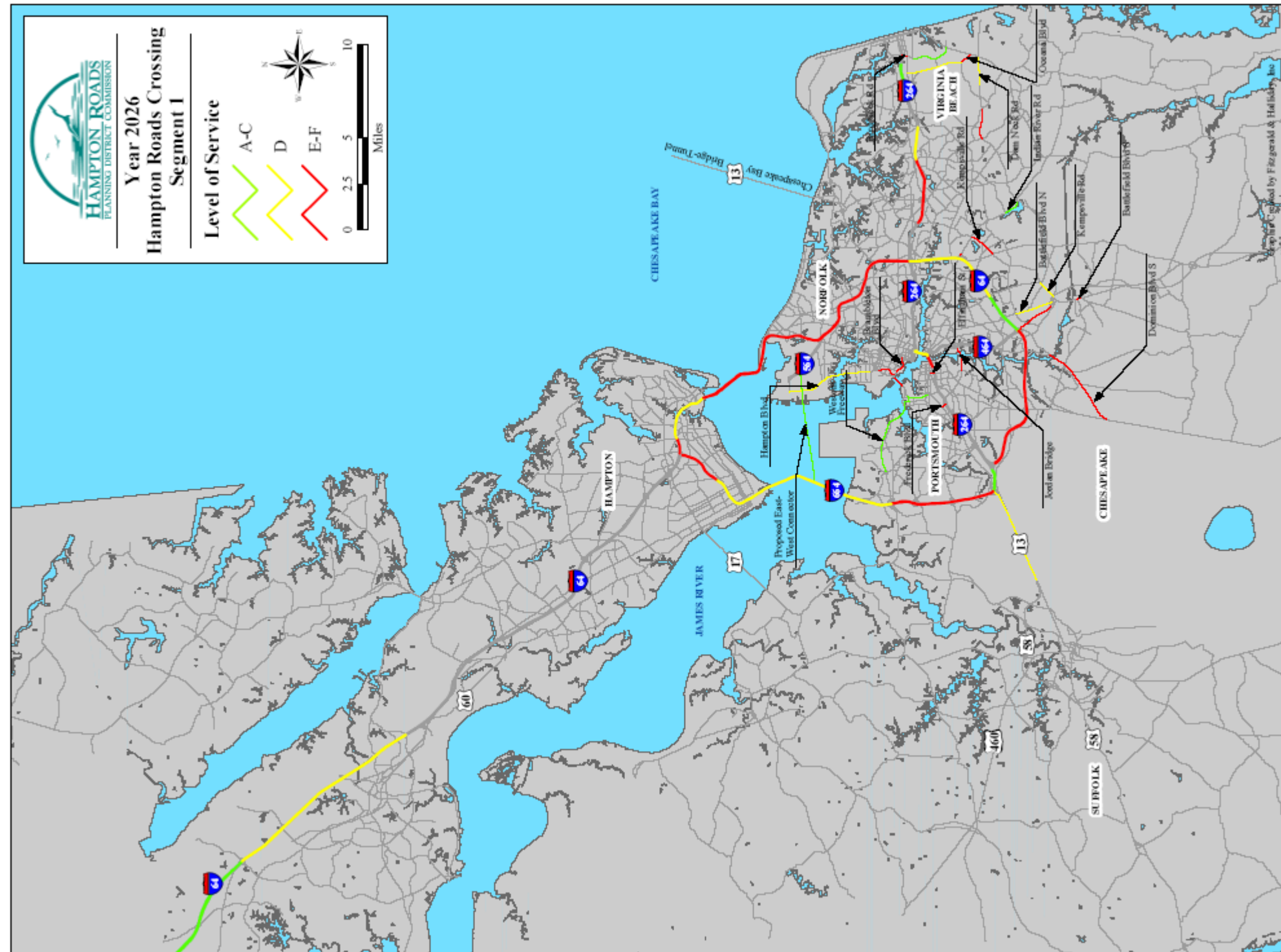
LEVEL OF SERVICE

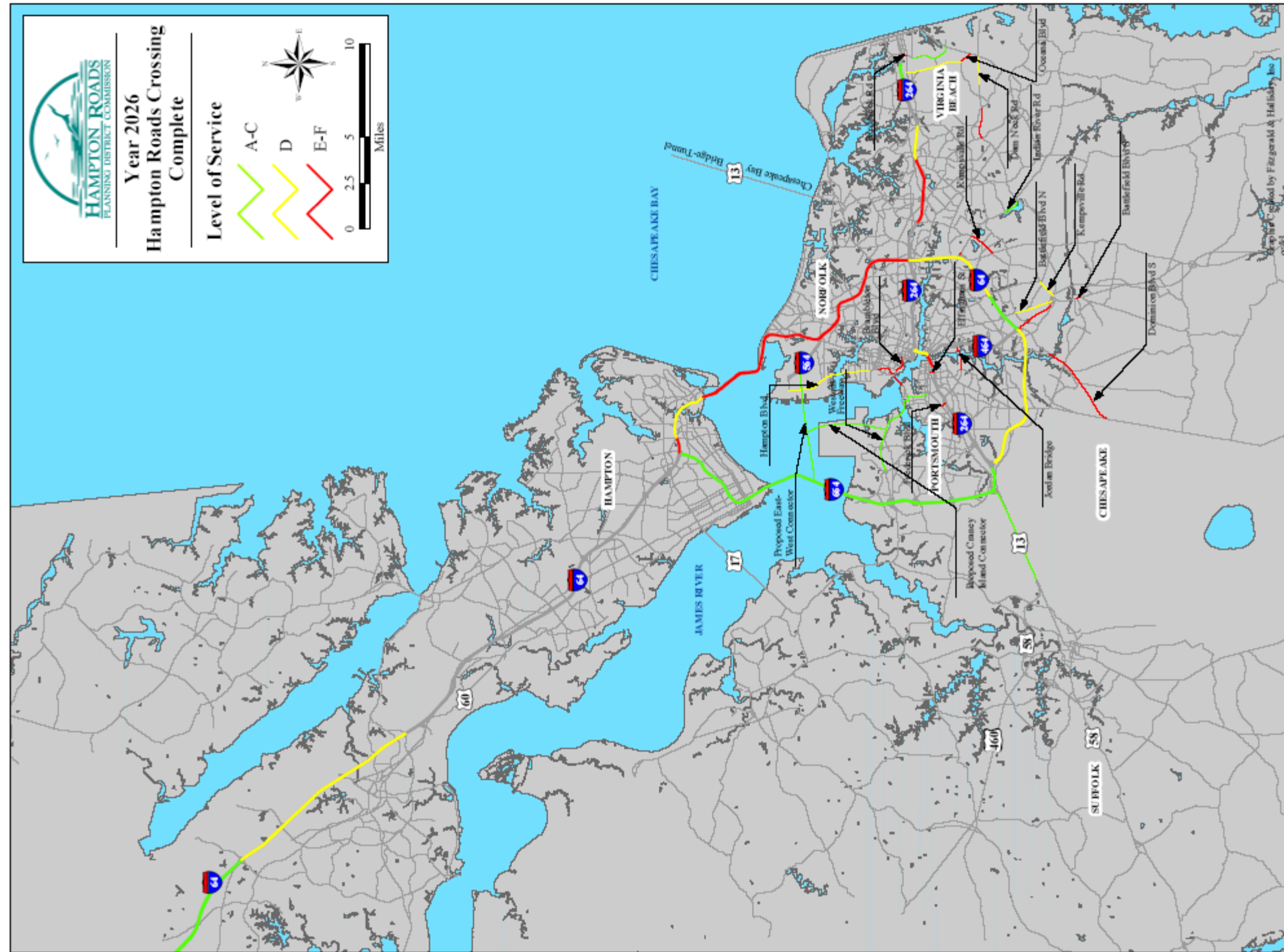
|                                                      | A    | B       | C       | D       | E       | F    |
|------------------------------------------------------|------|---------|---------|---------|---------|------|
| <u>FREEWAY (Density pc/mi/ln)</u>                    | 0-11 | > 11-18 | > 18-26 | > 26-35 | > 35-45 | >45  |
| <u>ARTERIAL - CLASS 1 (Average Travel Speed mph)</u> | >42  | >34-42  | >27-34  | >21-27  | >16-21  | <=16 |
| <u>ARTERIAL - CLASS 2 (Average Travel Speed mph)</u> | >35  | >28-35  | >22-28  | >17-22  | >13-17  | <=13 |
| <u>ARTERIAL - CLASS 3 (Average Travel Speed mph)</u> | >30  | >24-30  | >18-24  | >14-18  | >10-14  | <=10 |

- Notes\*
1. PHF based on data from studies:Norfolk LOS study, Newport etc.
2. K factor based on HRPDC
3. D Factor based on HRPDC & Studies: etc.
4. Density for Freeway Segments (pc/mi/ln)
5. Average Travel Speed for Arterial Segments (mph)

\*I-264 Corridor Study completed by URS.  
Elbow Road Study completed by FHI.  
I-264 Lynnhaven/Great Neck Interchange Study completed by FHI.

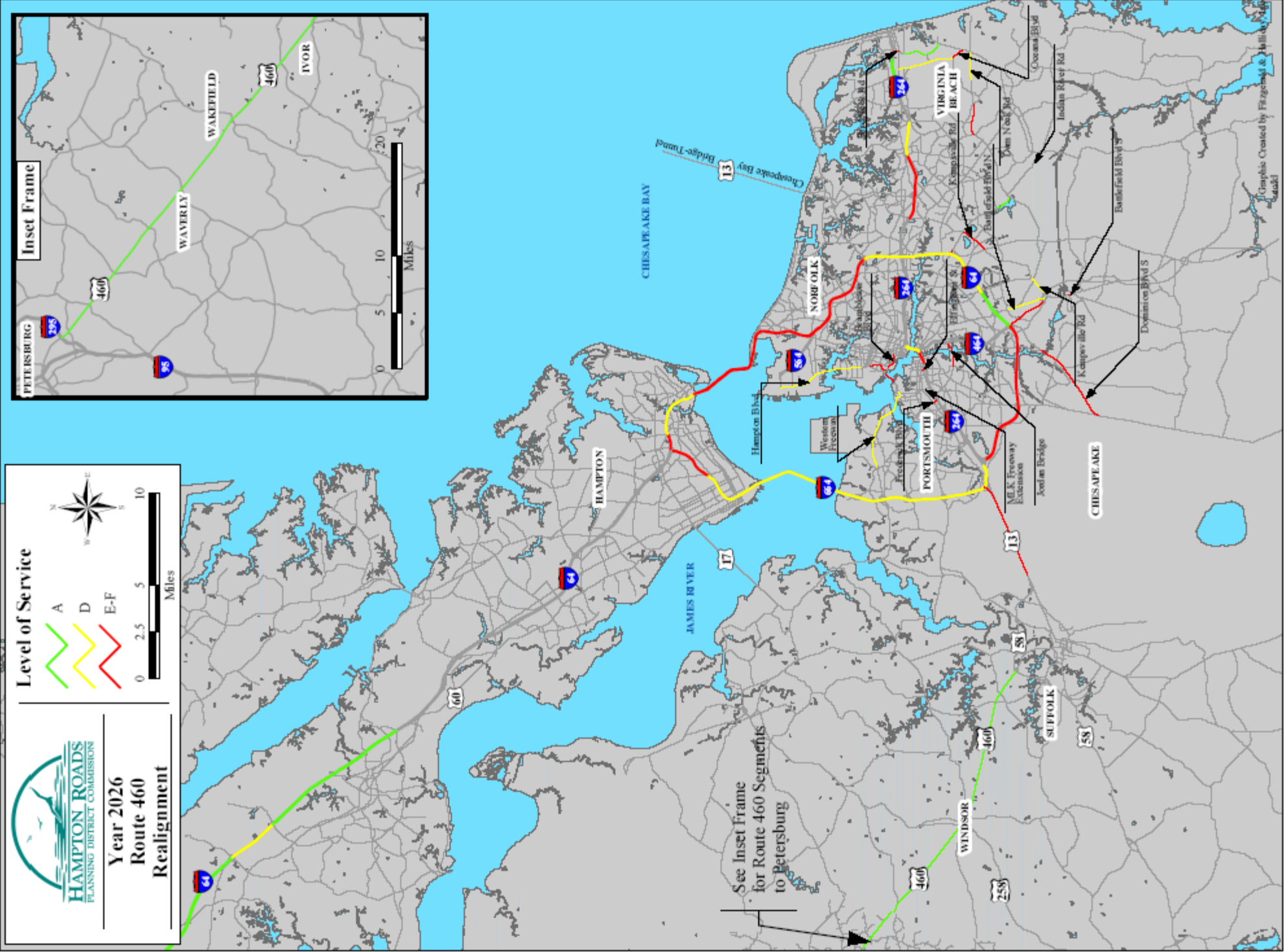




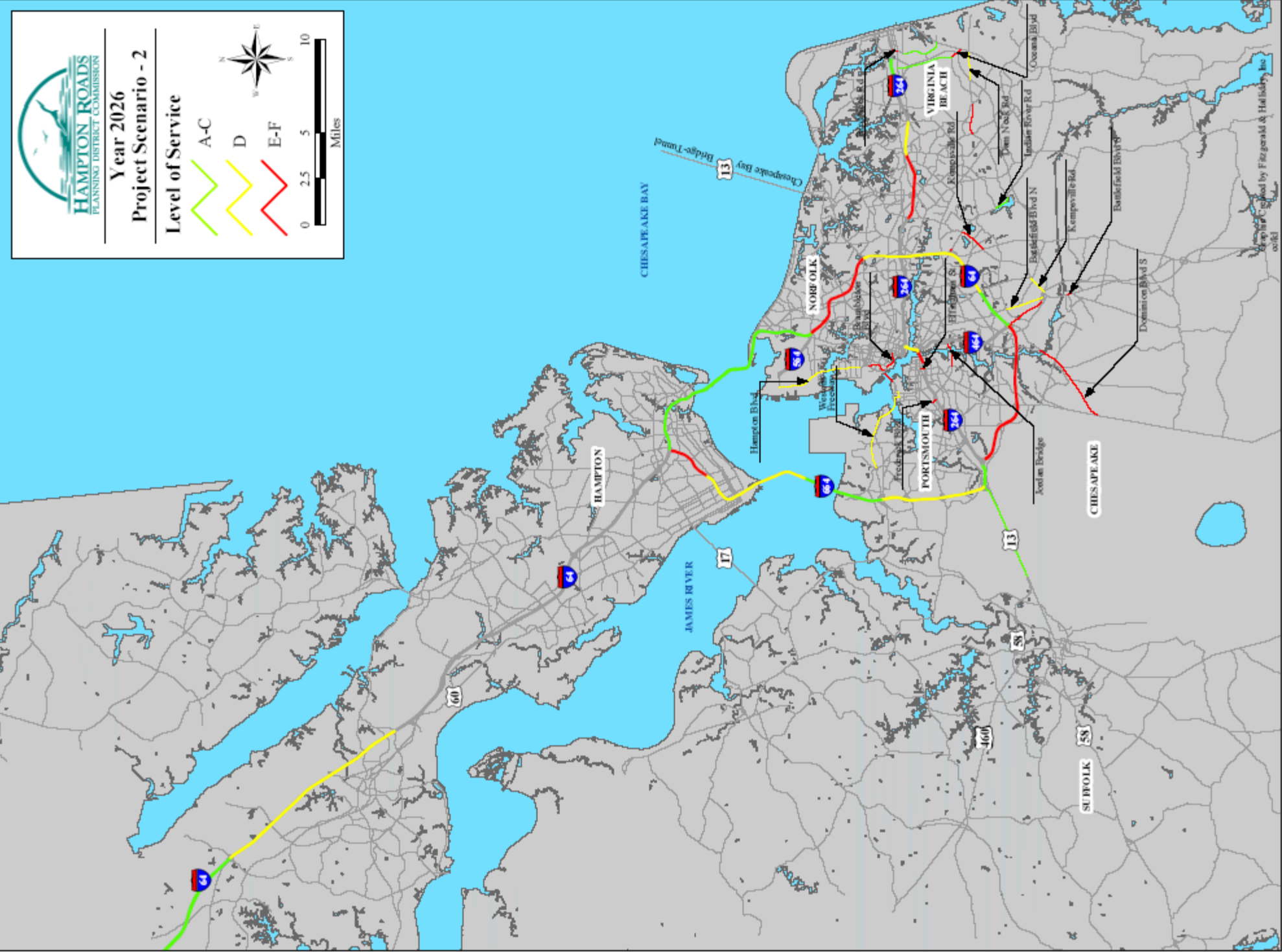














**Toll Feasibility Study**  
**Appendix H**  
Revenue Optimized Tolls – Travel Patterns

Note: Definition of Project Scenarios:

| Features                             | Project Scenario #1                                                                  | Project Scenario #2                                                                  | Project Scenario #3                                                 |
|--------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Projects                             | <ul style="list-style-type: none"><li>• HRX</li></ul>                                | <ul style="list-style-type: none"><li>• Improved HRBT (1)</li></ul>                  | <ul style="list-style-type: none"><li>• Midtown &amp; MLK</li></ul> |
| Existing/Unimproved, Tolled Roadways | <ul style="list-style-type: none"><li>• MMMBT</li><li>• JRB</li><li>• HRBT</li></ul> | <ul style="list-style-type: none"><li>• MMMBT</li><li>• JRB</li><li>• HRBT</li></ul> | <ul style="list-style-type: none"><li>• Downtown Tunnel</li></ul>   |

(2) Hampton Roads Crossing Study, Alternative #1  
MMMBT – Monitor Merrimac Bridge Tunnel  
JRB – James River Bridge  
HRBT – Hampton Roads Bridge Tunnel

Table H-1 Daily Travel Pattern – No Project

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 148,431    | 44,148  | 27,401     | 13,387  | 33,083         | 1,575         | 586               | 1,894        | 1,078   | 12       | 50           | 71         | 105    | 0          | 271,820   |
| Norfolk           | 16,135     | 158,210 | 7,365      | 1,226   | 37,042         | 204           | 599               | 840          | 1,339   | 13       | 64           | 81         | 106    | 0          | 223,223   |
| Portsmouth        | 21,277     | 16,915  | 39,175     | 7,715   | 3,947          | 1,057         | 90                | 1,304        | 717     | 8        | 45           | 54         | 73     | 0          | 92,379    |
| Suffolk           | 15,610     | 6,047   | 8,353      | 57,799  | 2,371          | 5,664         | 55                | 3,203        | 1,611   | 21       | 92           | 122        | 181    | 3          | 101,133   |
| Virginia Beach    | 63,196     | 123,746 | 8,727      | 3,090   | 354,912        | 432           | 16,144            | 818          | 944     | 12       | 27           | 35         | 82     | 0          | 572,164   |
| Isle of Wight     | 1,417      | 759     | 807        | 4,116   | 259            | 26,439        | 7                 | 2,939        | 1,427   | 20       | 77           | 99         | 163    | 5          | 38,534    |
| Va Bch Waterfront | 1,153      | 3,171   | 218        | 71      | 17,554         | 12            | 6,597             | 23           | 27      | 1        | 0            | 0          | 2      | 0          | 28,828    |
| Newport News      | 1,789      | 3,196   | 997        | 2,116   | 548            | 3,742         | 12                | 144,128      | 38,092  | 1,029    | 9,549        | 13,696     | 19,260 | 1,813      | 239,968   |
| Hampton           | 1,661      | 6,872   | 895        | 1,497   | 1,330          | 2,453         | 25                | 44,717       | 82,527  | 940      | 1,712        | 2,265      | 4,950  | 301        | 152,144   |
| Poquoson          | 88         | 325     | 46         | 87      | 67             | 161           | 2                 | 4,467        | 5,194   | 2,488    | 398          | 527        | 1,825  | 108        | 15,784    |
| Williamsburg      | 2          | 10      | 2          | 3       | 1              | 5             | 0                 | 492          | 100     | 5        | 6,308        | 3,649      | 1,777  | 42         | 12,396    |
| James City        | 15         | 66      | 9          | 19      | 6              | 38            | 0                 | 2,847        | 562     | 25       | 15,715       | 39,584     | 8,019  | 166        | 67,071    |
| York              | 233        | 799     | 125        | 254     | 156            | 470           | 4                 | 23,198       | 11,678  | 1,093    | 8,894        | 10,134     | 21,735 | 1,633      | 80,405    |
| Gloucester        | 1          | 6       | 1          | 2       | 0              | 5             | 0                 | 300          | 72      | 4        | 122          | 149        | 277    | 21,147     | 22,087    |
| Total             | 271,010    | 364,270 | 94,122     | 91,381  | 451,276        | 42,257        | 24,119            | 231,170      | 145,367 | 5,671    | 43,054       | 70,467     | 58,554 | 25,219     | 1,917,936 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 316,538    | 49,404  | 61,376     | 17,272  | 103,700        | 4,575         | 1,644             | 10,060       | 8,932   | 228      | 1,744        | 1,123      | 1,823   | 0          | 578,420   |
| Norfolk           | 20,550     | 342,581 | 10,403     | 2,635   | 91,294         | 1,217         | 1,055             | 5,612        | 7,250   | 173      | 733          | 627        | 1,175   | 1          | 485,306   |
| Portsmouth        | 30,099     | 10,486  | 123,502    | 8,448   | 9,312          | 1,710         | 311               | 3,761        | 3,293   | 68       | 421          | 332        | 592     | 0          | 192,335   |
| Suffolk           | 9,182      | 2,813   | 8,188      | 59,072  | 4,991          | 4,281         | 155               | 4,000        | 3,163   | 88       | 606          | 364        | 718     | 16         | 97,636    |
| Virginia Beach    | 53,935     | 95,090  | 9,525      | 5,194   | 849,748        | 2,191         | 22,855            | 6,771        | 7,582   | 211      | 1,554        | 951        | 1,602   | 0          | 1,057,209 |
| Isle of Wight     | 1,862      | 1,293   | 1,490      | 3,850   | 2,095          | 80,369        | 72                | 5,723        | 4,581   | 111      | 707          | 441        | 868     | 51         | 103,514   |
| Va Bch Waterfront | 351        | 670     | 165        | 81      | 13,896         | 37            | 6,557             | 102          | 166     | 3        | 34           | 14         | 29      | 0          | 22,106    |
| Newport News      | 2,322      | 3,215   | 1,937      | 2,145   | 3,858          | 3,728         | 122               | 492,108      | 94,534  | 1,971    | 10,704       | 6,288      | 34,664  | 1,102      | 658,700   |
| Hampton           | 1,411      | 2,753   | 1,133      | 1,113   | 3,039          | 1,846         | 114               | 63,409       | 257,071 | 1,591    | 2,154        | 1,347      | 9,545   | 439        | 346,965   |
| Poquoson          | 318        | 509     | 193        | 273     | 657            | 383           | 15                | 11,292       | 13,590  | 16,455   | 734          | 553        | 6,970   | 154        | 52,096    |
| Williamsburg      | 30         | 32      | 17         | 22      | 68             | 28            | 3                 | 776          | 226     | 9        | 17,917       | 3,677      | 3,317   | 27         | 26,147    |
| James City        | 571        | 895     | 428        | 452     | 1,182          | 583           | 22                | 11,704       | 4,453   | 207      | 53,900       | 116,099    | 18,675  | 567        | 209,739   |
| York              | 502        | 802     | 372        | 453     | 1,031          | 622           | 35                | 39,461       | 18,788  | 1,916    | 15,103       | 6,711      | 63,522  | 402        | 149,718   |
| Gloucester        | 75         | 133     | 63         | 62      | 148            | 74            | 2                 | 1,161        | 598     | 31       | 406          | 253        | 508     | 35,115     | 38,629    |
| Total             | 437,746    | 510,675 | 218,793    | 101,073 | 1,085,020      | 101,643       | 32,961            | 655,941      | 424,228 | 23,062   | 106,715      | 138,781    | 144,009 | 37,873     | 4,018,520 |

| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 110,696    | 19,739  | 19,205     | 5,672   | 34,164         | 1,333         | 346               | 2,271        | 1,331   | 124      | 194          | 566        | 561    | 131        | 196,333   |
| Norfolk           | 19,558     | 198,192 | 8,615      | 1,573   | 57,519         | 786           | 605               | 1,842        | 2,198   | 82       | 333          | 884        | 626    | 161        | 292,973   |
| Portsmouth        | 19,272     | 8,746   | 53,711     | 4,268   | 5,522          | 857           | 96                | 1,083        | 743     | 30       | 143          | 356        | 260    | 61         | 95,148    |
| Suffolk           | 5,849      | 1,640   | 4,324      | 22,866  | 2,121          | 2,241         | 43                | 1,333        | 896     | 40       | 103          | 380        | 263    | 74         | 42,176    |
| Virginia Beach    | 33,865     | 57,352  | 5,412      | 2,034   | 363,655        | 1,536         | 8,366             | 3,690        | 2,193   | 216      | 231          | 798        | 965    | 229        | 480,542   |
| Isle of Wight     | 1,426      | 852     | 911        | 2,323   | 1,673          | 33,405        | 61                | 2,657        | 1,755   | 67       | 102          | 446        | 389    | 97         | 46,164    |
| Va Bch Waterfront | 345        | 604     | 92         | 41      | 8,359          | 56            | 2,294             | 112          | 110     | 6        | 8            | 16         | 19     | 7          | 12,070    |
| Newport News      | 2,508      | 2,057   | 1,198      | 1,420   | 4,093          | 2,642         | 118               | 176,229      | 37,538  | 1,799    | 2,278        | 5,999      | 16,087 | 620        | 254,585   |
| Hampton           | 1,425      | 2,339   | 788        | 945     | 2,379          | 1,794         | 125               | 37,304       | 111,291 | 1,941    | 528          | 1,342      | 6,772  | 446        | 169,419   |
| Poquoson          | 139        | 87      | 32         | 44      | 237            | 79            | 6                 | 1,783        | 1,951   | 2,871    | 51           | 126        | 1,191  | 38         | 8,633     |
| Williamsburg      | 226        | 379     | 162        | 114     | 264            | 109           | 9                 | 2,381        | 563     | 55       | 14,372       | 11,387     | 4,744  | 101        | 34,866    |
| James City        | 649        | 995     | 404        | 422     | 913            | 477           | 18                | 6,206        | 1,425   | 134      | 11,398       | 65,176     | 7,324  | 388        | 95,929    |
| York              | 622        | 707     | 288        | 283     | 1,078          | 401           | 21                | 16,267       | 6,878   | 1,214    | 4,719        | 7,277      | 22,637 | 200        | 62,593    |
| Gloucester        | 151        | 214     | 90         | 100     | 230            | 141           | 6                 | 808          | 286     | 37       | 112          | 294        | 485    | 13,477     | 16,429    |
| Total             | 196,730    | 293,902 | 95,233     | 42,107  | 482,208        | 45,858        | 12,113            | 253,964      | 169,159 | 8,616    | 34,571       | 95,047     | 62,323 | 16,029     | 1,807,860 |

Table H-2 Daily Travel Pattern – Hampton Roads Crossing, Segment I

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 159,944    | 43,340  | 27,193     | 12,719  | 24,327         | 1,270         | 343               | 1,594        | 992     | 8        | 23           | 19         | 48     | 0          | 271,820   |
| Norfolk           | 14,463     | 167,810 | 6,908      | 1,530   | 29,016         | 242           | 357               | 1,350        | 1,412   | 10       | 28           | 31         | 65     | 0          | 223,223   |
| Portsmouth        | 20,837     | 17,005  | 41,064     | 7,900   | 2,712          | 887           | 47                | 1,141        | 696     | 6        | 21           | 23         | 42     | 0          | 92,379    |
| Suffolk           | 13,694     | 8,900   | 8,309      | 58,242  | 1,501          | 5,627         | 27                | 2,941        | 1,627   | 15       | 56           | 78         | 117    | 0          | 101,133   |
| Virginia Beach    | 57,421     | 109,562 | 7,872      | 2,740   | 375,526        | 345           | 17,029            | 853          | 788     | 6        | 0            | 0          | 21     | 0          | 572,164   |
| Isle of Wight     | 1,106      | 962     | 700        | 4,134   | 154            | 27,520        | 3                 | 2,443        | 1,308   | 13       | 41           | 57         | 93     | 1          | 38,534    |
| Va Bch Waterfront | 870        | 2,618   | 159        | 51      | 18,653         | 8             | 6,431             | 19           | 21      | 0        | 0            | 0          | 0      | 0          | 28,828    |
| Newport News      | 1,398      | 6,044   | 892        | 2,000   | 456            | 3,148         | 6                 | 149,796      | 33,044  | 654      | 9,258        | 13,662     | 17,983 | 1,627      | 239,968   |
| Hampton           | 1,597      | 8,111   | 1,007      | 1,725   | 990            | 2,517         | 14                | 41,882       | 88,431  | 645      | 812          | 1,109      | 3,165  | 140        | 152,144   |
| Poquoson          | 89         | 369     | 51         | 99      | 49             | 160           | 0                 | 3,931        | 5,266   | 3,374    | 258          | 349        | 1,693  | 97         | 15,784    |
| Williamsburg      | 1          | 3       | 0          | 1       | 0              | 2             | 0                 | 340          | 33      | 1        | 6,701        | 3,437      | 1,845  | 31         | 12,396    |
| James City        | 3          | 15      | 1          | 8       | 0              | 16            | 0                 | 2,178        | 217     | 9        | 15,704       | 40,743     | 8,033  | 145        | 67,071    |
| York              | 167        | 753     | 104        | 215     | 87             | 355           | 1                 | 21,301       | 11,346  | 930      | 9,315        | 9,562      | 24,554 | 1,715      | 80,405    |
| Gloucester        | 0          | 1       | 0          | 1       | 0              | 2             | 0                 | 279          | 50      | 3        | 154          | 175        | 296    | 21,126     | 22,087    |
| Total             | 271,589    | 365,493 | 94,260     | 91,366  | 453,471        | 42,100        | 24,257            | 230,047      | 145,230 | 5,673    | 42,371       | 69,244     | 57,954 | 24,882     | 1,917,936 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 316,540    | 49,420  | 61,378     | 17,270  | 103,704        | 4,573         | 1,644             | 10,046       | 8,928   | 228      | 1,744        | 1,123      | 1,823   | 0          | 578,420   |
| Norfolk           | 20,540     | 342,373 | 10,392     | 2,643   | 91,244         | 1,233         | 1,054             | 5,855        | 7,266   | 173      | 732          | 627        | 1,173   | 1          | 485,306   |
| Portsmouth        | 30,100     | 10,488  | 123,506    | 8,447   | 9,313          | 1,709         | 311               | 3,756        | 3,291   | 68       | 421          | 332        | 592     | 0          | 192,335   |
| Suffolk           | 9,181      | 2,828   | 8,187      | 59,067  | 4,992          | 4,279         | 155               | 3,995        | 3,161   | 88       | 606          | 364        | 718     | 16         | 97,636    |
| Virginia Beach    | 53,931     | 95,099  | 9,524      | 5,193   | 849,697        | 2,190         | 22,851            | 6,829        | 7,577   | 211      | 1,553        | 951        | 1,601   | 0          | 1,057,209 |
| Isle of Wight     | 1,862      | 1,306   | 1,491      | 3,850   | 2,096          | 80,362        | 72                | 5,717        | 4,580   | 111      | 707          | 441        | 868     | 51         | 103,514   |
| Va Bch Waterfront | 351        | 670     | 165        | 81      | 13,895         | 37            | 6,556             | 104          | 166     | 3        | 34           | 14         | 29      | 0          | 22,106    |
| Newport News      | 2,323      | 3,316   | 1,938      | 2,146   | 3,907          | 3,728         | 125               | 491,948      | 94,533  | 1,972    | 10,706       | 6,289      | 34,667  | 1,102      | 658,700   |
| Hampton           | 1,411      | 2,763   | 1,134      | 1,113   | 3,041          | 1,846         | 114               | 63,359       | 257,102 | 1,591    | 2,155        | 1,348      | 9,548   | 440        | 346,965   |
| Poquoson          | 318        | 509     | 194        | 274     | 658            | 383           | 15                | 11,289       | 13,590  | 16,456   | 734          | 553        | 6,970   | 154        | 52,096    |
| Williamsburg      | 30         | 32      | 17         | 22      | 68             | 28            | 3                 | 775          | 226     | 9        | 17,917       | 3,677      | 3,317   | 27         | 26,147    |
| James City        | 571        | 897     | 428        | 452     | 1,183          | 583           | 22                | 11,700       | 4,452   | 207      | 53,901       | 116,101    | 18,675  | 567        | 209,739   |
| York              | 503        | 803     | 372        | 453     | 1,031          | 622           | 35                | 39,457       | 18,786  | 1,916    | 15,103       | 6,711      | 63,525  | 402        | 149,718   |
| Gloucester        | 75         | 133     | 63         | 62      | 148            | 74            | 2                 | 1,161        | 598     | 31       | 406          | 253        | 508     | 35,115     | 38,629    |
| Total             | 437,735    | 510,638 | 218,789    | 101,073 | 1,084,975      | 101,647       | 32,960            | 655,991      | 424,258 | 23,063   | 106,718      | 138,784    | 144,015 | 37,874     | 4,018,520 |

| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 110,720    | 19,736  | 19,204     | 5,641   | 34,162         | 1,333         | 346               | 2,280        | 1,334   | 124      | 194          | 567        | 562    | 131        | 196,333   |
| Norfolk           | 19,589     | 197,217 | 8,667      | 1,819   | 57,470         | 838           | 605               | 2,303        | 2,336   | 90       | 374          | 903        | 606    | 157        | 292,973   |
| Portsmouth        | 19,270     | 8,779   | 53,714     | 4,235   | 5,521          | 856           | 96                | 1,082        | 744     | 30       | 143          | 357        | 260    | 62         | 95,148    |
| Suffolk           | 5,809      | 1,888   | 4,286      | 22,727  | 2,114          | 2,232         | 43                | 1,326        | 893     | 40       | 103          | 379        | 263    | 74         | 42,176    |
| Virginia Beach    | 33,869     | 57,224  | 5,414      | 2,031   | 363,770        | 1,538         | 8,378             | 3,670        | 2,203   | 216      | 231          | 799        | 967    | 230        | 480,542   |
| Isle of Wight     | 1,423      | 903     | 909        | 2,311   | 1,670          | 33,383        | 61                | 2,651        | 1,754   | 67       | 102          | 446        | 389    | 97         | 46,164    |
| Va Bch Waterfront | 345        | 603     | 93         | 41      | 8,368          | 56            | 2,297             | 104          | 107     | 6        | 8            | 16         | 19     | 7          | 12,070    |
| Newport News      | 2,508      | 2,608   | 1,192      | 1,408   | 4,044          | 2,632         | 108               | 175,878      | 37,424  | 1,796    | 2,276        | 6,003      | 16,088 | 620        | 254,585   |
| Hampton           | 1,423      | 2,481   | 786        | 939     | 2,380          | 1,790         | 121               | 37,216       | 111,256 | 1,940    | 528          | 1,341      | 6,771  | 447        | 169,419   |
| Poquoson          | 138        | 96      | 32         | 44      | 236            | 79            | 6                 | 1,780        | 1,950   | 2,866    | 51           | 125        | 1,191  | 38         | 8,633     |
| Williamsburg      | 225        | 424     | 162        | 114     | 264            | 109           | 9                 | 2,379        | 563     | 55       | 14,345       | 11,377     | 4,739  | 101        | 34,866    |
| James City        | 648        | 1,015   | 404        | 420     | 912            | 477           | 18                | 6,211        | 1,426   | 134      | 11,390       | 65,159     | 7,327  | 389        | 95,929    |
| York              | 621        | 682     | 288        | 282     | 1,077          | 401           | 21                | 16,273       | 6,882   | 1,214    | 4,715        | 7,279      | 22,655 | 200        | 62,593    |
| Gloucester        | 150        | 226     | 90         | 99      | 229            | 141           | 6                 | 805          | 285     | 37       | 111          | 293        | 484    | 13,474     | 16,429    |
| Total             | 196,738    | 293,883 | 95,240     | 42,112  | 482,216        | 45,863        | 12,114            | 253,958      | 169,156 | 8,615    | 34,571       | 95,045     | 62,321 | 16,028     | 1,807,860 |

Table H-3 Daily Travel Pattern – Hampton Roads Crossing

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 161,471    | 43,145  | 27,226     | 12,469  | 24,235         | 1,212         | 344               | 1,088        | 564     | 5        | 14           | 13         | 35     | 0          | 271,820   |
| Norfolk           | 14,458     | 167,780 | 7,179      | 1,470   | 29,078         | 248           | 365               | 1,321        | 1,203   | 8        | 25           | 28         | 59     | 0          | 223,223   |
| Portsmouth        | 20,543     | 18,363  | 41,049     | 7,436   | 2,839          | 859           | 49                | 803          | 381     | 4        | 13           | 12         | 29     | 0          | 92,379    |
| Suffolk           | 13,305     | 8,503   | 8,356      | 59,706  | 1,440          | 5,578         | 26                | 2,678        | 1,336   | 12       | 46           | 52         | 93     | 0          | 101,133   |
| Virginia Beach    | 57,452     | 109,936 | 8,045      | 2,650   | 375,220        | 309           | 17,021            | 833          | 672     | 5        | 0            | 0          | 18     | 0          | 572,164   |
| Isle of Wight     | 1,056      | 1,018   | 704        | 4,030   | 144            | 27,816        | 2                 | 2,392        | 1,205   | 12       | 34           | 43         | 78     | 1          | 38,534    |
| Va Bch Waterfront | 871        | 2,667   | 165        | 51      | 18,622         | 7             | 6,409             | 19           | 18      | 0        | 0            | 0          | 0      | 0          | 28,828    |
| Newport News      | 1,018      | 5,426   | 712        | 1,726   | 440            | 3,080         | 5                 | 151,816      | 32,634  | 641      | 9,379        | 13,566     | 17,881 | 1,644      | 239,968   |
| Hampton           | 935        | 7,409   | 605        | 1,418   | 910            | 2,459         | 14                | 41,498       | 90,549  | 661      | 923          | 1,235      | 3,375  | 152        | 152,144   |
| Poquoson          | 55         | 283     | 35         | 83      | 46             | 153           | 0                 | 3,970        | 5,308   | 3,393    | 271          | 362        | 1,724  | 102        | 15,784    |
| Williamsburg      | 0          | 2       | 0          | 1       | 0              | 2             | 0                 | 335          | 33      | 1        | 6,699        | 3,450      | 1,845  | 29         | 12,396    |
| James City        | 2          | 9       | 1          | 5       | 0              | 14            | 0                 | 2,211        | 225     | 9        | 15,552       | 40,883     | 8,017  | 143        | 67,071    |
| York              | 112        | 586     | 80         | 178     | 75             | 346           | 0                 | 21,360       | 11,316  | 926      | 9,392        | 9,619      | 24,649 | 1,765      | 80,405    |
| Gloucester        | 0          | 0       | 0          | 1       | 0              | 2             | 0                 | 276          | 50      | 3        | 154          | 174        | 295    | 21,132     | 22,087    |
| Total             | 271,278    | 365,127 | 94,158     | 91,223  | 453,049        | 42,085        | 24,236            | 230,600      | 145,494 | 5,681    | 42,503       | 69,437     | 58,098 | 24,968     | 1,917,936 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 319,418    | 49,977  | 61,740     | 15,636  | 104,717        | 4,128         | 1,652             | 8,564        | 8,059   | 212      | 1,582        | 1,004      | 1,732   | 0          | 578,420   |
| Norfolk           | 20,528     | 342,387 | 10,340     | 2,613   | 91,291         | 1,229         | 1,056             | 5,762        | 7,366   | 175      | 740          | 632        | 1,186   | 1          | 485,306   |
| Portsmouth        | 30,106     | 10,554  | 123,995    | 8,456   | 9,370          | 1,709         | 314               | 3,476        | 2,918   | 78       | 451          | 333        | 575     | 0          | 192,335   |
| Suffolk           | 7,948      | 2,761   | 8,044      | 61,057  | 4,401          | 4,372         | 130               | 3,958        | 3,180   | 82       | 600          | 365        | 724     | 14         | 97,636    |
| Virginia Beach    | 53,734     | 95,129  | 9,464      | 4,716   | 850,514        | 1,896         | 22,894            | 6,784        | 7,715   | 214      | 1,570        | 960        | 1,619   | 0          | 1,057,209 |
| Isle of Wight     | 1,598      | 1,244   | 1,456      | 3,936   | 1,835          | 80,807        | 61                | 5,773        | 4,618   | 111      | 710          | 442        | 872     | 50         | 103,514   |
| Va Bch Waterfront | 343        | 670     | 164        | 68      | 13,909         | 29            | 6,570             | 103          | 169     | 3        | 35           | 15         | 30      | 0          | 22,106    |
| Newport News      | 1,955      | 3,214   | 1,772      | 2,142   | 3,792          | 3,774         | 121               | 493,518      | 93,770  | 1,958    | 10,698       | 6,283      | 34,611  | 1,092      | 658,700   |
| Hampton           | 1,195      | 2,723   | 914        | 1,112   | 3,005          | 1,865         | 113               | 62,871       | 258,145 | 1,588    | 2,148        | 1,340      | 9,509   | 437        | 346,965   |
| Poquoson          | 296        | 503     | 194        | 263     | 650            | 386           | 15                | 11,275       | 13,657  | 16,452   | 732          | 551        | 6,969   | 153        | 52,096    |
| Williamsburg      | 26         | 32      | 17         | 22      | 67             | 28            | 3                 | 778          | 228     | 9        | 17,919       | 3,675      | 3,315   | 27         | 26,147    |
| James City        | 500        | 887     | 418        | 461     | 1,172          | 589           | 22                | 11,738       | 4,476   | 208      | 53,929       | 116,100    | 18,674  | 565        | 209,739   |
| York              | 459        | 793     | 346        | 457     | 1,020          | 628           | 34                | 39,456       | 18,852  | 1,917    | 15,104       | 6,708      | 63,544  | 399        | 149,718   |
| Gloucester        | 63         | 133     | 62         | 63      | 148            | 75            | 2                 | 1,168        | 604     | 31       | 408          | 254        | 511     | 35,108     | 38,629    |
| Total             | 438,170    | 511,008 | 218,924    | 101,004 | 1,085,891      | 101,513       | 32,987            | 655,225      | 423,755 | 23,038   | 106,626      | 138,661    | 143,872 | 37,844     | 4,018,520 |

| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 111,424    | 19,851  | 19,240     | 5,202   | 34,202         | 1,256         | 346               | 2,069        | 1,231   | 130      | 188          | 539        | 525    | 133        | 196,333   |
| Norfolk           | 19,712     | 197,208 | 8,907      | 1,714   | 57,467         | 802           | 605               | 2,202        | 2,271   | 82       | 357          | 866        | 627    | 154        | 292,973   |
| Portsmouth        | 19,303     | 9,022   | 53,809     | 4,195   | 5,523          | 823           | 96                | 976          | 556     | 33       | 135          | 358        | 256    | 62         | 95,148    |
| Suffolk           | 5,362      | 1,787   | 4,259      | 23,495  | 1,922          | 2,271         | 34                | 1,299        | 878     | 40       | 106          | 385        | 265    | 74         | 42,176    |
| Virginia Beach    | 33,925     | 57,234  | 5,416      | 1,832   | 363,907        | 1,530         | 8,377             | 3,675        | 2,204   | 216      | 231          | 799        | 967    | 230        | 480,542   |
| Isle of Wight     | 1,340      | 867     | 876        | 2,353   | 1,672          | 33,458        | 54                | 2,670        | 1,767   | 67       | 103          | 448        | 391    | 97         | 46,164    |
| Va Bch Waterfront | 344        | 603     | 93         | 32      | 8,370          | 51            | 2,298             | 113          | 110     | 6        | 8            | 16         | 19     | 7          | 12,070    |
| Newport News      | 2,281      | 2,506   | 1,061      | 1,383   | 4,071          | 2,651         | 122               | 176,713      | 37,020  | 1,787    | 2,277        | 6,010      | 16,081 | 623        | 254,585   |
| Hampton           | 1,341      | 2,420   | 604        | 918     | 2,386          | 1,799         | 125               | 36,806       | 111,989 | 1,944    | 528          | 1,342      | 6,770  | 447        | 169,419   |
| Poquoson          | 144        | 87      | 33         | 43      | 236            | 78            | 6                 | 1,777        | 1,955   | 2,868    | 51           | 125        | 1,190  | 38         | 8,633     |
| Williamsburg      | 211        | 407     | 154        | 117     | 264            | 109           | 9                 | 2,382        | 565     | 55       | 14,361       | 11,387     | 4,744  | 101        | 34,866    |
| James City        | 613        | 973     | 406        | 425     | 914            | 477           | 18                | 6,219        | 1,433   | 135      | 11,397       | 65,195     | 7,335  | 389        | 95,929    |
| York              | 591        | 704     | 284        | 283     | 1,078          | 401           | 21                | 16,251       | 6,892   | 1,216    | 4,719        | 7,284      | 22,668 | 200        | 62,593    |
| Gloucester        | 149        | 220     | 90         | 100     | 229            | 141           | 6                 | 808          | 286     | 37       | 111          | 293        | 484    | 13,474     | 16,429    |
| Total             | 196,740    | 293,890 | 95,233     | 42,092  | 482,241        | 45,846        | 12,114            | 253,960      | 169,158 | 8,616    | 34,572       | 95,047     | 62,322 | 16,029     | 1,807,860 |

Table H-4 Daily Travel Pattern – Midtown Tunnel & MLK Extension

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 159,896    | 43,280  | 27,128     | 12,438  | 24,726         | 1,243         | 354               | 1,634        | 1,015   | 9        | 25           | 22         | 51     | 0          | 271,820   |
| Norfolk           | 13,281     | 173,701 | 4,941      | 825     | 28,275         | 126           | 357               | 585          | 1,039   | 7        | 16           | 21         | 48     | 0          | 223,223   |
| Portsmouth        | 21,615     | 14,055  | 42,949     | 8,012   | 2,729          | 905           | 47                | 1,220        | 747     | 6        | 24           | 25         | 46     | 0          | 92,379    |
| Suffolk           | 14,826     | 5,222   | 9,086      | 59,373  | 1,595          | 5,739         | 30                | 3,207        | 1,759   | 16       | 63           | 87         | 129    | 0          | 101,133   |
| Virginia Beach    | 55,814     | 114,236 | 6,868      | 2,318   | 374,525        | 289           | 16,967            | 494          | 633     | 5        | 0            | 0          | 16     | 0          | 572,164   |
| Isle of Wight     | 1,162      | 557     | 740        | 4,165   | 160            | 27,644        | 3                 | 2,542        | 1,344   | 13       | 44           | 61         | 99     | 1          | 38,534    |
| Va Bch Waterfront | 846        | 2,815   | 137        | 44      | 18,553         | 7             | 6,397             | 12           | 18      | 0        | 0            | 0          | 0      | 0          | 28,828    |
| Newport News      | 1,542      | 2,403   | 996        | 2,108   | 305            | 3,256         | 3                 | 151,905      | 33,783  | 656      | 9,400        | 13,867     | 18,094 | 1,649      | 239,968   |
| Hampton           | 1,663      | 7,245   | 1,063      | 1,745   | 961            | 2,513         | 15                | 42,043       | 88,915  | 649      | 838          | 1,145      | 3,205  | 143        | 152,144   |
| Poquoson          | 93         | 297     | 52         | 97      | 49             | 155           | 0                 | 3,946        | 5,257   | 3,393    | 267          | 361        | 1,716  | 99         | 15,784    |
| Williamsburg      | 1          | 1       | 0          | 1       | 0              | 2             | 0                 | 328          | 32      | 1        | 6,723        | 3,435      | 1,842  | 30         | 12,396    |
| James City        | 3          | 5       | 1          | 7       | 0              | 15            | 0                 | 2,136        | 210     | 9        | 15,690       | 40,831     | 8,018  | 145        | 67,071    |
| York              | 168        | 569     | 106        | 213     | 82             | 351           | 0                 | 21,169       | 11,219  | 933      | 9,406        | 9,643      | 24,750 | 1,795      | 80,405    |
| Gloucester        | 0          | 0       | 0          | 1       | 0              | 2             | 0                 | 269          | 48      | 3        | 153          | 173        | 291    | 21,148     | 22,087    |
| Total             | 270,910    | 364,388 | 94,067     | 91,348  | 451,959        | 42,249        | 24,174            | 231,491      | 146,018 | 5,700    | 42,649       | 69,671     | 58,304 | 25,010     | 1,917,936 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 316,465    | 48,734  | 62,103     | 17,311  | 103,638        | 4,588         | 1,646             | 10,071       | 8,942   | 228      | 1,745        | 1,124      | 1,826   | 0          | 578,420   |
| Norfolk           | 20,109     | 347,622 | 5,859      | 2,302   | 91,696         | 996           | 1,060             | 5,654        | 7,284   | 174      | 737          | 631        | 1,181   | 1          | 485,306   |
| Portsmouth        | 30,606     | 6,076   | 127,215    | 8,578   | 9,147          | 1,746         | 321               | 3,839        | 3,362   | 70       | 432          | 339        | 605     | 0          | 192,335   |
| Suffolk           | 9,194      | 2,544   | 8,255      | 59,195  | 5,011          | 4,299         | 156               | 4,013        | 3,172   | 88       | 608          | 365        | 720     | 16         | 97,636    |
| Virginia Beach    | 53,848     | 95,620  | 9,375      | 5,185   | 849,511        | 2,189         | 22,840            | 6,760        | 7,568   | 211      | 1,552        | 950        | 1,599   | 0          | 1,057,209 |
| Isle of Wight     | 1,865      | 1,090   | 1,507      | 3,867   | 2,104          | 80,499        | 72                | 5,735        | 4,590   | 111      | 709          | 442        | 871     | 51         | 103,514   |
| Va Bch Waterfront | 351        | 675     | 167        | 81      | 13,896         | 37            | 6,551             | 102          | 166     | 3        | 34           | 14         | 29      | 0          | 22,106    |
| Newport News      | 2,319      | 3,247   | 1,955      | 2,144   | 3,862          | 3,734         | 122               | 492,065      | 94,516  | 1,971    | 10,706       | 6,290      | 34,664  | 1,103      | 658,700   |
| Hampton           | 1,409      | 2,779   | 1,141      | 1,112   | 3,043          | 1,849         | 114               | 63,402       | 257,034 | 1,591    | 2,155        | 1,348      | 9,547   | 440        | 346,965   |
| Poquoson          | 318        | 513     | 195        | 273     | 658            | 383           | 15                | 11,291       | 13,585  | 16,455   | 734          | 553        | 6,969   | 154        | 52,096    |
| Williamsburg      | 30         | 33      | 17         | 22      | 68             | 28            | 3                 | 775          | 226     | 9        | 17,916       | 3,678      | 3,317   | 27         | 26,147    |
| James City        | 570        | 904     | 433        | 452     | 1,183          | 583           | 22                | 11,699       | 4,450   | 207      | 53,894       | 116,102    | 18,673  | 568        | 209,739   |
| York              | 502        | 809     | 376        | 453     | 1,032          | 622           | 35                | 39,457       | 18,782  | 1,916    | 15,102       | 6,712      | 63,519  | 402        | 149,718   |
| Gloucester        | 75         | 135     | 63         | 62      | 148            | 74            | 2                 | 1,160        | 597     | 31       | 406          | 253        | 507     | 35,116     | 38,629    |
| Total             | 437,661    | 510,779 | 218,660    | 101,037 | 1,084,998      | 101,626       | 32,960            | 656,022      | 424,275 | 23,065   | 106,731      | 138,802    | 144,028 | 37,878     | 4,018,520 |

| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 110,736    | 19,270  | 19,578     | 5,717   | 34,151         | 1,339         | 346               | 2,278        | 1,337   | 124      | 195          | 568        | 563    | 131        | 196,333   |
| Norfolk           | 19,056     | 201,374 | 5,878      | 1,303   | 57,809         | 798           | 609               | 1,837        | 2,211   | 82       | 334          | 890        | 630    | 162        | 292,973   |
| Portsmouth        | 19,727     | 5,957   | 56,060     | 4,365   | 5,332          | 880           | 89                | 1,108        | 760     | 32       | 147          | 363        | 266    | 63         | 95,148    |
| Suffolk           | 5,894      | 1,371   | 4,407      | 22,972  | 2,131          | 2,252         | 43                | 1,340        | 900     | 41       | 104          | 382        | 265    | 74         | 42,176    |
| Virginia Beach    | 33,779     | 57,706  | 5,221      | 2,032   | 363,584        | 1,533         | 8,369             | 3,688        | 2,192   | 216      | 231          | 798        | 965    | 229        | 480,542   |
| Isle of Wight     | 1,429      | 867     | 928        | 2,327   | 1,672          | 33,358        | 61                | 2,661        | 1,758   | 67       | 102          | 446        | 389    | 97         | 46,164    |
| Va Bch Waterfront | 344        | 609     | 88         | 41      | 8,361          | 56            | 2,295             | 112          | 110     | 6        | 8            | 16         | 19     | 7          | 12,070    |
| Newport News      | 2,507      | 2,048   | 1,214      | 1,420   | 4,094          | 2,642         | 118               | 176,223      | 37,536  | 1,799    | 2,278        | 6,000      | 16,086 | 620        | 254,585   |
| Hampton           | 1,426      | 2,357   | 799        | 945     | 2,380          | 1,794         | 125               | 37,298       | 111,268 | 1,941    | 528          | 1,342      | 6,772  | 447        | 169,419   |
| Poquoson          | 139        | 87      | 33         | 44      | 237            | 79            | 6                 | 1,782        | 1,950   | 2,870    | 51           | 126        | 1,191  | 38         | 8,633     |
| Williamsburg      | 226        | 381     | 165        | 114     | 264            | 109           | 9                 | 2,381        | 563     | 55       | 14,370       | 11,386     | 4,743  | 101        | 34,866    |
| James City        | 648        | 1,003   | 408        | 422     | 913            | 476           | 18                | 6,204        | 1,425   | 134      | 11,396       | 65,171     | 7,323  | 388        | 95,929    |
| York              | 621        | 713     | 293        | 283     | 1,078          | 401           | 21                | 16,265       | 6,877   | 1,214    | 4,719        | 7,276      | 22,633 | 200        | 62,593    |
| Gloucester        | 150        | 215     | 92         | 100     | 230            | 141           | 6                 | 807          | 286     | 37       | 112          | 294        | 485    | 13,475     | 16,429    |
| Total             | 196,682    | 293,958 | 95,163     | 42,084  | 482,236        | 45,857        | 12,114            | 253,984      | 169,171 | 8,616    | 34,576       | 95,058     | 62,329 | 16,031     | 1,807,860 |

Table H-5 Daily Travel Pattern – Southeastern Parkway & Greenbelt

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 159,478    | 42,359  | 26,522     | 12,168  | 26,973         | 1,221         | 471               | 1,558        | 975     | 8        | 22           | 18         | 47     | 0          | 271,820   |
| Norfolk           | 12,921     | 171,734 | 6,235      | 1,028   | 28,987         | 152           | 386               | 613          | 1,069   | 8        | 18           | 23         | 50     | 0          | 223,223   |
| Portsmouth        | 20,062     | 17,040  | 41,612     | 7,786   | 3,000          | 876           | 56                | 1,151        | 707     | 6        | 19           | 21         | 42     | 0          | 92,379    |
| Suffolk           | 14,068     | 6,219   | 8,975      | 59,315  | 1,715          | 5,698         | 34                | 3,107        | 1,727   | 16       | 58           | 77         | 124    | 0          | 101,133   |
| Virginia Beach    | 59,108     | 113,250 | 7,640      | 2,579   | 371,131        | 325           | 16,933            | 526          | 649     | 5        | 0            | 0          | 17     | 0          | 572,164   |
| Isle of Wight     | 1,096      | 672     | 733        | 4,197   | 172            | 27,611        | 3                 | 2,501        | 1,343   | 13       | 41           | 54         | 96     | 1          | 38,534    |
| Va Bch Waterfront | 950        | 2,822   | 158        | 51      | 18,544         | 7             | 6,265             | 12           | 18      | 0        | 0            | 0          | 0      | 0          | 28,828    |
| Newport News      | 1,500      | 2,477   | 997        | 2,123   | 318            | 3,235         | 4                 | 151,667      | 33,980  | 659      | 9,378        | 13,798     | 18,142 | 1,689      | 239,968   |
| Hampton           | 1,615      | 7,027   | 1,087      | 1,798   | 978            | 2,576         | 15                | 42,220       | 88,796  | 649      | 849          | 1,155      | 3,228  | 151        | 152,144   |
| Poquoson          | 90         | 289     | 53         | 101     | 50             | 161           | 0                 | 3,936        | 5,251   | 3,394    | 263          | 354        | 1,733  | 109        | 15,784    |
| Williamsburg      | 1          | 1       | 0          | 1       | 0              | 2             | 0                 | 321          | 31      | 1        | 6,724        | 3,447      | 1,840  | 27         | 12,396    |
| James City        | 3          | 5       | 1          | 6       | 0              | 14            | 0                 | 2,121        | 212     | 8        | 15,696       | 40,844     | 8,022  | 138        | 67,071    |
| York              | 161        | 558     | 108        | 219     | 83             | 362           | 1                 | 21,372       | 11,164  | 929      | 9,391        | 9,644      | 24,637 | 1,777      | 80,405    |
| Gloucester        | 0          | 0       | 0          | 1       | 0              | 2             | 0                 | 272          | 50      | 3        | 152          | 170        | 293    | 21,142     | 22,087    |
| Total             | 271,053    | 364,455 | 94,122     | 91,372  | 451,950        | 42,242        | 24,168            | 231,378      | 145,971 | 5,698    | 42,612       | 69,607     | 58,272 | 25,035     | 1,917,936 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 317,131    | 48,916  | 61,146     | 17,370  | 103,313        | 4,611         | 1,668             | 10,181       | 9,111   | 226      | 1,750        | 1,128      | 1,870   | 0          | 578,420   |
| Norfolk           | 20,377     | 342,751 | 10,407     | 2,623   | 91,357         | 1,213         | 1,052             | 5,598        | 7,228   | 173      | 731          | 625        | 1,171   | 1          | 485,306   |
| Portsmouth        | 29,912     | 10,518  | 123,670    | 8,442   | 9,317          | 1,707         | 311               | 3,757        | 3,288   | 68       | 421          | 332        | 592     | 0          | 192,335   |
| Suffolk           | 9,167      | 2,827   | 8,206      | 59,032  | 5,004          | 4,283         | 155               | 4,004        | 3,164   | 88       | 607          | 364        | 719     | 16         | 97,636    |
| Virginia Beach    | 53,659     | 95,277  | 9,517      | 5,161   | 849,933        | 2,188         | 22,834            | 6,764        | 7,564   | 211      | 1,552        | 950        | 1,599   | 0          | 1,057,209 |
| Isle of Wight     | 1,854      | 1,299   | 1,495      | 3,846   | 2,101          | 80,358        | 72                | 5,727        | 4,583   | 111      | 708          | 442        | 869     | 51         | 103,514   |
| Va Bch Waterfront | 351        | 672     | 165        | 81      | 13,898         | 37            | 6,553             | 102          | 166     | 3        | 34           | 14         | 29      | 0          | 22,106    |
| Newport News      | 2,325      | 3,226   | 1,942      | 2,141   | 3,865          | 3,726         | 122               | 492,107      | 94,508  | 1,972    | 10,709       | 6,291      | 34,662  | 1,103      | 658,700   |
| Hampton           | 1,417      | 2,763   | 1,136      | 1,111   | 3,048          | 1,845         | 114               | 63,419       | 257,033 | 1,592    | 2,155        | 1,348      | 9,545   | 440        | 346,965   |
| Poquoson          | 322        | 510     | 194        | 273     | 659            | 383           | 15                | 11,289       | 13,585  | 16,458   | 734          | 553        | 6,967   | 154        | 52,096    |
| Williamsburg      | 30         | 32      | 17         | 22      | 68             | 28            | 3                 | 775          | 226     | 9        | 17,917       | 3,678      | 3,317   | 27         | 26,147    |
| James City        | 564        | 898     | 429        | 451     | 1,185          | 582           | 22                | 11,699       | 4,450   | 207      | 53,903       | 116,110    | 18,672  | 567        | 209,739   |
| York              | 506        | 804     | 373        | 452     | 1,033          | 621           | 35                | 39,459       | 18,786  | 1,917    | 15,105       | 6,712      | 63,513  | 402        | 149,718   |
| Gloucester        | 74         | 134     | 63         | 62      | 149            | 74            | 2                 | 1,160        | 597     | 31       | 406          | 253        | 507     | 35,117     | 38,629    |
| Total             | 437,689    | 510,628 | 218,758    | 101,068 | 1,084,929      | 101,654       | 32,958            | 656,042      | 424,288 | 23,065   | 106,730      | 138,800    | 144,032 | 37,877     | 4,018,520 |

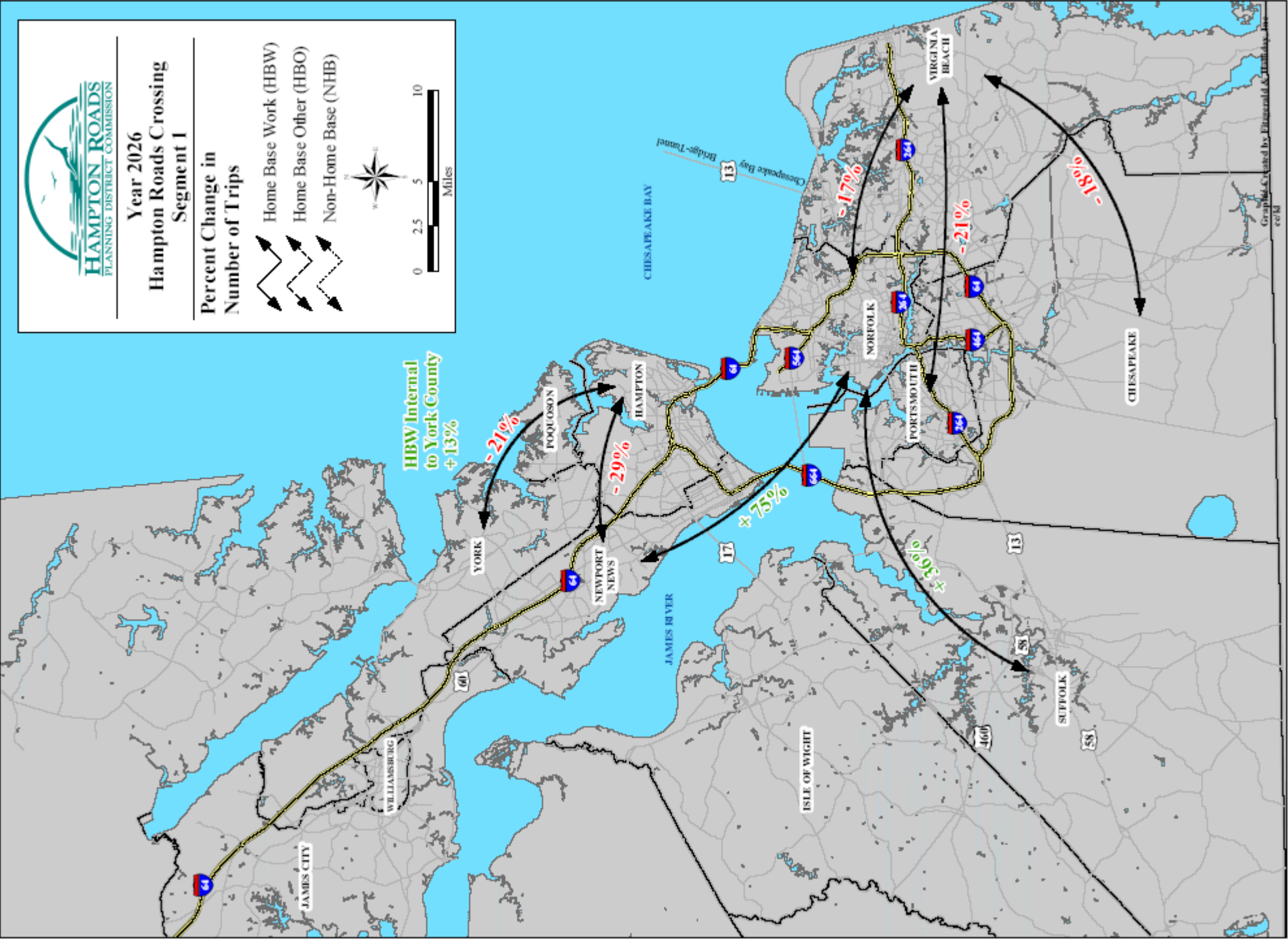
| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 111,238    | 19,449  | 19,036     | 5,652   | 34,016         | 1,342         | 341               | 2,307        | 1,337   | 131      | 199          | 577        | 575    | 134        | 196,333   |
| Norfolk           | 19,266     | 198,387 | 8,639      | 1,576   | 57,577         | 788           | 605               | 1,845        | 2,201   | 82       | 333          | 886        | 627    | 161        | 292,973   |
| Portsmouth        | 19,121     | 8,765   | 53,832     | 4,275   | 5,522          | 858           | 96                | 1,084        | 744     | 30       | 143          | 357        | 260    | 62         | 95,148    |
| Suffolk           | 5,849      | 1,639   | 4,325      | 22,867  | 2,120          | 2,243         | 43                | 1,332        | 896     | 40       | 103          | 380        | 263    | 74         | 42,176    |
| Virginia Beach    | 33,665     | 57,426  | 5,422      | 2,040   | 363,755        | 1,534         | 8,373             | 3,691        | 2,195   | 216      | 231          | 799        | 966    | 230        | 480,542   |
| Isle of Wight     | 1,449      | 851     | 911        | 2,321   | 1,669          | 33,394        | 61                | 2,654        | 1,754   | 67       | 102          | 446        | 389    | 97         | 46,164    |
| Va Bch Waterfront | 339        | 605     | 93         | 41      | 8,366          | 56            | 2,293             | 112          | 110     | 6        | 8            | 16         | 19     | 7          | 12,070    |
| Newport News      | 2,516      | 2,056   | 1,199      | 1,420   | 4,085          | 2,643         | 118               | 176,223      | 37,543  | 1,798    | 2,278        | 6,001      | 16,086 | 620        | 254,585   |
| Hampton           | 1,452      | 2,337   | 788        | 945     | 2,375          | 1,794         | 124               | 37,296       | 111,284 | 1,939    | 528          | 1,342      | 6,767  | 446        | 169,419   |
| Poquoson          | 137        | 87      | 32         | 44      | 237            | 79            | 6                 | 1,783        | 1,952   | 2,869    | 51           | 126        | 1,192  | 38         | 8,633     |
| Williamsburg      | 226        | 378     | 162        | 114     | 264            | 109           | 9                 | 2,381        | 563     | 55       | 14,372       | 11,387     | 4,744  | 101        | 34,866    |
| James City        | 661        | 995     | 404        | 422     | 912            | 477           | 18                | 6,204        | 1,425   | 134      | 11,396       | 65,169     | 7,324  | 388        | 95,929    |
| York              | 637        | 706     | 288        | 283     | 1,077          | 401           | 21                | 16,260       | 6,878   | 1,213    | 4,720        | 7,277      | 22,631 | 200        | 62,593    |
| Gloucester        | 153        | 214     | 90         | 100     | 229            | 141           | 6                 | 807          | 286     | 37       | 112          | 294        | 485    | 13,475     | 16,429    |
| Total             | 196,709    | 293,896 | 95,221     | 42,102  | 482,203        | 45,858        | 12,113            | 253,981      | 169,170 | 8,616    | 34,575       | 95,056     | 62,328 | 16,030     | 1,807,860 |

Table H-6 Daily Travel Pattern – Route 460 Realignment

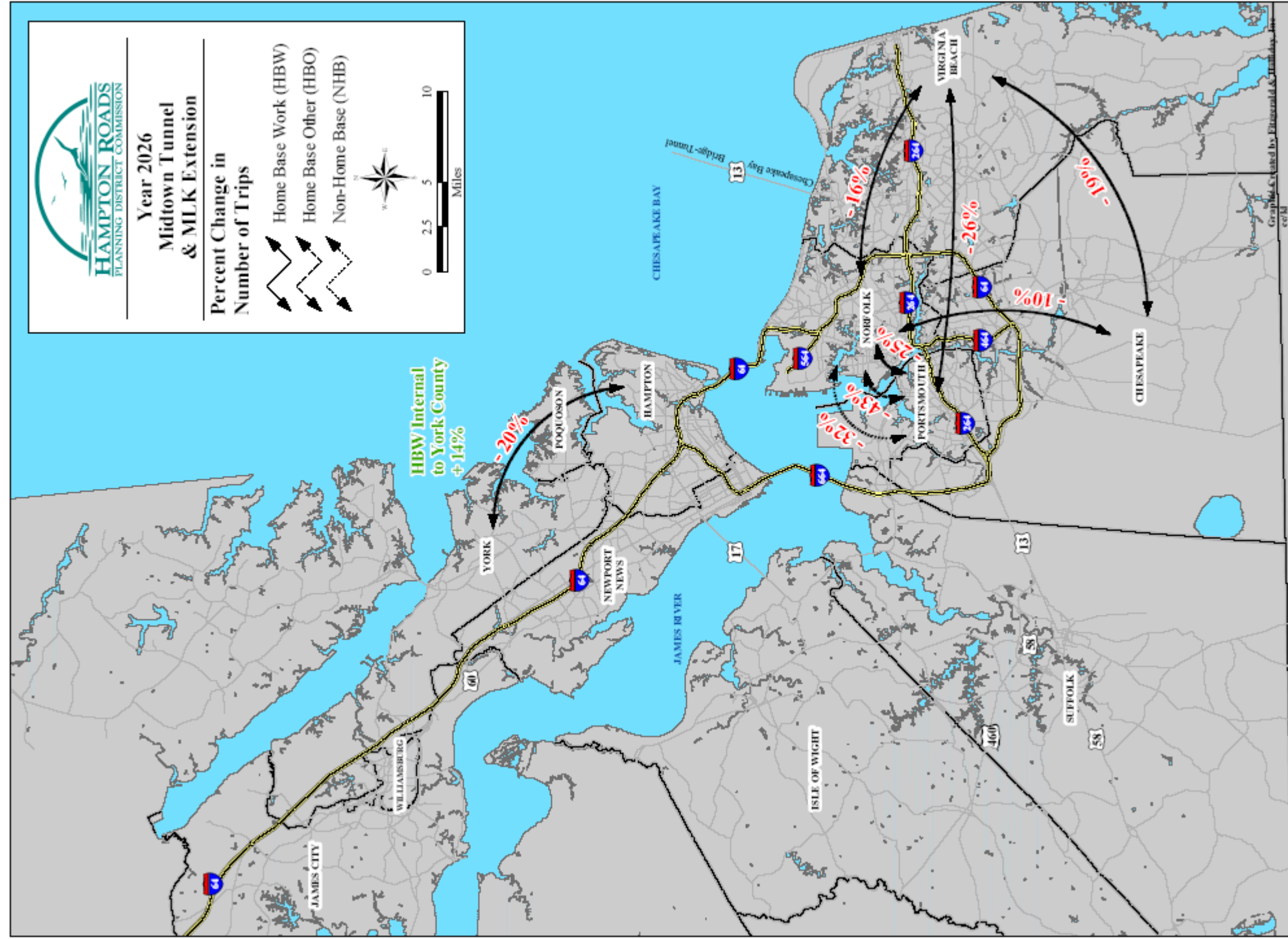
| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 160,015    | 43,509  | 27,248     | 11,546  | 25,065         | 1,102         | 374               | 1,714        | 1,077   | 9        | 29           | 37         | 62     | 0          | 271,787   |
| Norfolk           | 13,896     | 170,696 | 6,115      | 915     | 29,035         | 136           | 390               | 697          | 1,192   | 9        | 39           | 40         | 64     | 0          | 223,223   |
| Portsmouth        | 21,109     | 16,177  | 41,908     | 7,330   | 2,836          | 789           | 53                | 1,252        | 772     | 6        | 31           | 37         | 53     | 0          | 92,353    |
| Suffolk           | 13,720     | 5,470   | 8,388      | 60,218  | 1,425          | 5,718         | 29                | 3,149        | 1,721   | 16       | 69           | 100        | 134    | 0          | 100,157   |
| Virginia Beach    | 56,572     | 114,016 | 7,209      | 2,118   | 373,653        | 247           | 16,993            | 582          | 739     | 6        | 0            | 3          | 26     | 0          | 572,163   |
| Isle of Wight     | 1,036      | 575     | 653        | 4,304   | 136            | 26,684        | 2                 | 2,487        | 1,300   | 13       | 50           | 68         | 102    | 1          | 37,411    |
| Va Bch Waterfront | 893        | 2,912   | 152        | 43      | 18,465         | 5             | 6,321             | 15           | 21      | 0        | 0            | 0          | 0      | 0          | 28,828    |
| Newport News      | 1,613      | 2,768   | 1,057      | 2,018   | 366            | 3,184         | 5                 | 150,474      | 34,732  | 664      | 9,796        | 14,369     | 18,029 | 872        | 239,948   |
| Hampton           | 1,741      | 7,452   | 1,095      | 1,657   | 1,067          | 2,403         | 16                | 42,505       | 87,309  | 648      | 1,151        | 1,513      | 3,497  | 68         | 152,122   |
| Poquoson          | 97         | 305     | 56         | 92      | 54             | 152           | 0                 | 3,962        | 5,207   | 3,371    | 303          | 413        | 1,745  | 27         | 15,782    |
| Williamsburg      | 1          | 4       | 1          | 2       | 0              | 3             | 0                 | 397          | 51      | 2        | 6,627        | 3,487      | 1,815  | 8          | 12,396    |
| James City        | 6          | 21      | 4          | 11      | 1              | 22            | 0                 | 2,604        | 328     | 12       | 15,595       | 40,419     | 8,006  | 42         | 67,071    |
| York              | 182        | 618     | 117        | 214     | 98             | 369           | 1                 | 21,641       | 11,359  | 940      | 9,231        | 9,716      | 24,897 | 1,018      | 80,402    |
| Gloucester        | 0          | 0       | 0          | 0       | 0              | 2             | 0                 | 195          | 40      | 2        | 87           | 105        | 193    | 21,462     | 22,087    |
| Total             | 270,881    | 364,523 | 94,002     | 90,467  | 452,203        | 40,816        | 24,185            | 231,673      | 145,848 | 5,699    | 43,008       | 70,305     | 58,623 | 23,498     | 1,915,731 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 307,337    | 46,966  | 59,176     | 17,824  | 98,446         | 5,193         | 1,538             | 9,190        | 8,181   | 209      | 1,582        | 1,014      | 1,661   | 0          | 558,316   |
| Norfolk           | 20,723     | 338,346 | 10,707     | 2,975   | 90,095         | 1,471         | 1,037             | 5,456        | 7,065   | 169      | 702          | 598        | 1,138   | 1          | 480,482   |
| Portsmouth        | 29,216     | 9,686   | 119,904    | 8,565   | 8,583          | 1,918         | 287               | 3,426        | 3,003   | 62       | 378          | 297        | 537     | 0          | 185,863   |
| Suffolk           | 8,198      | 2,196   | 7,369      | 53,300  | 3,887          | 4,097         | 118               | 3,117        | 2,468   | 69       | 460          | 273        | 551     | 14         | 86,118    |
| Virginia Beach    | 54,471     | 94,066  | 9,844      | 5,882   | 839,267        | 2,710         | 22,566            | 6,582        | 7,391   | 206      | 1,493        | 910        | 1,550   | 0          | 1,046,938 |
| Isle of Wight     | 1,520      | 988     | 1,222      | 3,348   | 1,610          | 72,678        | 52                | 4,636        | 3,731   | 85       | 531          | 339        | 681     | 42         | 91,465    |
| Va Bch Waterfront | 360        | 666     | 171        | 92      | 13,754         | 46            | 6,486             | 100          | 163     | 3        | 33           | 14         | 29      | 0          | 21,917    |
| Newport News      | 2,438      | 3,234   | 2,042      | 2,448   | 3,874          | 4,375         | 122               | 487,206      | 93,645  | 1,963    | 10,480       | 6,141      | 34,322  | 1,063      | 653,353   |
| Hampton           | 1,476      | 2,761   | 1,192      | 1,264   | 3,043          | 2,158         | 114               | 62,755       | 254,500 | 1,578    | 2,099        | 1,308      | 9,422   | 423        | 344,091   |
| Poquoson          | 330        | 507     | 202        | 308     | 655            | 442           | 15                | 11,075       | 13,366  | 16,225   | 710          | 533        | 6,840   | 147        | 51,354    |
| Williamsburg      | 32         | 33      | 18         | 26      | 69             | 34            | 3                 | 783          | 229     | 9        | 17,878       | 3,660      | 3,311   | 26         | 26,111    |
| James City        | 610        | 920     | 461        | 529     | 1,213          | 719           | 23                | 11,795       | 4,514   | 210      | 53,767       | 115,422    | 18,629  | 559        | 209,370   |
| York              | 527        | 808     | 393        | 519     | 1,037          | 746           | 35                | 39,016       | 18,621  | 1,903    | 15,010       | 6,647      | 62,896  | 388        | 148,545   |
| Gloucester        | 81         | 139     | 68         | 73      | 153            | 94            | 2                 | 1,185        | 612     | 32       | 409          | 254        | 517     | 34,977     | 38,595    |
| Total             | 427,319    | 501,317 | 212,769    | 97,153  | 1,065,686      | 96,679        | 32,397            | 646,322      | 417,489 | 22,724   | 105,533      | 137,409    | 142,082 | 37,639     | 3,942,519 |

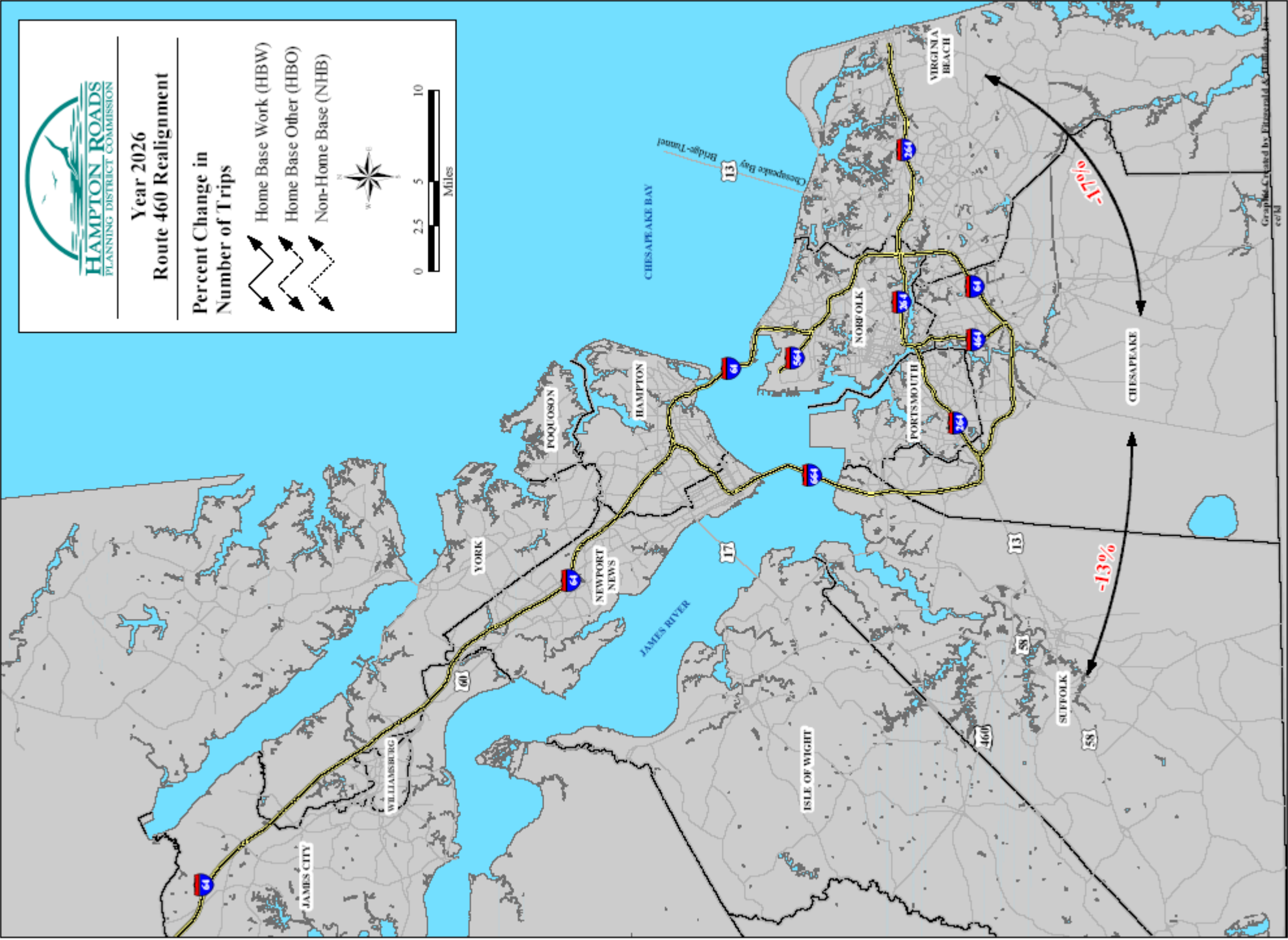
| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 109,825    | 19,658  | 19,051     | 5,611   | 34,042         | 1,305         | 345               | 2,268        | 1,329   | 123      | 195          | 566        | 560    | 129        | 195,007   |
| Norfolk           | 19,422     | 197,656 | 8,541      | 1,534   | 57,369         | 762           | 604               | 1,840        | 2,196   | 81       | 333          | 885        | 625    | 159        | 292,005   |
| Portsmouth        | 19,153     | 8,680   | 53,391     | 4,222   | 5,484          | 841           | 94                | 1,084        | 744     | 30       | 143          | 357        | 260    | 61         | 94,544    |
| Suffolk           | 5,823      | 1,618   | 4,294      | 22,100  | 2,087          | 2,161         | 43                | 1,307        | 877     | 39       | 102          | 374        | 258    | 71         | 41,155    |
| Virginia Beach    | 33,634     | 57,209  | 5,363      | 1,965   | 362,730        | 1,498         | 8,347             | 3,686        | 2,189   | 215      | 231          | 798        | 964    | 226        | 479,056   |
| Isle of Wight     | 1,412      | 845     | 900        | 2,243   | 1,663          | 32,127        | 60                | 2,609        | 1,754   | 67       | 106          | 453        | 396    | 98         | 44,733    |
| Va Bch Waterfront | 342        | 603     | 92         | 40      | 8,338          | 54            | 2,288             | 112          | 110     | 6        | 8            | 16         | 19     | 7          | 12,034    |
| Newport News      | 2,479      | 2,043   | 1,183      | 1,364   | 4,071          | 2,562         | 118               | 175,643      | 37,393  | 1,790    | 2,276        | 5,985      | 16,032 | 610        | 253,550   |
| Hampton           | 1,409      | 2,328   | 779        | 908     | 2,367          | 1,763         | 124               | 37,177       | 110,925 | 1,932    | 528          | 1,340      | 6,751  | 440        | 168,770   |
| Poquoson          | 137        | 86      | 32         | 42      | 236            | 71            | 6                 | 1,778        | 1,945   | 2,857    | 51           | 125        | 1,188  | 37         | 8,592     |
| Williamsburg      | 223        | 376     | 160        | 110     | 262            | 110           | 9                 | 2,371        | 560     | 55       | 14,347       | 11,359     | 4,731  | 99         | 34,772    |
| James City        | 640        | 988     | 399        | 406     | 906            | 472           | 18                | 6,175        | 1,417   | 133      | 11,373       | 64,957     | 7,297  | 381        | 95,562    |
| York              | 615        | 702     | 285        | 271     | 1,072          | 400           | 20                | 16,212       | 6,852   | 1,208    | 4,710        | 7,255      | 22,545 | 197        | 62,343    |
| Gloucester        | 150        | 214     | 90         | 97      | 230            | 140           | 6                 | 810          | 287     | 37       | 112          | 295        | 486    | 13,366     | 16,319    |
| Total             | 195,265    | 293,006 | 94,559     | 40,912  | 480,855        | 44,266        | 12,080            | 253,071      | 168,578 | 8,573    | 34,515       | 94,766     | 62,115 | 15,880     | 1,798,442 |



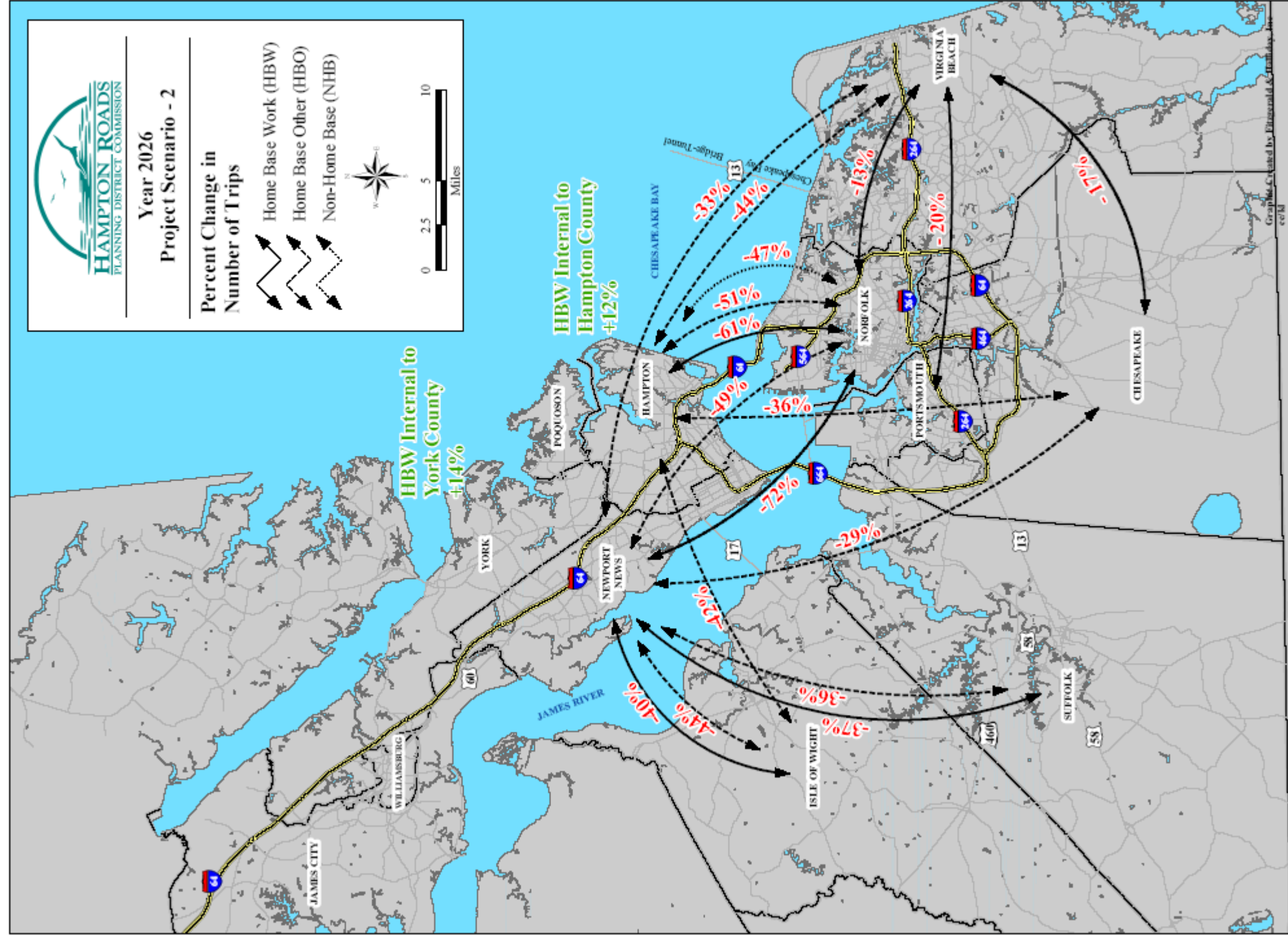














Toll Feasibility Study

Addendum- Appendix B

Reduced Tolls – Travel Patterns

Note: Definition of Project Scenarios:

| Features                              | Project Scenario #1                                                            | Project Scenario #2                                                            | Project Scenario #3                                               |
|---------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Projects                              | <ul style="list-style-type: none"><li>HRX</li></ul>                            | <ul style="list-style-type: none"><li>Improved HRBT (1)</li></ul>              | <ul style="list-style-type: none"><li>Midtown &amp; MLK</li></ul> |
| Existing/Unimproved, Tolloed Roadways | <ul style="list-style-type: none"><li>MMMBT</li><li>JRB</li><li>HRBT</li></ul> | <ul style="list-style-type: none"><li>MMMBT</li><li>JRB</li><li>HRBT</li></ul> | <ul style="list-style-type: none"><li>Downtown Tunnel</li></ul>   |

(3) Hampton Roads Crossing Study, Alternative #1  
MMMBT – Monitor Merrimac Bridge Tunnel  
JRB – James River Bridge  
HRBT – Hampton Roads Bridge Tunnel

Table B-1 Daily Travel Pattern – No Project

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 148,431    | 44,148  | 27,401     | 13,387  | 33,083         | 1,575         | 586               | 1,894        | 1,078   | 12       | 50           | 71         | 105    | 0          | 271,820   |
| Norfolk           | 16,135     | 158,210 | 7,365      | 1,226   | 37,042         | 204           | 599               | 840          | 1,339   | 13       | 64           | 81         | 106    | 0          | 223,223   |
| Portsmouth        | 21,277     | 16,915  | 39,175     | 7,715   | 3,947          | 1,057         | 90                | 1,304        | 717     | 8        | 45           | 54         | 73     | 0          | 92,379    |
| Suffolk           | 15,610     | 6,047   | 8,353      | 57,799  | 2,371          | 5,664         | 55                | 3,203        | 1,611   | 21       | 92           | 122        | 181    | 3          | 101,133   |
| Virginia Beach    | 63,196     | 123,746 | 8,727      | 3,090   | 354,912        | 432           | 16,144            | 818          | 944     | 12       | 27           | 35         | 82     | 0          | 572,164   |
| Isle of Wight     | 1,417      | 759     | 807        | 4,116   | 259            | 26,439        | 7                 | 2,939        | 1,427   | 20       | 77           | 99         | 163    | 5          | 38,534    |
| Va Bch Waterfront | 1,153      | 3,171   | 218        | 71      | 17,554         | 12            | 6,597             | 23           | 27      | 1        | 0            | 0          | 2      | 0          | 28,828    |
| Newport News      | 1,789      | 3,196   | 997        | 2,116   | 548            | 3,742         | 12                | 144,128      | 38,092  | 1,029    | 9,549        | 13,696     | 19,260 | 1,813      | 239,968   |
| Hampton           | 1,661      | 6,872   | 895        | 1,497   | 1,330          | 2,453         | 25                | 44,717       | 82,527  | 940      | 1,712        | 2,265      | 4,950  | 301        | 152,144   |
| Poquoson          | 88         | 325     | 46         | 87      | 67             | 161           | 2                 | 4,467        | 5,194   | 2,488    | 398          | 527        | 1,825  | 108        | 15,784    |
| Williamsburg      | 2          | 10      | 2          | 3       | 1              | 5             | 0                 | 492          | 100     | 5        | 6,308        | 3,649      | 1,777  | 42         | 12,396    |
| James City        | 15         | 66      | 9          | 19      | 6              | 38            | 0                 | 2,847        | 562     | 25       | 15,715       | 39,584     | 8,019  | 166        | 67,071    |
| York              | 233        | 799     | 125        | 254     | 156            | 470           | 4                 | 23,198       | 11,678  | 1,093    | 8,894        | 10,134     | 21,735 | 1,633      | 80,405    |
| Gloucester        | 1          | 6       | 1          | 2       | 0              | 5             | 0                 | 300          | 72      | 4        | 122          | 149        | 277    | 21,147     | 22,087    |
| Total             | 271,010    | 364,270 | 94,122     | 91,381  | 451,276        | 42,257        | 24,119            | 231,170      | 145,367 | 5,671    | 43,054       | 70,467     | 58,554 | 25,219     | 1,917,936 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 316,538    | 49,404  | 61,376     | 17,272  | 103,700        | 4,575         | 1,644             | 10,060       | 8,932   | 228      | 1,744        | 1,123      | 1,823   | 0          | 578,420   |
| Norfolk           | 20,550     | 342,581 | 10,403     | 2,635   | 91,294         | 1,217         | 1,055             | 5,612        | 7,250   | 173      | 733          | 627        | 1,175   | 1          | 485,306   |
| Portsmouth        | 30,099     | 10,486  | 123,502    | 8,448   | 9,312          | 1,710         | 311               | 3,761        | 3,293   | 68       | 421          | 332        | 592     | 0          | 192,335   |
| Suffolk           | 9,182      | 2,813   | 8,188      | 59,072  | 4,991          | 4,281         | 155               | 4,000        | 3,163   | 88       | 606          | 364        | 718     | 16         | 97,636    |
| Virginia Beach    | 53,935     | 95,090  | 9,525      | 5,194   | 849,748        | 2,191         | 22,855            | 6,771        | 7,582   | 211      | 1,554        | 951        | 1,602   | 0          | 1,057,209 |
| Isle of Wight     | 1,862      | 1,293   | 1,490      | 3,850   | 2,095          | 80,369        | 72                | 5,723        | 4,581   | 111      | 707          | 441        | 868     | 51         | 103,514   |
| Va Bch Waterfront | 351        | 670     | 165        | 81      | 13,896         | 37            | 6,557             | 102          | 166     | 3        | 34           | 14         | 29      | 0          | 22,106    |
| Newport News      | 2,322      | 3,215   | 1,937      | 2,145   | 3,858          | 3,728         | 122               | 492,108      | 94,534  | 1,971    | 10,704       | 6,288      | 34,664  | 1,102      | 658,700   |
| Hampton           | 1,411      | 2,753   | 1,133      | 1,113   | 3,039          | 1,846         | 114               | 63,409       | 257,071 | 1,591    | 2,154        | 1,347      | 9,545   | 439        | 346,965   |
| Poquoson          | 318        | 509     | 193        | 273     | 657            | 383           | 15                | 11,292       | 13,590  | 16,455   | 734          | 553        | 6,970   | 154        | 52,096    |
| Williamsburg      | 30         | 32      | 17         | 22      | 68             | 28            | 3                 | 776          | 226     | 9        | 17,917       | 3,677      | 3,317   | 27         | 26,147    |
| James City        | 571        | 895     | 428        | 452     | 1,182          | 583           | 22                | 11,704       | 4,453   | 207      | 53,900       | 116,099    | 18,675  | 567        | 209,739   |
| York              | 502        | 802     | 372        | 453     | 1,031          | 622           | 35                | 39,461       | 18,788  | 1,916    | 15,103       | 6,711      | 63,522  | 402        | 149,718   |
| Gloucester        | 75         | 133     | 63         | 62      | 148            | 74            | 2                 | 1,161        | 598     | 31       | 406          | 253        | 508     | 35,115     | 38,629    |
| Total             | 437,746    | 510,675 | 218,793    | 101,073 | 1,085,020      | 101,643       | 32,961            | 655,941      | 424,228 | 23,062   | 106,715      | 138,781    | 144,009 | 37,873     | 4,018,520 |

| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 110,696    | 19,739  | 19,205     | 5,672   | 34,164         | 1,333         | 346               | 2,271        | 1,331   | 124      | 194          | 566        | 561    | 131        | 196,333   |
| Norfolk           | 19,558     | 198,192 | 8,615      | 1,573   | 57,519         | 786           | 605               | 1,842        | 2,198   | 82       | 333          | 884        | 626    | 161        | 292,973   |
| Portsmouth        | 19,272     | 8,746   | 53,711     | 4,268   | 5,522          | 857           | 96                | 1,083        | 743     | 30       | 143          | 356        | 260    | 61         | 95,148    |
| Suffolk           | 5,849      | 1,640   | 4,324      | 22,866  | 2,121          | 2,241         | 43                | 1,333        | 896     | 40       | 103          | 380        | 263    | 74         | 42,176    |
| Virginia Beach    | 33,865     | 57,352  | 5,412      | 2,034   | 363,655        | 1,536         | 8,366             | 3,690        | 2,193   | 216      | 231          | 798        | 965    | 229        | 480,542   |
| Isle of Wight     | 1,426      | 852     | 911        | 2,323   | 1,673          | 33,405        | 61                | 2,657        | 1,755   | 67       | 102          | 446        | 389    | 97         | 46,164    |
| Va Bch Waterfront | 345        | 604     | 92         | 41      | 8,359          | 56            | 2,294             | 112          | 110     | 6        | 8            | 16         | 19     | 7          | 12,070    |
| Newport News      | 2,508      | 2,057   | 1,198      | 1,420   | 4,093          | 2,642         | 118               | 176,229      | 37,538  | 1,799    | 2,278        | 5,999      | 16,087 | 620        | 254,585   |
| Hampton           | 1,425      | 2,339   | 788        | 945     | 2,379          | 1,794         | 125               | 37,304       | 111,291 | 1,941    | 528          | 1,342      | 6,772  | 446        | 169,419   |
| Poquoson          | 139        | 87      | 32         | 44      | 237            | 79            | 6                 | 1,783        | 1,951   | 2,871    | 51           | 126        | 1,191  | 38         | 8,633     |
| Williamsburg      | 226        | 379     | 162        | 114     | 264            | 109           | 9                 | 2,381        | 563     | 55       | 14,372       | 11,387     | 4,744  | 101        | 34,866    |
| James City        | 649        | 995     | 404        | 422     | 913            | 477           | 18                | 6,206        | 1,425   | 134      | 11,398       | 65,176     | 7,324  | 388        | 95,929    |
| York              | 622        | 707     | 288        | 283     | 1,078          | 401           | 21                | 16,267       | 6,878   | 1,214    | 4,719        | 7,277      | 22,637 | 200        | 62,593    |
| Gloucester        | 151        | 214     | 90         | 100     | 230            | 141           | 6                 | 808          | 286     | 37       | 112          | 294        | 485    | 13,477     | 16,429    |
| Total             | 196,730    | 293,902 | 95,233     | 42,107  | 482,208        | 45,858        | 12,113            | 253,964      | 169,159 | 8,616    | 34,571       | 95,047     | 62,323 | 16,029     | 1,807,860 |

Table B-2 Daily Travel Pattern – Project Scenario #1

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 159,499    | 43,763  | 27,403     | 12,684  | 24,710         | 1,327         | 376               | 1,294        | 691     | 6        | 17           | 14         | 36     | 0          | 271,820   |
| Norfolk           | 15,493     | 164,344 | 7,881      | 1,906   | 29,790         | 346           | 409               | 1,758        | 1,149   | 8        | 38           | 35         | 65     | 0          | 223,223   |
| Portsmouth        | 20,442     | 19,191  | 39,937     | 7,454   | 2,964          | 917           | 55                | 890          | 461     | 4        | 15           | 17         | 31     | 0          | 92,379    |
| Suffolk           | 13,329     | 9,537   | 8,167      | 59,048  | 1,602          | 6,196         | 29                | 1,999        | 1,046   | 9        | 42           | 52         | 78     | 0          | 101,133   |
| Virginia Beach    | 58,248     | 109,236 | 8,300      | 2,947   | 374,159        | 380           | 16,943            | 1,209        | 710     | 5        | 0            | 1          | 24     | 0          | 572,164   |
| Isle of Wight     | 1,122      | 1,175   | 739        | 4,372   | 175            | 28,495        | 3                 | 1,500        | 812     | 8        | 32           | 40         | 61     | 0          | 38,534    |
| Va Bch Waterfront | 951        | 2,753   | 187        | 58      | 18,405         | 8             | 6,410             | 34           | 21      | 0        | 0            | 0          | 0      | 0          | 28,828    |
| Newport News      | 1,123      | 6,997   | 737        | 1,342   | 618            | 2,156         | 9                 | 150,139      | 33,446  | 652      | 9,382        | 13,648     | 18,021 | 1,698      | 239,968   |
| Hampton           | 1,137      | 7,313   | 767        | 1,191   | 824            | 1,764         | 14                | 42,803       | 89,944  | 667      | 949          | 1,269      | 3,345  | 156        | 152,144   |
| Poquoson          | 63         | 342     | 37         | 70      | 43             | 118           | 0                 | 4,012        | 5,287   | 3,355    | 268          | 367        | 1,716  | 104        | 15,784    |
| Williamsburg      | 1          | 6       | 0          | 1       | 0              | 2             | 0                 | 366          | 43      | 2        | 6,629        | 3,475      | 1,843  | 30         | 12,396    |
| James City        | 3          | 27      | 1          | 5       | 0              | 13            | 0                 | 2,387        | 269     | 10       | 15,603       | 40,576     | 8,027  | 151        | 67,071    |
| York              | 119        | 746     | 83         | 150     | 81             | 242           | 1                 | 21,425       | 11,212  | 936      | 9,367        | 9,792      | 24,463 | 1,790      | 80,405    |
| Gloucester        | 0          | 1       | 0          | 0       | 0              | 1             | 0                 | 282          | 51      | 3        | 148          | 173        | 295    | 21,131     | 22,087    |
| Total             | 271,529    | 365,431 | 94,241     | 91,228  | 453,371        | 41,965        | 24,251            | 230,099      | 145,143 | 5,666    | 42,489       | 69,458     | 58,007 | 25,059     | 1,917,936 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 320,951    | 50,436  | 62,101     | 16,216  | 105,788        | 4,184         | 1,678             | 7,352        | 6,229   | 158      | 1,237        | 697        | 1,393   | 0          | 578,420   |
| Norfolk           | 20,534     | 343,796 | 10,456     | 2,659   | 91,858         | 1,287         | 1,062             | 6,005        | 5,109   | 127      | 834          | 630        | 950     | 0          | 485,306   |
| Portsmouth        | 30,246     | 10,939  | 124,784    | 8,465   | 9,540          | 1,708         | 319               | 2,706        | 2,349   | 48       | 412          | 318        | 502     | 0          | 192,335   |
| Suffolk           | 8,537      | 2,982   | 8,283      | 62,411  | 4,805          | 4,567         | 150               | 2,543        | 2,247   | 55       | 359          | 249        | 448     | 0          | 97,636    |
| Virginia Beach    | 53,602     | 95,322  | 9,395      | 4,796   | 852,907        | 1,881         | 22,944            | 6,875        | 5,974   | 148      | 1,296        | 701        | 1,367   | 0          | 1,057,209 |
| Isle of Wight     | 1,835      | 1,468   | 1,638      | 4,295   | 2,098          | 85,083        | 71                | 3,086        | 2,601   | 60       | 436          | 291        | 550     | 1          | 103,514   |
| Va Bch Waterfront | 342        | 671     | 163        | 73      | 13,962         | 29            | 6,590             | 140          | 78      | 4        | 20           | 5          | 29      | 0          | 22,106    |
| Newport News      | 1,542      | 3,049   | 1,166      | 1,122   | 3,505          | 1,446         | 137               | 496,120      | 95,760  | 1,964    | 10,755       | 6,266      | 34,826  | 1,040      | 658,700   |
| Hampton           | 848        | 1,653   | 684        | 620     | 1,970          | 765           | 51                | 62,828       | 262,590 | 1,580    | 2,135        | 1,319      | 9,510   | 412        | 346,965   |
| Poquoson          | 165        | 386     | 159        | 139     | 412            | 156           | 21                | 11,432       | 14,102  | 16,617   | 740          | 551        | 7,072   | 146        | 52,096    |
| Williamsburg      | 19         | 31      | 15         | 13      | 56             | 17            | 2                 | 781          | 235     | 9        | 17,958       | 3,666      | 3,320   | 25         | 26,147    |
| James City        | 337        | 803     | 346        | 272     | 803            | 307           | 10                | 11,901       | 4,650   | 211      | 54,377       | 116,361    | 18,818  | 544        | 209,739   |
| York              | 331        | 590     | 273        | 239     | 814            | 309           | 34                | 39,731       | 19,282  | 1,922    | 15,167       | 6,703      | 63,941  | 382        | 149,718   |
| Gloucester        | 38         | 119     | 48         | 34      | 79             | 44            | 0                 | 1,232        | 651     | 33       | 430          | 265        | 537     | 35,119     | 38,629    |
| Total             | 439,329    | 512,247 | 219,511    | 101,353 | 1,088,597      | 101,782       | 33,069            | 652,730      | 421,856 | 22,935   | 106,155      | 138,024    | 143,263 | 37,669     | 4,018,520 |

| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 111,257    | 19,980  | 19,177     | 5,390   | 34,196         | 1,304         | 346               | 1,969        | 1,336   | 106      | 149          | 477        | 518    | 127        | 196,333   |
| Norfolk           | 19,861     | 196,522 | 9,281      | 1,948   | 57,437         | 934           | 604               | 2,532        | 1,778   | 80       | 355          | 867        | 620    | 155        | 292,973   |
| Portsmouth        | 19,233     | 9,378   | 53,534     | 4,225   | 5,564          | 864           | 96                | 1,006        | 490     | 48       | 111          | 276        | 267    | 56         | 95,148    |
| Suffolk           | 5,532      | 2,015   | 4,282      | 23,466  | 2,028          | 2,368         | 37                | 1,027        | 653     | 54       | 107          | 303        | 247    | 58         | 42,176    |
| Virginia Beach    | 33,944     | 57,172  | 5,457      | 1,945   | 363,819        | 1,534         | 8,379             | 3,612        | 2,336   | 227      | 218          | 754        | 917    | 227        | 480,542   |
| Isle of Wight     | 1,397      | 1,009   | 924        | 2,469   | 1,672          | 35,043        | 58                | 1,550        | 1,057   | 61       | 111          | 429        | 308    | 76         | 46,164    |
| Va Bch Waterfront | 345        | 602     | 93         | 35      | 8,370          | 54            | 2,299             | 97           | 123     | 3        | 7            | 17         | 19     | 7          | 12,070    |
| Newport News      | 2,199      | 2,854   | 1,105      | 1,086   | 3,995          | 1,538         | 107               | 177,572      | 37,299  | 1,788    | 2,282        | 6,028      | 16,118 | 614        | 254,585   |
| Hampton           | 1,426      | 1,929   | 526        | 672     | 2,525          | 1,059         | 131               | 37,132       | 112,958 | 1,948    | 531          | 1,348      | 6,792  | 441        | 169,419   |
| Poquoson          | 126        | 82      | 44         | 54      | 246            | 61            | 4                 | 1,784        | 1,964   | 2,864    | 51           | 125        | 1,190  | 37         | 8,633     |
| Williamsburg      | 175        | 415     | 128        | 116     | 256            | 117           | 9                 | 2,390        | 569     | 55       | 14,380       | 11,407     | 4,752  | 99         | 34,866    |
| James City        | 543        | 1,004   | 315        | 336     | 882            | 453           | 18                | 6,246        | 1,443   | 135      | 11,424       | 65,391     | 7,357  | 384        | 95,929    |
| York              | 573        | 697     | 293        | 263     | 1,029          | 312           | 20                | 16,306       | 6,928   | 1,213    | 4,726        | 7,304      | 22,731 | 198        | 62,593    |
| Gloucester        | 126        | 211     | 75         | 79      | 218            | 114           | 5                 | 826          | 293     | 38       | 114          | 299        | 495    | 13,535     | 16,429    |
| Total             | 196,736    | 293,870 | 95,232     | 42,086  | 482,237        | 45,754        | 12,114            | 254,049      | 169,228 | 8,618    | 34,566       | 95,026     | 62,330 | 16,014     | 1,807,860 |

Table B-3 Daily Travel Pattern – Project Scenario #2

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 158,757    | 43,814  | 27,359     | 12,866  | 25,192         | 1,341         | 389               | 1,251        | 764     | 7        | 20           | 16         | 43     | 0          | 271,820   |
| Norfolk           | 14,193     | 169,896 | 6,549      | 1,120   | 29,268         | 169           | 408               | 551          | 972     | 7        | 20           | 23         | 47     | 0          | 223,223   |
| Portsmouth        | 21,142     | 17,136  | 40,803     | 7,899   | 2,951          | 928           | 58                | 874          | 510     | 5        | 17           | 19         | 36     | 0          | 92,379    |
| Suffolk           | 15,071     | 6,390   | 9,013      | 59,213  | 1,747          | 5,978         | 36                | 2,238        | 1,223   | 11       | 51           | 65         | 97     | 0          | 101,133   |
| Virginia Beach    | 56,645     | 114,290 | 7,614      | 2,638   | 372,705        | 343           | 16,862            | 445          | 602     | 4        | 0            | 0          | 15     | 0          | 572,164   |
| Isle of Wight     | 1,253      | 730     | 783        | 4,308   | 183            | 28,241        | 4                 | 1,859        | 996     | 10       | 38           | 49         | 79     | 1          | 38,534    |
| Va Bch Waterfront | 924        | 2,926   | 171        | 55      | 18,335         | 8             | 6,381             | 10           | 17      | 0        | 0            | 0          | 0      | 0          | 28,828    |
| Newport News      | 1,233      | 1,985   | 765        | 1,581   | 264            | 2,674         | 3                 | 152,397      | 34,710  | 660      | 9,674        | 13,927     | 18,345 | 1,750      | 239,968   |
| Hampton           | 1,268      | 6,191   | 820        | 1,304   | 877            | 2,037         | 15                | 43,569       | 89,518  | 666      | 998          | 1,326      | 3,396  | 158        | 152,144   |
| Poquoson          | 71         | 242     | 39         | 77      | 43             | 128           | 0                 | 4,014        | 5,294   | 3,381    | 275          | 376        | 1,736  | 108        | 15,784    |
| Williamsburg      | 1          | 1       | 0          | 1       | 0              | 2             | 0                 | 364          | 41      | 2        | 6,629        | 3,488      | 1,838  | 30         | 12,396    |
| James City        | 3          | 6       | 1          | 6       | 0              | 15            | 0                 | 2,391        | 269     | 10       | 15,551       | 40,664     | 8,002  | 153        | 67,071    |
| York              | 138        | 440     | 86         | 164     | 70             | 301           | 0                 | 21,543       | 11,142  | 934      | 9,400        | 9,846      | 24,502 | 1,838      | 80,405    |
| Gloucester        | 0          | 0       | 0          | 0       | 0              | 2             | 0                 | 273          | 50      | 3        | 146          | 170        | 289    | 21,153     | 22,087    |
| Total             | 270,699    | 364,049 | 94,002     | 91,233  | 451,636        | 42,168        | 24,156            | 231,779      | 146,107 | 5,698    | 42,819       | 69,970     | 58,425 | 25,192     | 1,917,936 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 319,265    | 50,123  | 62,111     | 17,513  | 105,229        | 4,620         | 1,674             | 7,632        | 6,635   | 159      | 1,325        | 711        | 1,424   | 0          | 578,420   |
| Norfolk           | 20,623     | 346,166 | 10,403     | 2,638   | 92,289         | 1,198         | 1,066             | 3,648        | 4,926   | 127      | 826          | 554        | 842     | 0          | 485,306   |
| Portsmouth        | 30,442     | 10,735  | 124,901    | 8,557   | 9,547          | 1,733         | 319               | 2,645        | 2,176   | 52       | 457          | 314        | 458     | 0          | 192,335   |
| Suffolk           | 9,426      | 2,928   | 8,399      | 60,557  | 5,197          | 4,477         | 161               | 2,796        | 2,440   | 62       | 392          | 278        | 521     | 0          | 97,636    |
| Virginia Beach    | 53,899     | 95,602  | 9,460      | 5,170   | 854,252        | 2,170         | 22,970            | 5,268        | 5,874   | 147      | 871          | 375        | 1,151   | 0          | 1,057,209 |
| Isle of Wight     | 1,999      | 1,390   | 1,596      | 4,119   | 2,266          | 83,820        | 78                | 3,620        | 3,049   | 84       | 462          | 333        | 687     | 10         | 103,514   |
| Va Bch Waterfront | 350        | 674     | 164        | 81      | 13,979         | 37            | 6,594             | 119          | 79      | 4        | 1            | 1          | 24      | 0          | 22,106    |
| Newport News      | 1,555      | 1,812   | 1,126      | 1,239   | 2,738          | 1,763         | 117               | 497,715      | 95,748  | 1,976    | 10,757       | 6,251      | 34,878  | 1,025      | 658,700   |
| Hampton           | 933        | 1,637   | 650        | 691     | 1,990          | 912           | 51                | 63,265       | 261,988 | 1,577    | 2,094        | 1,314      | 9,460   | 402        | 346,965   |
| Poquoson          | 170        | 350     | 134        | 166     | 412            | 248           | 20                | 11,488       | 14,065  | 16,564   | 739          | 549        | 7,048   | 143        | 52,096    |
| Williamsburg      | 19         | 32      | 15         | 15      | 41             | 18            | 0                 | 784          | 234     | 9        | 17,972       | 3,664      | 3,320   | 25         | 26,147    |
| James City        | 315        | 630     | 337        | 328     | 399            | 370           | 3                 | 11,998       | 4,641   | 212      | 54,543       | 116,558    | 18,868  | 537        | 209,739   |
| York              | 329        | 497     | 244        | 288     | 721            | 408           | 30                | 39,901       | 19,192  | 1,919    | 15,179       | 6,699      | 63,935  | 375        | 149,718   |
| Gloucester        | 38         | 87      | 47         | 44      | 36             | 49            | 0                 | 1,261        | 653     | 33       | 438          | 269        | 547     | 35,127     | 38,629    |
| Total             | 439,362    | 512,661 | 219,587    | 101,406 | 1,089,097      | 101,821       | 33,083            | 652,141      | 421,701 | 22,925   | 106,054      | 137,872    | 143,162 | 37,646     | 4,018,520 |

| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 110,927    | 19,775  | 19,306     | 5,747   | 34,194         | 1,371         | 348               | 1,979        | 1,311   | 108      | 160          | 470        | 511    | 126        | 196,333   |
| Norfolk           | 19,597     | 198,954 | 8,639      | 1,588   | 57,600         | 807           | 608               | 1,986        | 1,541   | 86       | 195          | 624        | 617    | 130        | 292,973   |
| Portsmouth        | 19,379     | 8,768   | 53,943     | 4,324   | 5,536          | 884           | 96                | 979          | 493     | 42       | 107          | 276        | 264    | 57         | 95,148    |
| Suffolk           | 5,929      | 1,660   | 4,383      | 23,146  | 2,142          | 2,324         | 44                | 1,095        | 684     | 43       | 111          | 316        | 239    | 62         | 42,176    |
| Virginia Beach    | 33,894     | 57,451  | 5,422      | 2,050   | 364,048        | 1,562         | 8,404             | 3,320        | 2,365   | 215      | 190          | 632        | 765    | 225        | 480,542   |
| Isle of Wight     | 1,481      | 881     | 949        | 2,429   | 1,717          | 34,607        | 63                | 1,846        | 1,200   | 70       | 110          | 423        | 307    | 80         | 46,164    |
| Va Bch Waterfront | 346        | 606     | 93         | 42      | 8,394          | 57            | 2,306             | 59           | 121     | 3        | 4            | 17         | 16     | 7          | 12,070    |
| Newport News      | 2,184      | 2,215   | 1,088      | 1,175   | 3,731          | 1,865         | 65                | 177,869      | 37,485  | 1,804    | 2,283        | 6,037      | 16,169 | 613        | 254,585   |
| Hampton           | 1,420      | 1,675   | 534        | 719     | 2,612          | 1,226         | 131               | 37,221       | 112,885 | 1,943    | 520          | 1,329      | 6,767  | 437        | 169,419   |
| Poquoson          | 116        | 97      | 45         | 47      | 228            | 74            | 3                 | 1,789        | 1,966   | 2,863    | 51           | 126        | 1,191  | 37         | 8,633     |
| Williamsburg      | 187        | 228     | 124        | 125     | 225            | 118           | 4                 | 2,407        | 561     | 55       | 14,473       | 11,475     | 4,785  | 100        | 34,866    |
| James City        | 548        | 733     | 318        | 355     | 742            | 455           | 19                | 6,292        | 1,423   | 135      | 11,483       | 65,640     | 7,400  | 385        | 95,929    |
| York              | 571        | 703     | 295        | 260     | 857            | 317           | 17                | 16,369       | 6,893   | 1,213    | 4,756        | 7,344      | 22,798 | 198        | 62,593    |
| Gloucester        | 133        | 173     | 75         | 84      | 201            | 124           | 5                 | 828          | 302     | 38       | 114          | 301        | 498    | 13,553     | 16,429    |
| Total             | 196,712    | 293,919 | 95,214     | 42,089  | 482,227        | 45,794        | 12,114            | 254,040      | 169,229 | 8,618    | 34,557       | 95,009     | 62,326 | 16,010     | 1,807,860 |

Table B-4 Daily Travel Pattern – Project Scenario #3

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 158,849    | 43,608  | 26,618     | 12,639  | 25,578         | 1,287         | 394               | 1,680        | 1,049   | 9        | 26           | 26         | 56     | 0          | 271,820   |
| Norfolk           | 13,947     | 172,174 | 4,363      | 833     | 29,526         | 128           | 409               | 635          | 1,094   | 8        | 24           | 27         | 55     | 0          | 223,223   |
| Portsmouth        | 21,231     | 12,907  | 44,376     | 8,120   | 2,630          | 933           | 49                | 1,255        | 768     | 6        | 27           | 28         | 49     | 0          | 92,379    |
| Suffolk           | 14,994     | 5,055   | 9,445      | 58,951  | 1,712          | 5,669         | 35                | 3,201        | 1,766   | 16       | 65           | 91         | 134    | 0          | 101,133   |
| Virginia Beach    | 56,235     | 116,678 | 5,983      | 2,429   | 372,387        | 309           | 16,883            | 544          | 688     | 6        | 0            | 1          | 21     | 0          | 572,164   |
| Isle of Wight     | 1,200      | 548     | 789        | 4,162   | 171            | 27,433        | 3                 | 2,607        | 1,389   | 13       | 46           | 65         | 106    | 2          | 38,534    |
| Va Bch Waterfront | 915        | 2,981   | 130        | 50      | 18,344         | 7             | 6,367             | 14           | 19      | 0        | 0            | 0          | 0      | 0          | 28,828    |
| Newport News      | 1,566      | 2,542   | 1,054      | 2,072   | 341            | 3,298         | 5                 | 150,632      | 34,370  | 656      | 9,542        | 13,865     | 18,265 | 1,761      | 239,968   |
| Hampton           | 1,691      | 6,997   | 1,112      | 1,753   | 1,014          | 2,613         | 16                | 42,562       | 88,132  | 668      | 916          | 1,231      | 3,281  | 158        | 152,144   |
| Poquoson          | 96         | 282     | 56         | 106     | 51             | 180           | 0                 | 3,966        | 5,204   | 3,366    | 270          | 368        | 1,731  | 108        | 15,784    |
| Williamsburg      | 1          | 2       | 0          | 1       | 0              | 2             | 0                 | 352          | 40      | 2        | 6,641        | 3,481      | 1,844  | 30         | 12,396    |
| James City        | 4          | 10      | 2          | 8       | 0              | 17            | 0                 | 2,286        | 255     | 10       | 15,627       | 40,666     | 8,031  | 154        | 67,071    |
| York              | 169        | 559     | 111        | 215     | 86             | 368           | 1                 | 21,367       | 11,070  | 933      | 9,399        | 9,814      | 24,468 | 1,844      | 80,405    |
| Gloucester        | 0          | 0       | 0          | 1       | 0              | 2             | 0                 | 274          | 49      | 3        | 147          | 171        | 290    | 21,149     | 22,087    |
| Total             | 270,897    | 364,344 | 94,039     | 91,340  | 451,840        | 42,248        | 24,164            | 231,373      | 145,893 | 5,695    | 42,731       | 69,835     | 58,330 | 25,207     | 1,917,936 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 316,515    | 48,922  | 61,832     | 17,299  | 103,696        | 4,586         | 1,646             | 10,064       | 8,938   | 228      | 1,746        | 1,124      | 1,825   | 0          | 578,420   |
| Norfolk           | 20,230     | 348,747 | 4,320      | 2,306   | 91,934         | 984           | 1,064             | 5,678        | 7,308   | 175      | 741          | 633        | 1,186   | 1          | 485,306   |
| Portsmouth        | 30,372     | 4,748   | 128,938    | 8,575   | 9,003          | 1,744         | 315               | 3,836        | 3,358   | 70       | 432          | 339        | 605     | 0          | 192,335   |
| Suffolk           | 9,199      | 2,531   | 8,318      | 59,172  | 4,996          | 4,296         | 155               | 4,007        | 3,167   | 88       | 607          | 364        | 719     | 16         | 97,636    |
| Virginia Beach    | 53,877     | 95,724  | 9,248      | 5,198   | 849,459        | 2,193         | 22,845            | 6,769        | 7,579   | 211      | 1,554        | 952        | 1,602   | 0          | 1,057,209 |
| Isle of Wight     | 1,867      | 1,068   | 1,528      | 3,869   | 2,101          | 80,502        | 72                | 5,734        | 4,589   | 111      | 709          | 442        | 870     | 51         | 103,514   |
| Va Bch Waterfront | 351        | 675     | 166        | 82      | 13,894         | 37            | 6,552             | 102          | 166     | 3        | 34           | 14         | 29      | 0          | 22,106    |
| Newport News      | 2,322      | 3,246   | 1,983      | 2,147   | 3,856          | 3,735         | 122               | 492,047      | 94,509  | 1,971    | 10,705       | 6,290      | 34,662  | 1,103      | 658,700   |
| Hampton           | 1,411      | 2,778   | 1,156      | 1,114   | 3,039          | 1,850         | 114               | 63,402       | 257,022 | 1,591    | 2,155        | 1,348      | 9,547   | 440        | 346,965   |
| Poquoson          | 318        | 513     | 198        | 274     | 657            | 383           | 15                | 11,290       | 13,584  | 16,454   | 734          | 553        | 6,969   | 154        | 52,096    |
| Williamsburg      | 30         | 33      | 17         | 22      | 68             | 28            | 3                 | 775          | 226     | 9        | 17,916       | 3,678      | 3,317   | 27         | 26,147    |
| James City        | 570        | 904     | 439        | 452     | 1,181          | 584           | 22                | 11,698       | 4,449   | 207      | 53,892       | 116,100    | 18,673  | 568        | 209,739   |
| York              | 502        | 809     | 381        | 453     | 1,030          | 623           | 35                | 39,456       | 18,781  | 1,916    | 15,102       | 6,711      | 63,517  | 402        | 149,718   |
| Gloucester        | 75         | 135     | 64         | 62      | 148            | 74            | 2                 | 1,160        | 597     | 31       | 406          | 253        | 507     | 35,116     | 38,629    |
| Total             | 437,639    | 510,831 | 218,588    | 101,024 | 1,085,061      | 101,618       | 32,962            | 656,019      | 424,273 | 23,065   | 106,732      | 138,803    | 144,028 | 37,878     | 4,018,520 |

| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 110,773    | 19,407  | 19,386     | 5,714   | 34,170         | 1,339         | 346               | 2,279        | 1,337   | 124      | 195          | 568        | 563    | 131        | 196,333   |
| Norfolk           | 19,194     | 201,893 | 5,082      | 1,296   | 57,929         | 809           | 610               | 1,842        | 2,214   | 82       | 335          | 892        | 632    | 162        | 292,973   |
| Portsmouth        | 19,511     | 5,199   | 57,090     | 4,382   | 5,240          | 884           | 86                | 1,116        | 763     | 32       | 147          | 366        | 268    | 64         | 95,148    |
| Suffolk           | 5,892      | 1,361   | 4,440      | 22,958  | 2,128          | 2,251         | 43                | 1,339        | 900     | 41       | 103          | 382        | 264    | 74         | 42,176    |
| Virginia Beach    | 33,813     | 57,817  | 5,082      | 2,034   | 363,567        | 1,534         | 8,371             | 3,691        | 2,194   | 216      | 231          | 798        | 966    | 230        | 480,542   |
| Isle of Wight     | 1,429      | 877     | 938        | 2,327   | 1,670          | 33,343        | 61                | 2,661        | 1,757   | 67       | 102          | 446        | 389    | 97         | 46,164    |
| Va Bch Waterfront | 344        | 610     | 83         | 41      | 8,362          | 56            | 2,296             | 112          | 110     | 6        | 8            | 16         | 19     | 7          | 12,070    |
| Newport News      | 2,507      | 2,049   | 1,229      | 1,420   | 4,090          | 2,642         | 118               | 176,214      | 37,534  | 1,799    | 2,278        | 6,000      | 16,085 | 620        | 254,585   |
| Hampton           | 1,426      | 2,357   | 806        | 945     | 2,377          | 1,793         | 125               | 37,297       | 111,264 | 1,941    | 528          | 1,342      | 6,771  | 447        | 169,419   |
| Poquoson          | 139        | 87      | 34         | 44      | 236            | 79            | 6                 | 1,782        | 1,950   | 2,870    | 51           | 126        | 1,191  | 38         | 8,633     |
| Williamsburg      | 226        | 381     | 167        | 114     | 264            | 109           | 9                 | 2,380        | 563     | 55       | 14,370       | 11,385     | 4,743  | 101        | 34,866    |
| James City        | 649        | 1,003   | 413        | 422     | 912            | 476           | 18                | 6,203        | 1,424   | 134      | 11,396       | 65,169     | 7,322  | 388        | 95,929    |
| York              | 622        | 713     | 297        | 283     | 1,077          | 401           | 21                | 16,264       | 6,876   | 1,214    | 4,719        | 7,276      | 22,631 | 200        | 62,593    |
| Gloucester        | 150        | 216     | 93         | 100     | 229            | 141           | 6                 | 807          | 286     | 37       | 112          | 294        | 485    | 13,474     | 16,429    |
| Total             | 196,674    | 293,972 | 95,139     | 42,079  | 482,253        | 45,856        | 12,114            | 253,986      | 169,173 | 8,616    | 34,576       | 95,060     | 62,330 | 16,031     | 1,807,860 |

Table B-5 Daily Travel Pattern – Southeastern Parkway and Greenbelt

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 154,737    | 44,795  | 27,307     | 12,525  | 28,038         | 1,248         | 471               | 1,602        | 993     | 8        | 25           | 22         | 50     | 0          | 271,820   |
| Norfolk           | 13,913     | 170,433 | 6,124      | 1,021   | 29,392         | 152           | 403               | 613          | 1,076   | 8        | 17           | 22         | 49     | 0          | 223,223   |
| Portsmouth        | 20,828     | 16,989  | 40,859     | 7,721   | 3,103          | 870           | 58                | 1,150        | 705     | 6        | 23           | 24         | 43     | 0          | 92,379    |
| Suffolk           | 14,495     | 6,211   | 8,827      | 58,999  | 1,764          | 5,677         | 34                | 3,123        | 1,711   | 15       | 62           | 86         | 127    | 0          | 101,133   |
| Virginia Beach    | 61,602     | 112,080 | 7,953      | 2,740   | 369,305        | 349           | 16,892            | 562          | 658     | 5        | 0            | 0          | 17     | 0          | 572,164   |
| Isle of Wight     | 1,147      | 676     | 728        | 4,159   | 178            | 27,583        | 3                 | 2,515        | 1,326   | 13       | 44           | 61         | 100    | 1          | 38,534    |
| Va Bch Waterfront | 964        | 2,822   | 158        | 49      | 18,525         | 7             | 6,273             | 12           | 18      | 0        | 0            | 0          | 0      | 0          | 28,828    |
| Newport News      | 1,553      | 2,480   | 990        | 2,115   | 330            | 3,258         | 4                 | 151,562      | 33,852  | 659      | 9,443        | 13,805     | 18,230 | 1,687      | 239,968   |
| Hampton           | 1,674      | 7,089   | 1,067      | 1,778   | 1,018          | 2,559         | 16                | 42,149       | 88,848  | 645      | 844          | 1,142      | 3,177  | 138        | 152,144   |
| Poquoson          | 94         | 291     | 52         | 101     | 52             | 160           | 0                 | 3,930        | 5,270   | 3,387    | 268          | 358        | 1,719  | 101        | 15,784    |
| Williamsburg      | 1          | 1       | 0          | 1       | 0              | 2             | 0                 | 325          | 31      | 1        | 6,716        | 3,450      | 1,840  | 28         | 12,396    |
| James City        | 3          | 5       | 1          | 7       | 0              | 15            | 0                 | 2,156        | 211     | 8        | 15,658       | 40,853     | 8,011  | 144        | 67,071    |
| York              | 169        | 562     | 106        | 219     | 86             | 371           | 1                 | 21,378       | 11,199  | 939      | 9,367        | 9,627      | 24,613 | 1,767      | 80,405    |
| Gloucester        | 0          | 0       | 0          | 1       | 0              | 3             | 0                 | 271          | 50      | 3        | 151          | 169        | 294    | 21,145     | 22,087    |
| Total             | 271,180    | 364,435 | 94,172     | 91,436  | 451,791        | 42,254        | 24,156            | 231,349      | 145,948 | 5,698    | 42,619       | 69,618     | 58,271 | 25,011     | 1,917,936 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 316,939    | 49,203  | 60,961     | 17,286  | 103,834        | 4,559         | 1,661             | 10,038       | 9,030   | 227      | 1,735        | 1,114      | 1,832   | 0          | 578,420   |
| Norfolk           | 20,449     | 342,670 | 10,449     | 2,633   | 91,269         | 1,217         | 1,053             | 5,612        | 7,246   | 173      | 733          | 627        | 1,174   | 1          | 485,306   |
| Portsmouth        | 29,893     | 10,481  | 123,765    | 8,444   | 9,282          | 1,707         | 310               | 3,755        | 3,286   | 68       | 420          | 332        | 591     | 0          | 192,335   |
| Suffolk           | 9,157      | 2,816   | 8,212      | 59,071  | 4,986          | 4,283         | 155               | 4,002        | 3,162   | 88       | 606          | 364        | 718     | 16         | 97,636    |
| Virginia Beach    | 53,875     | 95,186  | 9,558      | 5,182   | 849,684        | 2,195         | 22,843            | 6,781        | 7,583   | 212      | 1,555        | 952        | 1,603   | 0          | 1,057,209 |
| Isle of Wight     | 1,847      | 1,294   | 1,496      | 3,851   | 2,094          | 80,377        | 72                | 5,724        | 4,580   | 111      | 707          | 441        | 868     | 51         | 103,514   |
| Va Bch Waterfront | 351        | 671     | 166        | 82      | 13,896         | 37            | 6,555             | 102          | 166     | 3        | 34           | 14         | 29      | 0          | 22,106    |
| Newport News      | 2,319      | 3,217   | 1,945      | 2,145   | 3,854          | 3,730         | 122               | 492,128      | 94,504  | 1,972    | 10,708       | 6,290      | 34,665  | 1,102      | 658,700   |
| Hampton           | 1,412      | 2,755   | 1,137      | 1,113   | 3,038          | 1,847         | 114               | 63,433       | 257,037 | 1,591    | 2,155        | 1,348      | 9,545   | 440        | 346,965   |
| Poquoson          | 322        | 509     | 194        | 273     | 657            | 383           | 15                | 11,292       | 13,587  | 16,455   | 734          | 553        | 6,968   | 154        | 52,096    |
| Williamsburg      | 30         | 32      | 17         | 22      | 68             | 28            | 3                 | 775          | 226     | 9        | 17,917       | 3,677      | 3,317   | 27         | 26,147    |
| James City        | 562        | 895     | 430        | 452     | 1,181          | 583           | 22                | 11,702       | 4,451   | 207      | 53,904       | 116,107    | 18,676  | 567        | 209,739   |
| York              | 504        | 802     | 374        | 453     | 1,030          | 622           | 35                | 39,461       | 18,787  | 1,916    | 15,104       | 6,711      | 63,518  | 402        | 149,718   |
| Gloucester        | 74         | 133     | 63         | 62      | 148            | 74            | 2                 | 1,161        | 598     | 31       | 406          | 253        | 508     | 35,115     | 38,629    |
| Total             | 437,734    | 510,666 | 218,767    | 101,067 | 1,085,022      | 101,643       | 32,961            | 655,965      | 424,244 | 23,063   | 106,718      | 138,783    | 144,014 | 37,874     | 4,018,520 |

| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 110,765    | 19,698  | 19,083     | 5,660   | 34,251         | 1,338         | 346               | 2,265        | 1,341   | 125      | 194          | 570        | 566    | 131        | 196,333   |
| Norfolk           | 19,515     | 198,219 | 8,628      | 1,573   | 57,520         | 787           | 605               | 1,843        | 2,199   | 82       | 333          | 885        | 626    | 161        | 292,973   |
| Portsmouth        | 19,168     | 8,754   | 53,802     | 4,270   | 5,525          | 857           | 96                | 1,083        | 743     | 30       | 143          | 356        | 260    | 62         | 95,148    |
| Suffolk           | 5,835      | 1,641   | 4,330      | 22,873  | 2,122          | 2,243         | 43                | 1,333        | 896     | 40       | 103          | 381        | 264    | 74         | 42,176    |
| Virginia Beach    | 33,945     | 57,354  | 5,417      | 2,036   | 363,565        | 1,536         | 8,369             | 3,688        | 2,192   | 216      | 231          | 798        | 965    | 229        | 480,542   |
| Isle of Wight     | 1,436      | 852     | 911        | 2,323   | 1,671          | 33,399        | 61                | 2,656        | 1,755   | 67       | 102          | 446        | 389    | 97         | 46,164    |
| Va Bch Waterfront | 345        | 604     | 93         | 41      | 8,362          | 56            | 2,292             | 112          | 110     | 6        | 8            | 16         | 19     | 7          | 12,070    |
| Newport News      | 2,489      | 2,057   | 1,199      | 1,420   | 4,089          | 2,642         | 118               | 176,246      | 37,540  | 1,799    | 2,278        | 6,001      | 16,088 | 620        | 254,585   |
| Hampton           | 1,437      | 2,339   | 789        | 945     | 2,377          | 1,794         | 124               | 37,302       | 111,285 | 1,941    | 528          | 1,342      | 6,769  | 446        | 169,419   |
| Poquoson          | 135        | 87      | 32         | 44      | 237            | 79            | 6                 | 1,784        | 1,952   | 2,871    | 51           | 126        | 1,192  | 38         | 8,633     |
| Williamsburg      | 223        | 378     | 162        | 114     | 264            | 109           | 9                 | 2,381        | 563     | 55       | 14,374       | 11,388     | 4,744  | 101        | 34,866    |
| James City        | 655        | 995     | 405        | 422     | 913            | 477           | 18                | 6,206        | 1,425   | 134      | 11,396       | 65,171     | 7,324  | 388        | 95,929    |
| York              | 627        | 707     | 289        | 283     | 1,078          | 401           | 21                | 16,265       | 6,878   | 1,214    | 4,720        | 7,278      | 22,635 | 200        | 62,593    |
| Gloucester        | 151        | 214     | 90         | 100     | 230            | 141           | 6                 | 807          | 286     | 37       | 112          | 294        | 485    | 13,477     | 16,429    |
| Total             | 196,726    | 293,897 | 95,229     | 42,105  | 482,202        | 45,859        | 12,113            | 253,971      | 169,164 | 8,616    | 34,573       | 95,050     | 62,325 | 16,029     | 1,807,860 |

**Table B-6 Daily Travel Pattern – Route 460 Realignment**

| Home-Based Work   | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 159,927    | 43,557  | 27,197     | 11,470  | 25,088         | 1,207         | 378               | 1,717        | 1,076   | 9        | 30           | 38         | 62     | 0          | 271,757   |
| Norfolk           | 13,944     | 170,456 | 6,173      | 919     | 29,129         | 148           | 397               | 706          | 1,196   | 9        | 40           | 41         | 64     | 0          | 223,221   |
| Portsmouth        | 21,064     | 16,207  | 41,884     | 7,275   | 2,840          | 866           | 54                | 1,249        | 769     | 6        | 32           | 38         | 53     | 0          | 92,336    |
| Suffolk           | 13,637     | 5,446   | 8,327      | 59,852  | 1,416          | 6,049         | 29                | 3,144        | 1,718   | 15       | 69           | 101        | 132    | 0          | 99,935    |
| Virginia Beach    | 56,632     | 114,091 | 7,210      | 2,120   | 373,482        | 283           | 16,980            | 588          | 740     | 6        | 1            | 4          | 26     | 0          | 572,161   |
| Isle of Wight     | 1,090      | 606     | 692        | 4,558   | 145            | 25,946        | 3                 | 2,511        | 1,315   | 13       | 51           | 70         | 102    | 0          | 37,102    |
| Va Bch Waterfront | 891        | 2,915   | 153        | 43      | 18,464         | 7             | 6,318             | 15           | 21      | 0        | 0            | 0          | 0      | 0          | 28,828    |
| Newport News      | 1,599      | 2,777   | 1,046      | 2,012   | 365            | 3,240         | 5                 | 150,584      | 34,717  | 655      | 9,781        | 14,373     | 17,875 | 911        | 239,938   |
| Hampton           | 1,728      | 7,411   | 1,088      | 1,659   | 1,061          | 2,454         | 16                | 42,597       | 87,235  | 644      | 1,161        | 1,528      | 3,468  | 63         | 152,114   |
| Poquoson          | 97         | 308     | 55         | 92      | 54             | 153           | 0                 | 3,941        | 5,210   | 3,382    | 309          | 420        | 1,735  | 25         | 15,781    |
| Williamsburg      | 1          | 4       | 1          | 2       | 0              | 3             | 0                 | 396          | 52      | 2        | 6,630        | 3,487      | 1,810  | 9          | 12,396    |
| James City        | 7          | 21      | 4          | 11      | 1              | 23            | 0                 | 2,608        | 334     | 12       | 15,614       | 40,411     | 7,986  | 40         | 67,071    |
| York              | 178        | 631     | 115        | 213     | 97             | 367           | 1                 | 21,427       | 11,424  | 944      | 9,209        | 9,702      | 25,113 | 978        | 80,401    |
| Gloucester        | 0          | 0       | 0          | 0       | 0              | 1             | 0                 | 188          | 37      | 2        | 87           | 101        | 199    | 21,471     | 22,087    |
| Total             | 270,794    | 364,429 | 93,944     | 90,226  | 452,144        | 40,747        | 24,182            | 231,671      | 145,845 | 5,699    | 43,012       | 70,312     | 58,625 | 23,498     | 1,915,128 |

| Home-Based Other  | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York    | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|---------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16      | 17         |           |
| Chesapeake        | 307,335    | 46,966  | 59,176     | 17,823  | 98,445         | 5,193         | 1,538             | 9,190        | 8,181   | 209      | 1,582        | 1,014      | 1,661   | 0          | 558,312   |
| Norfolk           | 20,723     | 338,345 | 10,707     | 2,975   | 90,095         | 1,471         | 1,037             | 5,456        | 7,065   | 169      | 702          | 598        | 1,138   | 1          | 480,481   |
| Portsmouth        | 29,215     | 9,686   | 119,902    | 8,565   | 8,582          | 1,918         | 287               | 3,426        | 3,003   | 62       | 378          | 297        | 537     | 0          | 185,859   |
| Suffolk           | 8,198      | 2,196   | 7,370      | 53,302  | 3,887          | 4,097         | 118               | 3,118        | 2,468   | 69       | 460          | 273        | 551     | 14         | 86,121    |
| Virginia Beach    | 54,471     | 94,066  | 9,844      | 5,882   | 839,265        | 2,709         | 22,566            | 6,582        | 7,391   | 206      | 1,493        | 910        | 1,550   | 0          | 1,046,937 |
| Isle of Wight     | 1,520      | 988     | 1,222      | 3,348   | 1,611          | 72,684        | 52                | 4,637        | 3,732   | 85       | 532          | 339        | 681     | 42         | 91,474    |
| Va Bch Waterfront | 360        | 667     | 171        | 92      | 13,754         | 46            | 6,486             | 100          | 163     | 3        | 33           | 14         | 29      | 0          | 21,917    |
| Newport News      | 2,438      | 3,234   | 2,042      | 2,448   | 3,874          | 4,374         | 122               | 487,205      | 93,645  | 1,963    | 10,480       | 6,141      | 34,322  | 1,063      | 653,352   |
| Hampton           | 1,476      | 2,761   | 1,192      | 1,264   | 3,043          | 2,157         | 114               | 62,755       | 254,500 | 1,578    | 2,099        | 1,308      | 9,422   | 423        | 344,090   |
| Poquoson          | 330        | 507     | 202        | 308     | 655            | 442           | 15                | 11,075       | 13,366  | 16,225   | 710          | 533        | 6,840   | 147        | 51,354    |
| Williamsburg      | 32         | 33      | 18         | 26      | 69             | 34            | 3                 | 783          | 229     | 9        | 17,878       | 3,660      | 3,311   | 26         | 26,111    |
| James City        | 610        | 920     | 461        | 529     | 1,213          | 719           | 23                | 11,795       | 4,514   | 210      | 53,767       | 115,422    | 18,629  | 559        | 209,370   |
| York              | 527        | 808     | 393        | 519     | 1,037          | 746           | 35                | 39,016       | 18,621  | 1,903    | 15,010       | 6,647      | 62,895  | 388        | 148,545   |
| Gloucester        | 81         | 139     | 68         | 73      | 153            | 93            | 2                 | 1,185        | 612     | 32       | 409          | 254        | 517     | 34,977     | 38,595    |
| Total             | 427,317    | 501,316 | 212,768    | 97,154  | 1,065,684      | 96,683        | 32,397            | 646,322      | 417,489 | 22,724   | 105,533      | 137,409    | 142,082 | 37,639     | 3,942,517 |

| Non Home-Based    | Chesapeake | Norfolk | Portsmouth | Suffolk | Virginia Beach | Isle of Wight | Va Bch Waterfront | Newport News | Hampton | Poquoson | Williamsburg | James City | York   | Gloucester | Total     |
|-------------------|------------|---------|------------|---------|----------------|---------------|-------------------|--------------|---------|----------|--------------|------------|--------|------------|-----------|
|                   | 1          | 2       | 3          | 4       | 5              | 6             | 7                 | 11           | 12      | 13       | 14           | 15         | 16     | 17         |           |
| Chesapeake        | 109,821    | 19,658  | 19,050     | 5,610   | 34,043         | 1,314         | 345               | 2,268        | 1,329   | 123      | 195          | 566        | 561    | 129        | 195,011   |
| Norfolk           | 19,420     | 197,663 | 8,541      | 1,533   | 57,369         | 754           | 603               | 1,840        | 2,196   | 81       | 333          | 885        | 625    | 159        | 292,003   |
| Portsmouth        | 19,152     | 8,681   | 53,388     | 4,222   | 5,484          | 842           | 94                | 1,084        | 744     | 30       | 143          | 357        | 260    | 61         | 94,541    |
| Suffolk           | 5,822      | 1,618   | 4,294      | 22,093  | 2,087          | 2,165         | 43                | 1,307        | 877     | 39       | 102          | 375        | 258    | 71         | 41,151    |
| Virginia Beach    | 33,632     | 57,210  | 5,363      | 1,964   | 362,732        | 1,497         | 8,346             | 3,686        | 2,190   | 215      | 231          | 798        | 964    | 226        | 479,055   |
| Isle of Wight     | 1,423      | 836     | 901        | 2,247   | 1,662          | 32,120        | 61                | 2,609        | 1,754   | 67       | 106          | 453        | 396    | 98         | 44,733    |
| Va Bch Waterfront | 342        | 603     | 92         | 40      | 8,337          | 55            | 2,288             | 112          | 110     | 6        | 8            | 16         | 19     | 7          | 12,034    |
| Newport News      | 2,479      | 2,043   | 1,183      | 1,364   | 4,071          | 2,562         | 118               | 175,643      | 37,393  | 1,790    | 2,276        | 5,985      | 16,032 | 610        | 253,549   |
| Hampton           | 1,409      | 2,328   | 779        | 908     | 2,367          | 1,763         | 124               | 37,177       | 110,925 | 1,932    | 528          | 1,340      | 6,751  | 440        | 168,770   |
| Poquoson          | 137        | 86      | 32         | 42      | 236            | 71            | 6                 | 1,778        | 1,945   | 2,857    | 51           | 125        | 1,188  | 37         | 8,592     |
| Williamsburg      | 223        | 376     | 160        | 110     | 262            | 110           | 9                 | 2,371        | 560     | 55       | 14,347       | 11,359     | 4,731  | 99         | 34,772    |
| James City        | 640        | 988     | 399        | 406     | 906            | 472           | 18                | 6,175        | 1,417   | 133      | 11,373       | 64,957     | 7,297  | 381        | 95,562    |
| York              | 615        | 702     | 285        | 271     | 1,072          | 400           | 20                | 16,212       | 6,852   | 1,208    | 4,710        | 7,255      | 22,545 | 197        | 62,343    |
| Gloucester        | 150        | 214     | 90         | 97      | 230            | 140           | 6                 | 810          | 287     | 37       | 112          | 295        | 486    | 13,366     | 16,319    |
| Total             | 195,266    | 293,005 | 94,555     | 40,907  | 480,856        | 44,264        | 12,080            | 253,072      | 168,578 | 8,573    | 34,515       | 94,766     | 62,115 | 15,881     | 1,798,434 |

