# Hampton Roads 2040 Long-Range Transportation Plan:

## Prioritization of Transportation Projects

## Project Evaluation and Scoring


the *heartbeat* of HAMPTON ROADS TPO

TRANSPORTATION PLANNING ORGANIZATION

April 2015

T15-01

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## REPORT DOCUMENTATION

**TITLE**
Hampton Roads 2040 Long-Range Transportation Plan:
Prioritization of Transportation Projects
Candidate Project Evaluation and Scoring

**REPORT DATE**
April 2015

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**ABSTRACT**
The Hampton Roads Transportation Planning Organization (HRTPO) is currently in the process of updating the regional Long-Range Transportation Plan to the horizon year 2040. As part of this process and in keeping with federal regulations, HRTPO must consider multimodal transportation options to effectively address future regional needs based upon projected population and employment growth for the next 20 years. To accomplish this task, staff developed a list of approximately 200 candidate transportation projects to be considered for inclusion in the 2040 LRTP. The evaluation and scoring of these candidate projects is summarized within the document and will serve as a guiding tool in developing regional transportation priorities. This document will also be used in the development of a fiscally-constrained 2040 Long-Range Transportation Plan.

**ACKNOWLEDGEMENTS**
This document was prepared by the Hampton Roads Transportation Planning Organization (HRTPO) in cooperation with the U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Virginia Department of Transportation (VDOT), Virginia Department of Rail and Public Transportation (DRPT), Transportation District Commission of Hampton Roads (TDCHR), and Williamsburg Area Transit Authority (WATA). The contents of this report reflect the views of the HRTPO. The HRTPO staff is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the FHWA, FTA, VDOT or DRPT. This report does not constitute a standard, specification, or regulation. FHWA, FTA, VDOT or DRPT acceptance of this report as evidence of fulfillment of the objectives of this program does not constitute endorsement/approval of the need for any recommended improvements nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessments and/or studies of alternatives may be necessary.

**NON-DISCRIMINATION**
The HRTPO assures that no person shall, on the ground of race, color, national origin, handicap, sex, age, or income status as provided by Title VI of the Civil Rights Act of 1964 and subsequent authorities, be excluded from participation in, be denied the benefits of, or be otherwise subject to discrimination under any program or activity. The HRTPO Title VI Plan provides this assurance, information about HRTPO responsibilities, and a Discrimination Complaint Form.

# Hampton Roads 2040 Long-Range Transportation Plan:

## Prioritization of Transportation Projects

*Candidate Project Evaluation and Scoring*

**PREPARED BY:**

the heartbeat of HAMPTON ROADS TPO
TRANSPORTATION PLANNING ORGANIZATION

**APRIL 2015**

**T15-01**

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# Hampton Roads 2040 Long-Range Transportation Plan: Prioritization of Transportation Projects

*Candidate Project Evaluation and Scoring*

## 2040 Long-Range Transportation Vision Statement

*With an engaged public, the 2040 Long-Range Transportation Plan sets forth a vision to develop a well-balanced transportation system that promotes good quality of life while enhancing the unique character of Hampton Roads*

## LRTP Update Overview

Transportation helps connect people to the places where they live, work, and play. Moreover, reliable transportation is essential in improving quality of life. Every four years, Metropolitan Planning Organizations (MPOs) are required to update the Long-Range Transportation Plan (LRTP), which serves as the blueprint for the region's multimodal transportation system. The LRTP will guide regionally significant transportation investments designed to develop a well-balanced transportation system that also promotes good quality of life for area residents over the next twenty years.

Over the past three years, the Hampton Roads Transportation Planning Organization, or HRTPO (the MPO for Hampton Roads), has been updating the next LRTP, entitled *Navigating the Future to 2040*. As part of the update process, HRTPO staff assesses the current transportation system in order to determine system deficiencies in regards to roadway condition, congestion, safety, etc. HRTPO staff also examines how the region may develop over the LRTP timeline (approximately twenty years) based upon projected population and employment growth. Changes in growth can impact travel demand on the regional transportation system, therefore future plans must consider alternatives to effectively address these needs; alternatives can include new or widened roadways as well as new or expanded transit services. Once alternatives are determined and prioritized, funds are identified to pay for the projects. This entire process takes approximately four years to complete and requires regional cooperation and public participation.

## 2040 LRTP Project Prioritization

Project Prioritization is an essential part of the development of the LRTP as scores produced from this process will aid regional decision-makers in selecting projects for the Plan. For the 2040 LRTP, approximately 190 candidate projects were submitted by regional stakeholders and citizens from across the area. These projects range in scope from interstate bridges and tunnels to new bike paths and multi-use trails. For prioritization purposes, candidate projects are evaluated in separate categories: Highway, Interchange/Intersection, Bridge/Tunnel, Transit, Intermodal, and Active Transportation). Projects are separated into categories in order to align with potential funding sources (which are often tied to transportation mode or facility type). Because of funding constraints, as well as the differences in evaluation criteria, project scores are not compared across categories.

Since the objective of this prioritization process is to maximize the use of scarce transportation dollars, 'Committed' transportation projects were not evaluated using the HRTPO Project Prioritization Tool as part of the development of the 2040 LRTP. Committed Projects are defined as fully funded transportation projects programmed in the current Six-Year Improvement Program (SYIP) as well as the regional priority projects identified by the Hampton Roads Transportation Accountability Commission (HRTAC) to receive regional funds from the Hampton Roads Transportation Fund (HRTF). Committed Projects, since they are considered fully funded, are automatically included in the LRTP.

The remaining 2040 LRTP Candidate Projects were evaluated and prioritized using the HRTPO Project Prioritization Tool, an objective methodology which evaluates transportation projects based on their technical merits and regional benefits. This process requires substantial data and stakeholder input, resulting in a prioritized list of candidate projects.

The HRTPO Project Prioritization Tool evaluates transportation projects based on three components: Project Utility (the ability to solve an existing transportation issue), Economic Vitality (the ability to support economic growth), and Project Viability (project readiness). Each component is worth 100 points, combining for a maximum score of 300 points. Note that Active Transportation projects are not evaluated for Economic Vitality and therefore have a maximum score of 200 points.

This document is intended to provide an overview of Project Prioritization Scores for the 2040 LRTP Candidate Projects, as well as serve as a resource for how these scores were produced. One-Page summaries are included for the top ranking projects in each category. Although Committed Projects were not evaluated as part of this process, One-Page summaries are also included for the high-priority Hampton Roads Transportation Accountability Commission (HRTAC) projects.

## Review of Data Inputs and Draft Scores

In order to ensure that the best available data was used in the evaluation and prioritization of candidate projects, data inputs were reviewed by the LRTP Subcommittee (comprised of representatives from localities, transit agencies, state and federal transportation agencies, etc.) at key points in the process.

Between November 2014 and March 2015, draft Project Prioritization scores were presented to the following Committees/Board for review and comment:

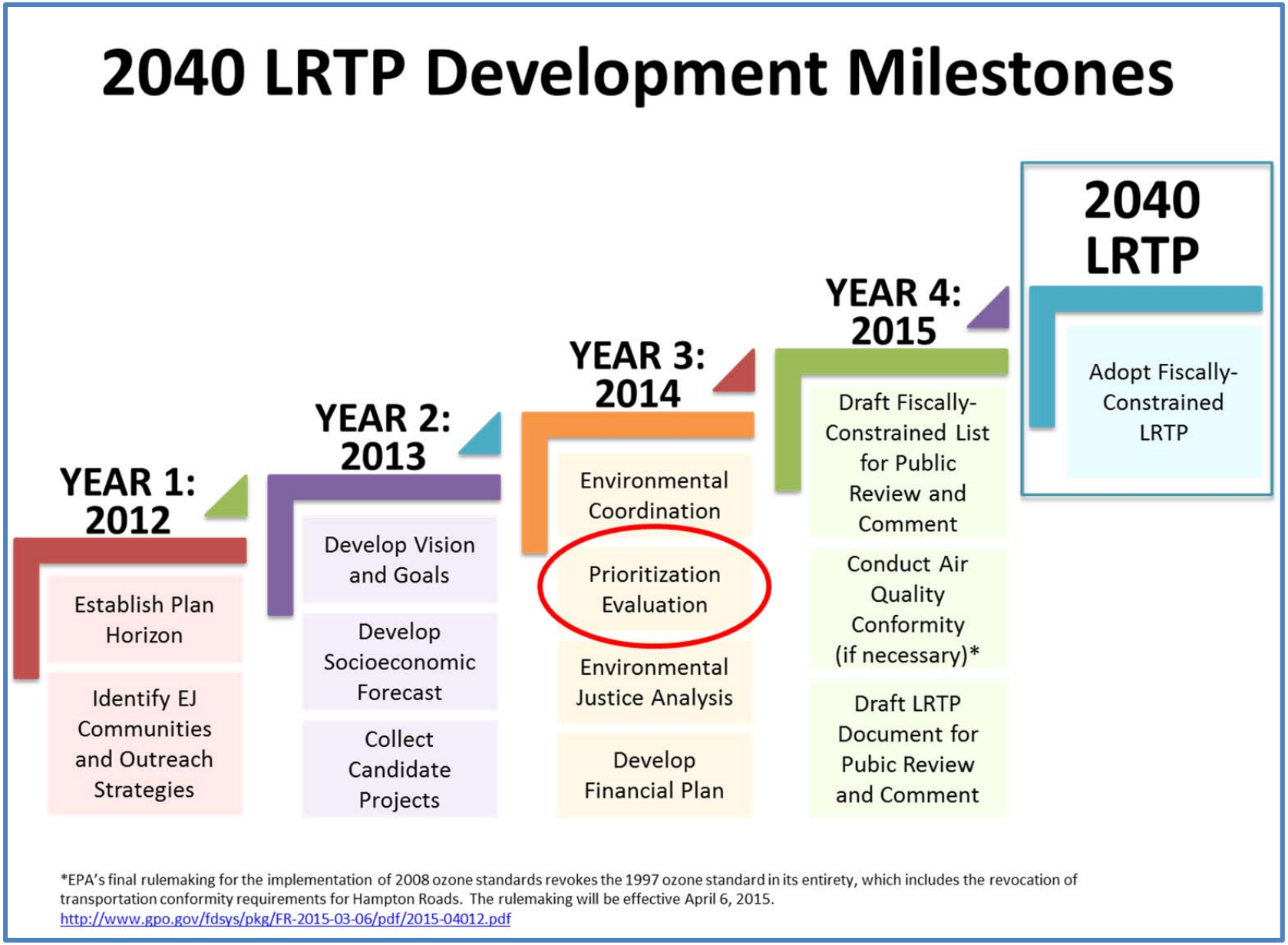
- LRTP Subcommittee
- HRTPO Advisory Committees
  - Transportation Technical Advisory Committee (TTAC)
  - Freight Transportation Advisory Committee (FTAC)
  - Citizen Transportation Advisory Committee (CTAC)
- Pedestrian and Bicycle Advisory Committee
- HRTPO Board

A public outreach campaign was also developed in order to provide interested citizens an opportunity to learn more about the HRPTO Project Prioritization process as well as review and comment on draft scores.

## Next Steps in the Development of the 2040 LRTP

The next step in the long-range transportation planning process will be the development of a financial plan. Using the Project Prioritization Scores as well as the analysis from the Title VI and Environmental Justice Methodology, top-ranking projects will be determined. The financial plan will identify funds to pay for regional priority projects, which can include new or widened roadways as well as new or expanded transit services. The final 2040 LRTP list of projects will help to achieve the overall goal of the 2040 LRTP: a well-balanced transportation system that remains accessible to all and promotes good quality of life while enhancing the unique character of Hampton Roads.

FIGURE 1: 2040 LRTP DEVELOPMENT PLANNING MILESTONES



# HRTPO Project Prioritization

The HRTPO developed a project prioritization tool to establish an objective methodology to assist the HRTPO Board in selecting transportation projects that will benefit the region while maximizing the use of scarce financial resources. The HRTPO Project Prioritization Tool is designed to score candidate transportation projects based on their technical merits and regional benefits.

The Tool evaluates transportation projects based on three components: Project Utility (ability to solve an existing transportation issue), Economic Vitality (ability to support economic growth), and Project Viability (project readiness). Each component is worth 100 points, combining for a maximum score of 300 points (Note: Active Transportation projects have a maximum score of 200 points).

For the 2040 LRTP, projects are evaluated in separate categories (highways, interchanges/intersections, bridge/tunnel, transit, intermodal, and active transportation). Evaluation criteria are based on the current regional vision and can be modified to address changing regional priorities.

Figure 2: HRTPO Project Prioritization

# HRTAC Projects

The following section contains maps and One-Page summaries of regional, high-priority transportation projects. On October 17, 2013, the HRTPO Board adopted Resolution 2013-9 supporting the following HRTF/HRTAC list of candidate projects. Since these projects have been identified for funding from HRTAC, they were not prioritized for the 2040 LRTP and thus do not have an associated Project Prioritization score. HRTAC is working on a plan for financing and implementation.

**MAP 1: HRTAC PROJECT - I-64 PENINSULA WIDENING**

**MAP 2: HRTAC PROJECT - HAMPTON ROADS MULTIMODAL THIRD CROSSING**

**MAP 3: HRTAC PROJECTS - I-64 SOUTHSIDE (INCLUDING HIGH RISE BRIDGE), I-64/I-264 INTERCHANGE & US 460/58/13 CONNECTOR**

# I-64 Peninsula Widening

## Project Description

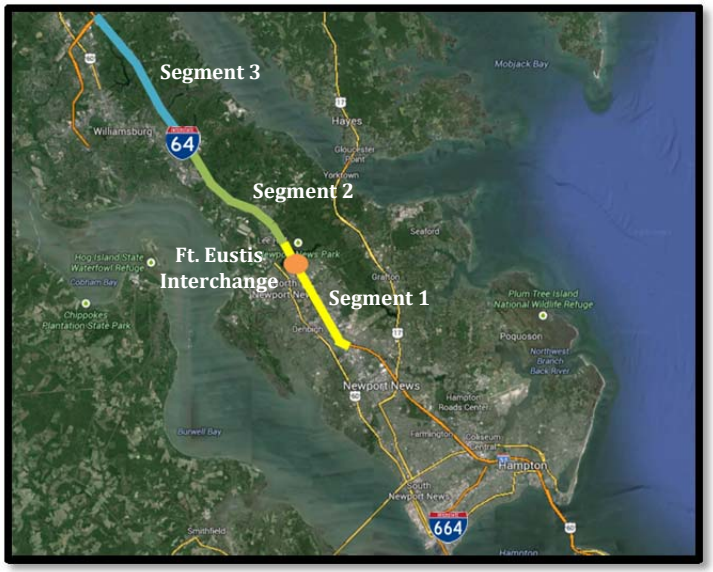
**SYSTEM:** Interstate

**FROM:** Jefferson Ave (exit 255)

**TO:** Route 199 west of Williamsburg (exit 234)

**DESCRIPTION OF WORK:** Provide for increased capacity, improve safety standards and minimize roadway geometric and structural deficiencies along the I-64 corridor.

- Segment 1: Jefferson Ave (exit 255) to Route 238/Mile Marker 248 (exit 247)
- Segment 2: Route 238/Mile Marker 248 (exit 247) to Route 199 east of Williamsburg (exit 242)
- Segment 3: Route 199 east of Williamsburg (exit 242) to Route 199 west of Williamsburg (exit 234)
- Ft. Eustis Interchange




| Estimated Total Project Cost, YOE* |
|---|
| Segment 1 - $122 M, YOE (2017) |
| Segment 2 - $214 M, YOE (2018) |
| Segment 3 - $311 M, YOE (2021) |
| Ft. Eustis Blvd Interchange - $181 M, YOE (2023) |

*YOE: Year-of-Expenditure
Cost and YOE source: VDOT (3-3-15 email)

## Summary of Project

- HRTF Project (HRTPO Board Resolution, October 17, 2013).
- Record of Decision (ROD) issued April 2014 for Segment 1: Jefferson Ave (Exit 255) to Route 238/Mile Marker 248 (Exit 247).
- Final EIS completed December 2013.
- Project improves safety and expands capacity of a major evacuation route.
- Project improves regional travel time and reliability.
- Project improves freight traffic and military connectivity in the Hampton Roads region and between Hampton Roads and Richmond as well.

## Overview of Project Status

**NEPA Status**

Final EIS completed Dec. 2013; Segment 1 ROD issued on April 21, 2014

**Funding Status**

Segment 1: Fully Funded

**Preliminary Engineering & Right of Way Status**

N/A

**Construction Status**

Seg. 1: D-B contract awarded Feb. 2015; Est. completion Dec. 2017
Seg. 2: Award D-B contract: Jan. 2017
Seg. 3: Award D-B contract: spring 2019
Ft. Eustis Blvd: Traffic analysis to start spring 2017, PE to start spring 2019

**Long-Range Transportation Plan (LRTP) Status**

Seg. 1: In original 2034 LRTP (Jan. 2012);
Seg's 2&3 and Ft. Eustis Blvd. Interchange: Added Sept. 18, 2014

March 2015

# Hampton Roads Multimodal Third Crossing

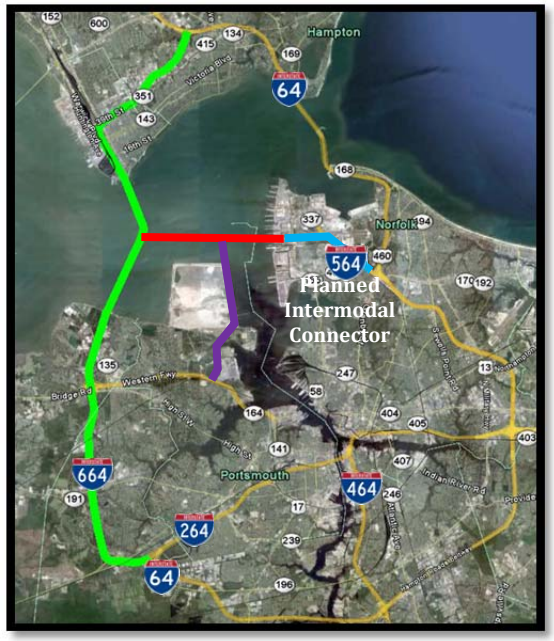
## Project Description

**FROM:** I-64/I-664 at Hampton Coliseum

**TO:** I-264/I-64 at Bowers Hill;
Hampton Blvd / Intermodal Conn;
VA 164 / Craney Island Connector

**DESCRIPTION OF WORK:**

- Patriots Crossing (I-664 to Hampton Blvd)
- Craney Island Intermodal Connector (Patriots Crossing to VA 164)
- I-664, additional lanes and tunnel (I-64 at Hampton Coliseum to I-264/I-64 Bowers Hill); project includes Bowers Hill interchange




## Estimated Total Project Cost, 2014 $'s*

**$8 Billion**

Cost source: Virginia Secretary of Transportation, 11-10-14 presentation to HRTAC, p. 9.
*YOE cost will be determined once HRTAC estalishes construction timeframe.

## Summary of Project

- HRTF Project (HRTPO Board Resolution, October 17, 2013).
- Project improves regional travel time and reliability.
- Project will have a positive impact on the region's economy and will help meet growing needs of the Port.
- Project will improve movement of people and goods to and from the region's military bases.
- Project will provide enhanced evacuation route for the region.
- Project, with Craney Island Intermodal Connector (CIIC), will provide efficient access to the Virginia International Gateway (VIG).
- Project with CIIC construction will create more than 88k jobs, and Craney Island Marine Terminal (CIMT) will produce more than 54k additional new jobs and $16B in national economic benefits.

## Overview of Project Status

**NEPA Status**

ROD issued (for Third Crossing) June 2001; Final Environmental Assessment (for Patriots Crossing) submitted to FHWA: February 2013
Supplemental EIS (SEIS) duration: 24-30 months

**Funding Status**

Hampton Roads Transportation Fund, Federal/State/Other Funds

**Preliminary Engineering & Right of Way Status**

N/A

**Construction Status**

N/A

**Long-Range Transportation Plan (LRTP) Status**

Added to 2034 LRTP: Sept. 18, 2014

March 2015

# I-64 Southside Widening (including High Rise Bridge)

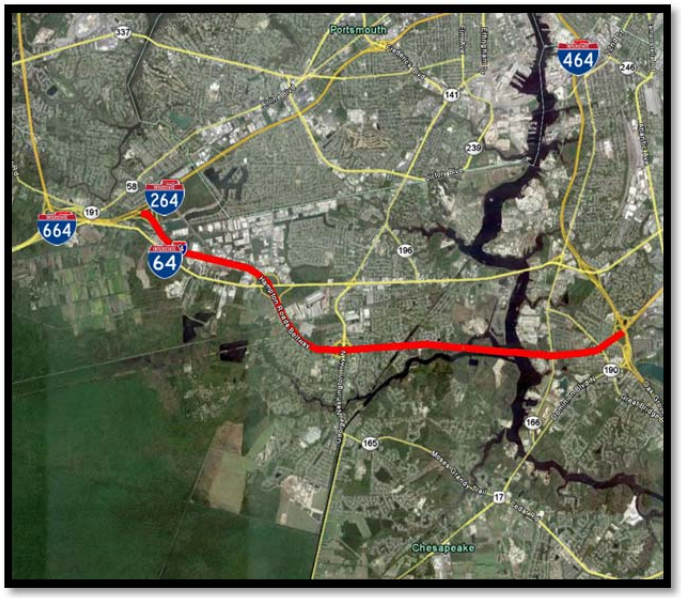
## Project Description

**SYSTEM:** Interstate

**FROM:** I-64/I-464

**TO:** I-64/I-264 at Bowers Hill

**DESCRIPTION OF WORK:** Provide for increased capacity along the I-64 corridor on the Southside and replace the High-Rise Bridge. Work includes the interchange work at I-464 and not at Bowers Hill.




## Estimated Total Project Cost, 2014 $'s*

**$1.86-2.30 Billion**

Cost source: Environmental Assessment (VDOT, Oct. 2014)
*YOE cost will be determined once HRTAC estalishes construction timeframe.

## Summary of Project

- HRTF Project (HRTPO Board Resolution, October 17, 2013).
- Draft Environmental Assessment (EA) on the I-64 corridor on the Southside, including the High Rise Bridge, was published Oct. 2014.
- Project reduces congestion and expands an evacuation route.
- Project greatly improves travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations.

## Overview of Project Status

**NEPA Status**

Environmental Assessment (EA) Anticipated Completion Date: spring 2015

**Funding Status**

Hampton Roads Transportation Fund, Federal/State/Other Funds

**Preliminary Engineering & Right of Way Status**

PE scheduled to start spring 2015

**Construction Status**

N/A

**Long-Range Transportation Plan (LRTP) Status**

Added to 2034 LRTP: Sept. 18, 2014

# I-64/I-264 Interchange

## Project Description

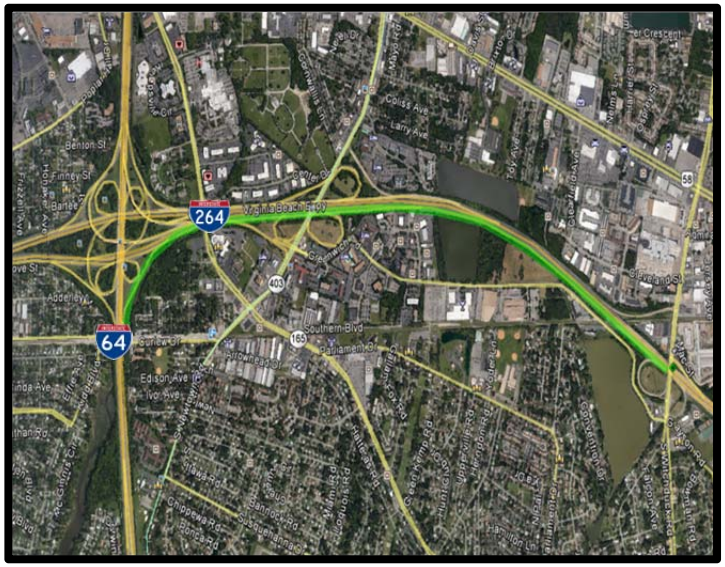
**SYSTEM:** Interstate

**FROM:** I-64 WB

**TO:** Witchduck Rd. interchange

**DESCRIPTION OF WORK:**

- I-64 WB to I-264 EB ramp widening
- Widening of I-264 EB Collector-Distributor (CD) road
- Overpass connecting Greenwich Rd and Cleveland St
- Improvements to Newtown Rd and Witchduck Rd interchanges




## Estimated Total Project Cost, YOE*

**$344 Million, YOE (2020)**

*YOE: Year of Expenditure
Cost and YOE source: Secretary Layne 9-24-14 presentation to HRTAC, p. 4.

## Summary of Project

- HRTF Project (HRTPO Board Resolution, Oct. 17, 2013).
- Project will relieve congestion and improve traffic operations from westbound I-64 to eastbound I-264.
- Project greatly improves regional travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations.
- Project expected to improve safety by reducing congestion.

## Overview of Project Status

**NEPA Status**

Categorical Exclusion: June 2010

**Funding Status**

Hampton Roads Transportation Fund, Federal/State/Other Funds

**Preliminary Engineering & Right of Way Status**

PE: and Right of Way Funded

**Construction Status**

Anticipated construction duration: 3 yrs.

**Long-Range Transportation Plan (LRTP) Status**

Added to 2034 LRTP: Sept. 18, 2014

# U.S. Route 460/58/13 Connector

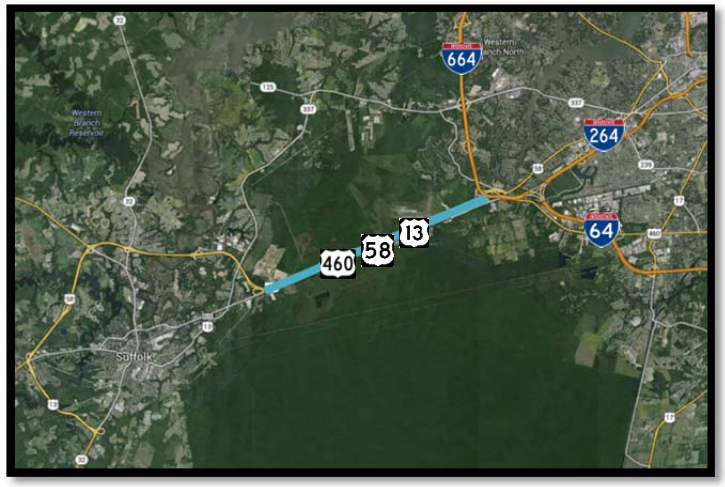
## Project Description

**SYSTEM:** Primary

**FROM:** Bowers Hill

**TO:** Eastern end of Suffolk Bypass

**DESCRIPTION OF WORK:** Improve section to interstate standards; includes SPSA and Airport interchanges




## Estimated Total Project Cost, 2014 $'s*

**$220 Million**

Cost source: Virginia Secretary of Transportation, 11-10-14 presentation to HRTAC, p. 9.
*YOE cost will be determined once HRTAC estalishes construction timeframe.

## Summary of Project

- HRTF Project (HRTPO Board Resolution, October 17, 2013).
- Project will improve section to interstate standards and improve accessibility to/from SPSA Regional Landfill and Hampton Roads Executive Airport.
- Project will provide improved access to the Commonwealth Connector (US Route 460).
- Project will improve safety along corridor and an enhanced evacuation route.

## Overview of Project Status

**NEPA Status**

N/A

**Funding Status (US Route 460: Bowers Hill to I-295)**

Hampton Roads Transportation Fund, Federal/State/Other Funds

**Preliminary Engineering & Right of Way Status**

N/A

**Construction Status**

N/A

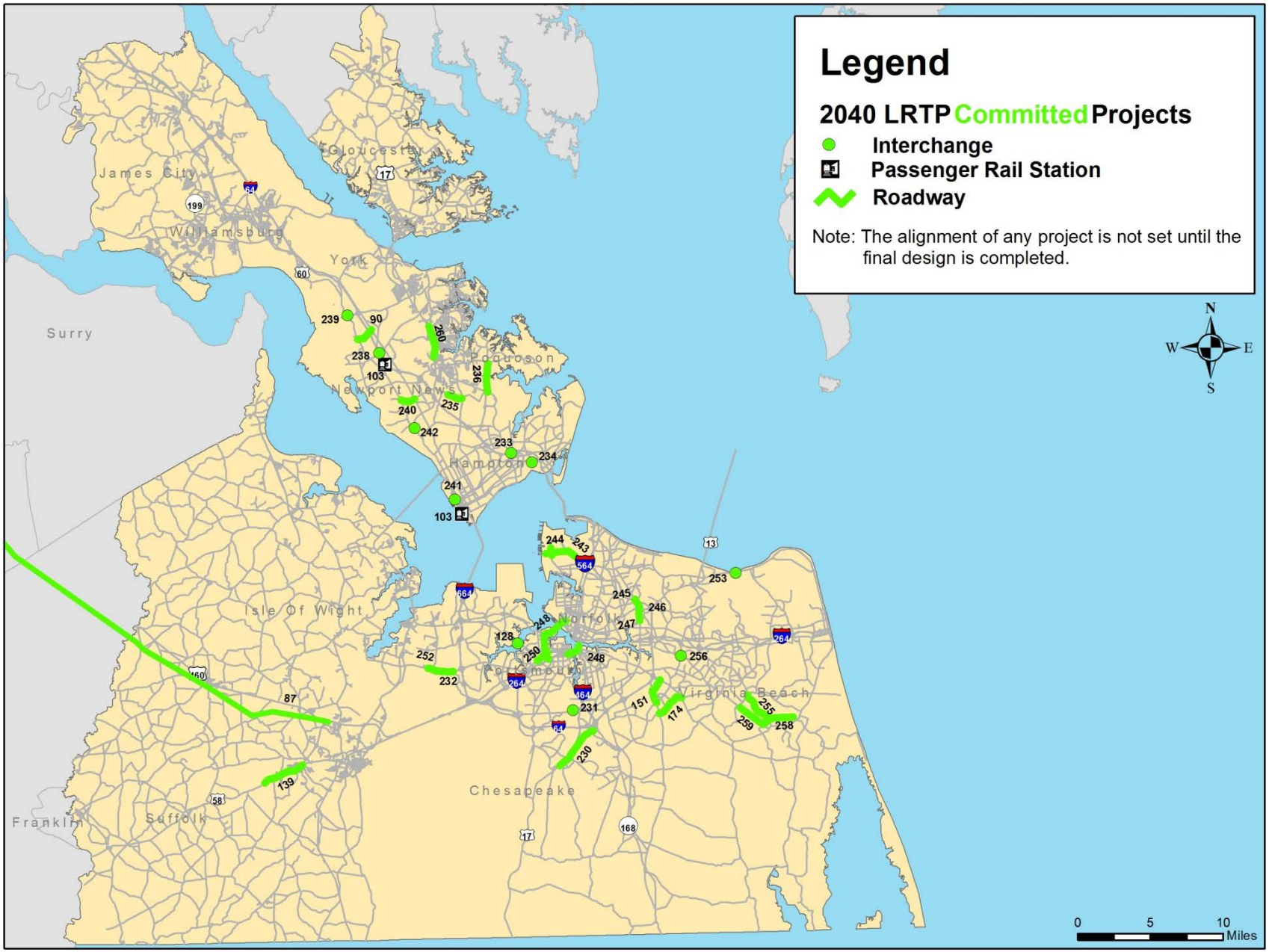
**Long-Range Transportation Plan (LRTP) Status**

Added to 2034 LRTP: Sept. 18, 2014

# 2040 LRTP Committed Projects

The following section contains a listing of Committed Projects for the 2040 LRTP. Committed Projects are defined as fully-funded transportation projects programmed in the current Six-Year Improvement Program (SYIP). Committed Projects are either under construction or scheduled for construction in the near future. Due to the full-funding status of these projects, Committed Projects are not subject to Project Prioritization (and thus do not have an associated Project Prioritization score) and are automatically included in the LRTP.

**MAP 4: 2040 LRTP COMMITTED PROJECTS**



# Table 1: 2040 LRTP Committed Projects List

| 2040 Project ID | UPC | Locality | Name | From | To |
|---|---|---|---|---|---|
| 2040-248 | T11488 | Multi-jurisdictional | Downtown Tunnel/Midtown Tunnel/MLK Extension | Hampton Blvd | I-264 |
| 2040-87 | 103803 | Multi-jurisdictional | US 460 - Hampton Roads Portion | Suffolk Bypass | Zuni |
| 2040-236 | 97715, 13427 | Multi-jurisdictional | Wythe Creek Rd | Alphus St | Commander Shepard Blvd |
| 2040-230 | 56187 | Chesapeake | Dominion Blvd | 0.05 mi N. of Great Bridge Blvd | 0.75 mil S. of Cedar Rd |
| 2040-231 | 1904 | Chesapeake | Gilmerton Bridge | 0.36 mi E. of Bridge (Bainbridge Blvd) | 0.42 mi W. of Bridge (Shell Rd) |
| 2040-232 | 18591 | Chesapeake | Portsmouth Blvd | Jolliff Rd | Suffolk CL |
| 2040-234 | 93081 | Hampton | Bridge Street Bridge | Rudd Ln | Marrow St |
| 2040-233 | 104363 | Hampton | I-64 Interchange at Lasalle Ave | N/A | N/A |
| 2040-235 | 57047 | Hampton | Saunders Rd | Big Bethel Rd | Newport News CL |
| 2040-90 | 4483 | Newport News | Atkinson Blvd | Jefferson Ave | Warwick Blvd |
| 2040-238 | 93077 | Newport News | Denbigh Blvd Bridge Replacement | Richneck Rd | Trailblazer Blvd |
| 2040-240 | 11816 | Newport News | Middle Ground Blvd | Jefferson Ave | Warwick Blvd |
| 2040-103 | 102734 | Newport News | Newport News Multimodal High-Speed and Intercity Passenger Rail Station Development | N/A | N/A |
| 2040-242 | 101279 | Newport News | Warwick Blvd over Lake Maury | Gatewood Rd | J Clyde Morris Blvd |
| 2040-241 | 85955 | Newport News | Washington Ave Bridge Replacement | 39th St | 41st St |
| 2040-244 | 14672 | Norfolk | Hampton Blvd Railroad Grade Separation | Rogers Ave | B Ave |
| 2040-243 | 18968 | Norfolk | Intermodal Connector | I-564 | Hampton Blvd |
| 2040-247 | 9783 | Norfolk | Military Hwy | 0.3 mile S. of Northampton Blvd | Lowery Rd |
| 2040-246 | 1765 | Norfolk | Military Hwy | 0.3 mi N. of Northampton Blvd | 0.3 S. of Northampton Blvd |
| 2040-245 | 84243 | Norfolk | Military Hwy | Robin Hood Rd | 0.3 mile N. of Northampton Blvd |

# Table 1: 2040 LRTP Committed Projects List

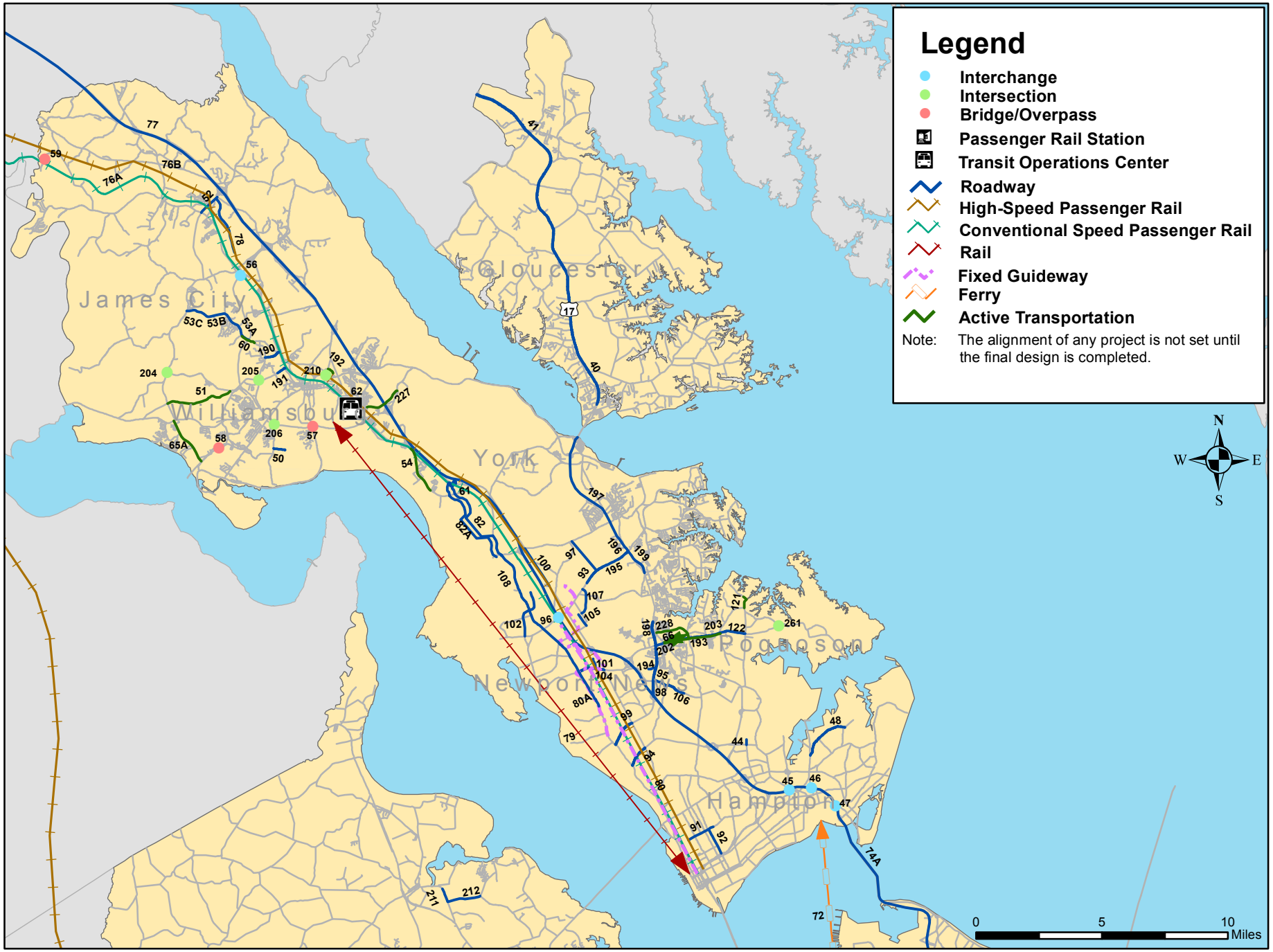
| 2040 Project ID | UPC | Locality | Name | From | To |
|---|---|---|---|---|---|
| 2040-128 | 102715 | Portsmouth | Churchland Bridge | N/A | N/A |
| 2040-250 | 65655 | Portsmouth | Turnpike Rd | 0.13 mi E. of Frederick Blvd | Constitution Ave |
| 2040-252 | 61407 | Suffolk | Nansemond Pkwy | Chesapeake CL | NS Railroad |
| 2040-139 | 100937 | Suffolk | Route 58 (Holland Rd) | Suffolk Bypass | 0.7 mi W. of Manning Bridge Rd |
| 2040-151 | 103005 | Virginia Beach | Centerville Turnpike | Indian River Rd | Kempsville Rd |
| 2040-255 | 15827 | Virginia Beach | Holland Road | Nimmo Pkwy | Dam Neck Rd |
| 2040-256 | 51866 | Virginia Beach | Kempsville Rd Intersection at Princess Anne Rd | N/A | N/A |
| 2040-253 | 97737 | Virginia Beach | Lesner Bridge | E. Stratford Rd | Paige Ave |
| 2040-174 | 14603 | Virginia Beach | Lynnhaven Pkwy | Indian River Rd | Centerville Tnpk |
| 2040-258 | 52058 | Virginia Beach | Nimmo Pkwy | Holland Rd | General Booth Blvd |
| 2040-259 | 13482/93522/ 95555/96137 | Virginia Beach | Princess Anne Rd and Nimmo Pkwy | Dam Neck Rd | Holland Rd |
| 2040-260 | 60843 | York County | Route 17 (George Washington Memorial Hwy) | Hampton Hwy | Dare Rd |

Note: List not in ranked order

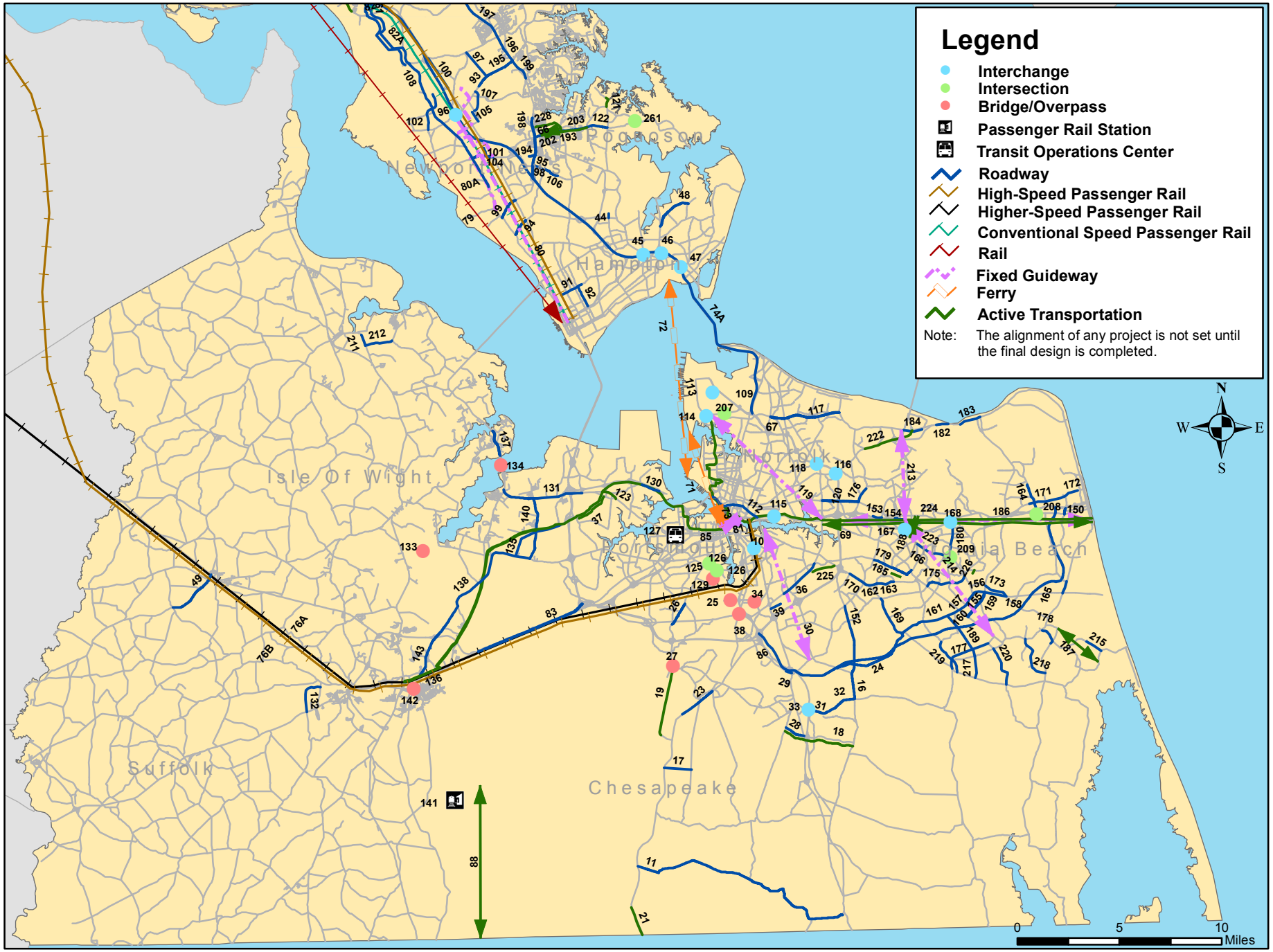
# 2040 LRTP Project Prioritization Scores

The following section contains maps and summary tables of Project Prioritization scores for the 2040 LRTP Candidate Projects. Projects are ranked by category and by system, based on Grand Total Score. Top scores in each component (Project Utility, Economic Vitality, Project Viability) are also high-lighted. One-Page summaries are included for top-ranking candidate projects.

# Map 5: 2040 LRTP Candidate Projects - Peninsula



# Map 6: 2040 LRTP Candidate Projects - Southside



# Table 2: 2040 LRTP Highway Candidate Projects

| 2040 Project ID | Project Name | From | To | Jurisdiction | PROJECT UTILITY TOTAL (MAX 100 POINTS) | ECONOMIC VITALITY TOTAL (MAX 100 POINTS) | PROJECT VIABILITY TOTAL (MAX 100 POINTS) | GRAND TOTAL SCORE (MAX 300 POINTS) |
|---|---|---|---|---|---|---|---|---|
| **INTERSTATE** | | | | | | | | |
| 2040-77 | I-64 Peninsula (8-Lane Option) | Bland Blvd | New Kent County Line | Multi-jurisdictional | **86** | **85** | **33** | **204** |
| **PRIMARY** | | | | | | | | |
| 2040-86 | Southeastern Pkwy and Greenbelt | I-264 | I-64/I-464 | Multi-jurisdictional | **73** | **87** | **18** | **178** |
| 2040-23 | Dominion Blvd Phase II | 0.75 mi South of Cedar Rd | Existing 4-lane Segment South of Cedar Rd | Chesapeake | **71** | **25** | **81** | **177** |
| 2040-199 | G.W. Mem Hwy (US 17) | Dare Rd | Denbigh Blvd (Rte 173) | York County | **84** | **46** | **15** | **145** |
| 2040-40 | G.W. Mem Hwy (US 17) | 1 mi North of Coleman Bridge | Main St (@ Walmart) | Gloucester | **72** | **63** | **5** | **140** |
| 2040-198 | J. Clyde Morris Blvd / G.W. Hwy (US 17) | Newport News CL | 1.27 mi South of Rte 620 (Lakeside Dr / Oriana Rd) | York County | **78** | **54** | **5** | **137** |
| 2040-82A | US 60 Relocation | Fort Eustis Blvd | Merrimac Trail (Rte 143) | Multi-jurisdictional | **66** | **45** | **25** | **136** |
| 2040-82 | US 60 Relocation | Fort Eustis Blvd | Green Mount Pkwy | Multi-jurisdictional | **59** | **45** | **26** | **130** |
| 2040-36 | Military Hwy | Allison Dr | Virginia Beach CL | Chesapeake | **69** | **56** | **5** | **130** |
| 2040-26 | G.W. Hwy (US 17) | Yadkin Rd | Canal Dr | Chesapeake | **67** | **50** | **8** | **125** |
| 2040-197 | G.W. Mem Hwy (US 17) | Fort Eustis Blvd (Rte 105) | Coleman Bridge | York County | **69** | **50** | **5** | **124** |
| 2040-16 | Centerville Tnpk | Mount Pleasant Rd | Virginia Beach CL | Chesapeake | **58** | **55** | **5** | **118** |
| 2040-203 | Victory Blvd (Rte 171) | Poquoson CL | Hampton Hwy (Rte 134) | Multi-jurisdictional | **70** | **39** | **5** | **114** |
| 2040-196 | G.W. Mem Hwy (US 17) | Denbigh Blvd (Rte 173) | Fort Eustis Blvd (Rte 105) | York County | **68** | **40** | **5** | **113** |
| 2040-61 | Skiffes Creek Connector | Green Mount Pkwy | Merrimac Trail (Rte 143) | James City County | **43** | **33** | **23** | **99** |
| 2040-202 | Victory Blvd (Rte 171) | G.W. Mem Hwy (US 17) | Hampton Hwy (Rte 134) | York County | **70** | **24** | **5** | **99** |
| 2040-83 | US 460/58/13 (8-Lane Option) | Bowers Hill | Suffolk Bypass | Multi-jurisdictional | **56** | **35** | **0** | **91** |
| 2040-49 | US 258 | US 460 | Sunset Dr | Isle of Wight | **70** | **15** | **5** | **90** |
| 2040-122 | Victory Blvd (Rte 171) | Wythe Creek Rd (Rte 172) | York County CL | Multi-jurisdictional | **49** | **22** | **15** | **86** |
| 2040-195 | Denbigh Blvd (Rte 173) | Newport News CL | G.W. Mem Hwy (US 17) | Multi-jurisdictional | **55** | **25** | **5** | **85** |
| 2040-41 | G.W. Mem Hwy (US 17) | Main St (@ Walmart) | Ark Rd | Gloucester | **53** | **18** | **5** | **76** |

# Table 2: 2040 LRTP Highway Candidate Projects

| 2040 Project ID | Project Name | From | To | Jurisdiction | PROJECT UTILITY TOTAL (MAX 100 POINTS) | ECONOMIC VITALITY TOTAL (MAX 100 POINTS) | PROJECT VIABILITY TOTAL (MAX 100 POINTS) | GRAND TOTAL SCORE (MAX 300 POINTS) |
|---|---|---|---|---|---|---|---|---|
| **SECONDARY** | | | | | | | | |
| 2040-53A | Longhill Rd (Phase 1) | Humelsine Pkwy (Rte 199) | Olde Towne Rd | James City County | 72 | 28 | 25 | 125 |
| 2040-53 | Longhill Rd (Phases 1-3) | Humelsine Pkwy (Rte 199) | Centerville Rd | James City County | 74 | 28 | 15 | 117 |
| 2040-52 | Croaker Rd | Richmond Rd (US 60) | Rochambeau Rd | James City County | 66 | 17 | 20 | 103 |
| 2040-53B | Longhill Rd (Phase 2) | Olde Towne Rd | Warhill Trail | James City County | 59 | 17 | 15 | 91 |
| 2040-194 | Commonwealth Drive Extension | G.W. Mem Hwy (US 17) | Commonwealth Dr | York County | 56 | 24 | 5 | 85 |
| 2040-53C | Longhill Rd (Phase 3) | Warhill Trail | Centerville Rd | James City County | 45 | 17 | 15 | 77 |
| 2040-78 | Mooretown Rd Extension | Lightfoot Rd | Croaker Rd | Multi-jurisdictional | 50 | 20 | 5 | 75 |
| 2040-211 | S. Church St | Battery Park Rd | Talbot Dr | Smithfield | 42 | 17 | 13 | 72 |
| 2040-50 | Airport Access Rd | Marclay Rd at Rte 617 | Airport | James City County | 48 | 0 | 21 | 69 |
| 2040-212 | Battery Park Rd | S. Church St | Nike Park Rd | Smithfield | 49 | 15 | 5 | 69 |
| **URBAN** | | | | | | | | |
| 2040-112 | Brambleton Ave | Midtown Tunnel | I-264 | Norfolk | 89 | 69 | 5 | 163 |
| 2040-183 | Shore Dr - Phase III | Eastern End of Lesner Bridge | Great Neck Rd | Virginia Beach | 56 | 27 | 70 | 153 |
| 2040-132 | Kenyon Rd Connector | Kenyon Court | Holland Rd (US 58) | Suffolk | 64 | 20 | 68 | 152 |
| 2040-98 | J. Clyde Morris Blvd / G.W. Hwy (US 17) | I-64 | York CL | Newport News | 81 | 67 | 0 | 148 |
| 2040-39 | Woodlake Dr | Battlefield Blvd | Existing Woodlake Dr | Chesapeake | 33 | 29 | 85 | 147 |
| 2040-170 | Indian River Rd | Centerville Tnpk | Ferrell Pkwy | Virginia Beach | 77 | 55 | 15 | 147 |
| 2040-165 | General Booth Blvd | Oceana Blvd | Dam Neck Rd | Virginia Beach | 70 | 60 | 15 | 145 |
| 2040-178 | Princess Anne Rd - Phase VII | Fisher Arch | General Booth Blvd | Virginia Beach | 50 | 20 | 74 | 144 |
| 2040-161 | Elbow Rd / Dam Neck Rd | Indian River Rd | Virginia Beach Amphitheater | Virginia Beach | 55 | 24 | 64 | 143 |
| 2040-180 | Rosemont Rd | Virginia Beach Blvd | Holland Rd | Virginia Beach | 68 | 59 | 15 | 142 |
| 2040-164 | First Colonial Rd | Old Donation Pkwy | Virginia Beach Blvd | Virginia Beach | 69 | 58 | 15 | 142 |
| 2040-166 | Holland Rd | Rosemont Rd | Independence Blvd | Virginia Beach | 76 | 49 | 15 | 140 |
| 2040-108 | Warwick Blvd | Nettles Dr | Fort Eustis Blvd | Newport News | 70 | 60 | 8 | 138 |
| 2040-162 | Ferrell Pkwy | Indian River Rd | Indian Lakes Blvd | Virginia Beach | 60 | 51 | 21 | 132 |
| 2040-176 | Newtown Rd | Baker Rd | Virginia Beach Blvd | Virginia Beach | 78 | 39 | 15 | 132 |
| 2040-120 | Virginia Beach Blvd | Military Hwy | Newtown Rd | Norfolk | 68 | 59 | 5 | 132 |
| 2040-171 | Laskin Rd (US 58) - Phase I | Republic Rd | Oriole Dr | Virginia Beach | 41 | 32 | 56 | 129 |
| 2040-158 | Dam Neck Rd | Drakesmile Rd | London Bridge Rd | Virginia Beach | 54 | 60 | 15 | 129 |
| 2040-131 | Bridge Rd (US 17) | Mills Godwin Bridge | Chesapeake CL | Suffolk | 76 | 37 | 15 | 128 |
| 2040-184 | Shore Dr | Pleasure House Rd | Treasure Island Dr | Virginia Beach | 55 | 57 | 15 | 127 |
| 2040-152 | Centerville Tnpk - Phase III | Chesapeake CL | Kempsville Rd | Virginia Beach | 65 | 43 | 17 | 125 |

# Table 2: 2040 LRTP Highway Candidate Projects

| 2040 Project ID | Project Name | From | To | Jurisdiction | PROJECT UTILITY TOTAL (MAX 100 POINTS) | ECONOMIC VITALITY TOTAL (MAX 100 POINTS) | PROJECT VIABILITY TOTAL (MAX 100 POINTS) | GRAND TOTAL SCORE (MAX 300 POINTS) |
|---|---|---|---|---|---|---|---|---|
| **URBAN (CONTINUED)** | | | | | | | | |
| 2040-104 | Oyster Point Rd | Jefferson Ave | Warwick Blvd | Newport News | 68 | 55 | 0 | 123 |
| 2040-175 | Lynnhaven Pkwy | Holland Rd | Princess Anne Rd | Virginia Beach | 59 | 47 | 15 | 121 |
| 2040-117 | Little Creek Rd | Tidewater Dr | Shore Dr | Norfolk | 58 | 55 | 5 | 118 |
| 2040-179 | Providence Rd | Kempsville Rd | Princess Anne Rd | Virginia Beach | 69 | 31 | 15 | 115 |
| 2040-157 | Dam Neck Rd - Phase I | Princess Anne Rd | Holland Rd | Virginia Beach | 61 | 47 | 5 | 113 |
| 2040-173 | London Bridge Rd | Dam Neck Rd | Shipps Corner Rd | Virginia Beach | 56 | 41 | 15 | 112 |
| 2040-125 | Elm Ave | Victory Blvd (Rte 239) | G.W. Hwy (US 17) | Portsmouth | 57 | 48 | 5 | 110 |
| 2040-156 | Dam Neck Rd - Phase II | Holland Rd | Drakesmile Rd | Virginia Beach | 62 | 32 | 15 | 109 |
| 2040-169 | Indian River Rd - Phase VII | Lynnhaven Pkwy | Elbow Rd (including Elbow Rd to CL) | Virginia Beach | 36 | 20 | 51 | 107 |
| 2040-101 | Liberty Pkwy | Oyster Point Rd | Freedom Way | Newport News | 38 | 36 | 32 | 106 |
| 2040-262 | Rosemont Rd V | Dam Neck Rd | Lynnhaven Pkwy | Virginia Beach | 59 | 37 | 5 | 101 |
| 2040-138 | Nansemond Pkwy (Rte 337) | Shoulder's Hill Rd (Rte 626) | Wilroy Rd (Rte 642) | Suffolk | 65 | 31 | 5 | 101 |
| 2040-25 | Freeman Ave | N/A | N/A | Chesapeake | 38 | 45 | 14 | 97 |
| 2040-31 | Mt Pleasant Rd, Phase 1 | Chesapeake Expressway | Etheridge Rd | Chesapeake | 51 | 34 | 11 | 96 |
| 2040-155 | Drakesmile Rd Extended | Dam Neck Rd | Princess Anne Rd | Virginia Beach | 45 | 46 | 5 | 96 |
| 2040-100 | Jefferson Ave | Green Grove Ln | Fort Eustis Blvd | Newport News | 64 | 32 | 0 | 96 |
| 2040-99 | J. Clyde Morris Blvd | Jefferson Ave | Warwick Blvd | Newport News | 69 | 27 | 0 | 96 |
| 2040-182 | Shore Dr - Phase IV | Marlin Bay Dr/Shady Oaks Dr | Western end of Lesner Bridge | Virginia Beach | 47 | 27 | 21 | 95 |
| 2040-163 | Ferrell Pkwy | Indian Lakes Blvd | Pleasant Valley Rd | Virginia Beach | 58 | 22 | 15 | 95 |
| 2040-160 | Drakesmile Rd Extended - Phase II | Holland Rd | Princess Anne Rd | Virginia Beach | 43 | 46 | 5 | 94 |
| 2040-172 | Laskin Rd (US 58) - Phase II | Oriole Dr | Laskin Rd Roundabout | Virginia Beach | 39 | 27 | 27 | 93 |
| 2040-135 | North Suffolk Connector Rd | Nansemond Pkwy (Rte 337) (near Hargrove Landing) | I-664 | Suffolk | 57 | 30 | 5 | 92 |
| 2040-150 | Birdneck Rd | I-264 | Virginia Beach Blvd | Virginia Beach | 47 | 28 | 15 | 90 |
| 2040-34 | Portlock Rd | N/A | N/A | Chesapeake | 50 | 35 | 5 | 90 |
| 2040-32 | Mt Pleasant Rd, Phase 2 | Etheridge Rd | Centerville Tnpk | Chesapeake | 50 | 34 | 5 | 89 |
| 2040-190 | Ironbound Rd (Rte 615) | Richmond Rd (US 60) | DePue Dr (formerly Longhill Connector) | Williamsburg | 47 | 25 | 16 | 88 |
| 2040-154 | Cleveland St - Phase IV | Aragona Blvd | Independence Blvd | Virginia Beach | 48 | 25 | 15 | 88 |
| 2040-48 | Little Back River Rd | N. King St | Harris Creek Rd | Hampton | 49 | 31 | 5 | 85 |
| 2040-191 | Monticello Ave | Richmond Rd (US 60) | Treyburn Dr | Williamsburg | 55 | 25 | 5 | 85 |
| 2040-153 | Cleveland St - Phase III | Witchduck Rd | Clearfield Ave | Virginia Beach | 44 | 25 | 15 | 84 |
| 2040-159 | Drakesmile Rd Extended - Phase I | Dam Neck Rd | Holland Rd | Virginia Beach | 48 | 31 | 5 | 84 |
| 2040-137 | Bridge Rd (US 17) | Mills Godwin Bridge | Isle of Wight CL | Suffolk | 62 | 15 | 5 | 82 |

# Table 2: 2040 LRTP Highway Candidate Projects

| 2040 Project ID | Project Name | From | To | Jurisdiction | PROJECT UTILITY TOTAL (MAX 100 POINTS) | ECONOMIC VITALITY TOTAL (MAX 100 POINTS) | PROJECT VIABILITY TOTAL (MAX 100 POINTS) | GRAND TOTAL SCORE (MAX 300 POINTS) |
|---|---|---|---|---|---|---|---|---|
| **URBAN (CONTINUED)** | | | | | | | | |
| 2040-93 | Denbigh Blvd (Rte 173) | Independence Blvd | York CL | Multi-jurisdictional | **66** | **10** | **5** | **81** |
| 2040-44 | Coliseum Dr | Hampton Roads Center Pkwy | Butler Farm Rd | Hampton | **29** | **32** | **19** | **80** |
| 2040-24 | Elbow Rd | Butts Station Rd | Virginia Beach CL | Chesapeake | **57** | **17** | **5** | **79** |
| 2040-97 | Independence Blvd | Denbigh Blvd (Rte 173) | Fort Eustis Blvd | Newport News | **43** | **25** | **5** | **73** |
| 2040-106 | Saunders Rd | Harpersville Rd | Hampton CL | Newport News | **54** | **12** | **5** | **71** |
| 2040-94 | Harpersville Rd | Jefferson Ave | Warwick Blvd | Newport News | **43** | **27** | **0** | **70** |
| 2040-95 | Harpersville Rd | J. Clyde Morris Blvd | Saunders Rd | Newport News | **57** | **12** | **0** | **69** |
| 2040-215 | Nimmo Pkwy VII | Artesia Way / Atwoodtown Rd | Sandbridge Rd | Virginia Beach | **40** | **22** | **5** | **67** |
| 2040-189 | West Neck Pkwy Extended | Dam Neck Rd | North Landing Rd | Virginia Beach | **29** | **22** | **15** | **66** |
| 2040-220 | West Neck Rd | North Landing Rd | Indian River Rd | Virginia Beach | **46** | **15** | **5** | **66** |
| 2040-140 | Shoulders Hill Rd (Rte 626) | Nansemond Pkwy (Rte 337) | Bridge Rd (US 17) | Suffolk | **29** | **25** | **9** | **63** |
| 2040-28 | Hanbury Rd | Johnstown Rd | Battlefield Blvd | Chesapeake | **40** | **17** | **5** | **62** |
| 2040-107 | Turnberry Blvd | McManus Blvd | Denbigh Blvd (Rte 173) | Newport News | **41** | **15** | **5** | **61** |
| 2040-11 | Ballahack Rd | G.W. Hwy (US 17) | Old Battlefield Blvd | Chesapeake | **36** | **18** | **5** | **59** |
| 2040-177 | Nimmo Pkwy | Indian River Rd | West Neck Rd | Virginia Beach | **22** | **20** | **15** | **57** |
| 2040-105 | Patrick Henry Dr | Bland Blvd | Turnberry Blvd | Newport News | **34** | **18** | **5** | **57** |
| 2040-102 | Lucas Creek Rd Extension | Denbigh Blvd (Rte 173) | Atkinson Blvd | Newport News | **31** | **19** | **5** | **55** |
| 2040-143 | Wilroy Rd (Rte 642) | Nansemond Pkwy (Rte 337) | Constance Rd | Suffolk | **34** | **15** | **5** | **54** |
| 2040-17 | Chesapeake Regional Airport Access Rd | West Rd | G.W. Hwy (US 17) | Chesapeake | **28** | **20** | **5** | **53** |
| 2040-217 | West Neck Pkwy Extended | North Landing Rd | Indian River Rd | Virginia Beach | **28** | **20** | **5** | **53** |
| 2040-91 | Briarfield Rd | Jefferson Ave | Hampton CL | Newport News | **39** | **8** | **5** | **52** |
| 2040-219 | Salem Rd Extended | Landstown Rd | Indian River Rd | Virginia Beach | **31** | **15** | **5** | **51** |
| 2040-218 | Seaboard Rd | Princess Anne Rd | Princess Anne Rd | Virginia Beach | **32** | **10** | **5** | **47** |
| 2040-92 | Chestnut Ave | I-664 | Briarfield Rd | Newport News | **29** | **7** | **5** | **41** |
| 2040-130 | West Norfolk Rd | Western Fwy (Rte 164) | End of West Norfolk Rd | Portsmouth | **31** | **0** | **5** | **36** |

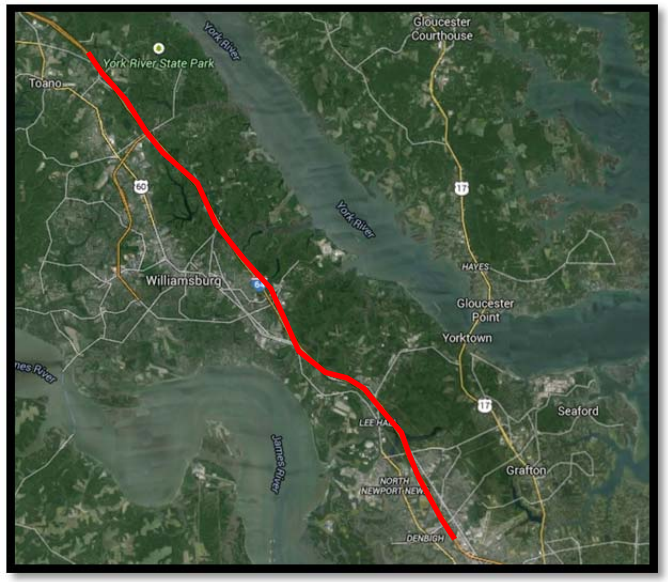
# I-64 Peninsula Widening (8-Lane Option)

## Project Description

**FROM:** Bland Boulevard

**TO:** New Kent County Line

**DESCRIPTION OF WORK:** Add capacity by widening from 2 lanes in each direction to 3 general purpose lanes and 1 HOV lane in each direction




| Project Utility |
|---|
| 86 |

| Economic Vitality |
|---|
| 85 |

| Project Viability |
|---|
| 33 |

| Total Project Score |
|---|
| 204 |

| Estimated Total Project Cost, YOE* |
|---|
| $2.8 Billion |

*YOE – Year-of-Expenditure
Cost Source: VDOT

## Summary of Project

- A Final EIS of the I-64 Peninsula Widening Study was completed in December 2013
- Candidate project improves safety and expands capacity of an evacuation route
- Candidate project significantly improves travel time and reliability to tourist destinations

## Overview of Project Status

| Project Category/System |
|---|
| Highway/Interstate |

| NEPA Status |
|---|
| Complete |

| Funding Status |
|---|
| 6-Lane option (Jefferson Ave (Exit 255) to Route 238/Mile Marker 248 (Exit 247) - $122 Million Fully Funded |

| Preliminary Engineering & Right of Way Status |
|---|
| 6-Lane option (Jefferson Ave (Exit 255) to Route 238/Mile Marker 248 (Exit 247) – PE and ROW Underway |

| Prior LRTP Commitment |
|---|
| 2034 LRTP Study |

March 2015

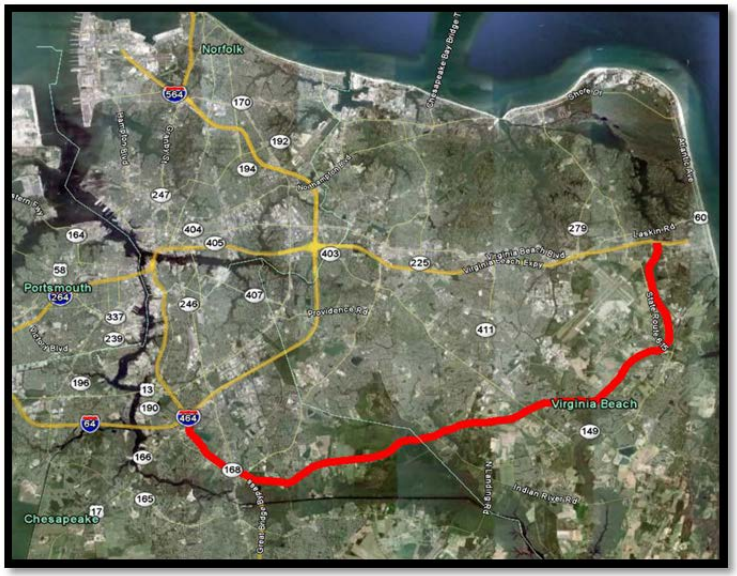
# Southeastern Parkway and Greenbelt

## Project Description

**FROM:** I-264

**TO:** I-64/I-464

**DESCRIPTION OF WORK:** Build new 4-lane limited access highway, providing east-west access to tourism destinations, and emergency evacuation as an alternative to congested I-264




**Project Utility**
73

**Economic Vitality**
87

**Project Viability**
18

**Total Project Score**
178

**Estimated Total Project Cost, YOE***
$4.8 Billion

YOE – Year of Expenditure
Cost Source: Southeastern Parkway and Greenbelt Location Study

## Summary of Project

- The Southeastern Parkway and Greenbelt's environmental review process was terminated by FHWA in November 2010
- Candidate project provides a new limited-access highway and associated benefits of congestion reduction and new evacuation route
- Candidate project greatly improves travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations

## Overview of Project Status

**Project Category/System**
Highway/Primary

**NEPA Status**
Underway

**Funding Status**
N/A

**Preliminary Engineering & Right of Way Status**
N/A

**Prior LRTP Commitment**
2034 LRTP Study

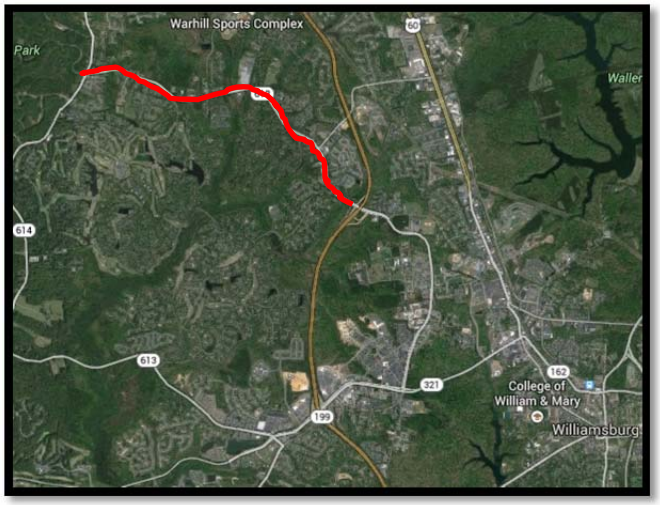
# Longhill Road (Phases 1-3)

## Project Description

**FROM:** Humelsine Parkway (Route 199)

**TO:** Centerville Road

**DESCRIPTION OF WORK:** Widen from a 2-lane urban minor arterial to a 4-lane urban minor arterial.




| Project Utility |
|---|
| 74 |

| Economic Vitality |
|---|
| 28 |

| Project Viability |
|---|
| 15 |

| Total Project Score |
|---|
| 117 |

| Estimated Total Project Cost, YOE* |
|---|
| $93 Million |

*YOE – Year of Expenditure
Cost Source: VDOT (Phase 1), James City County (Phases 2-3)

## Summary of Project

- The Longhill Road Candidate Project provides added roadway capacity by widening the facility from 2 to 4 lanes.
- Candidate project also includes bus pull-offs, bicycle and pedestrian accommodations
- Candidate project improves travel time reliability
- Candidate project supports plans for future growth

## Overview of Project Status

| Project Category/System |
|---|
| Highway/Secondary |

| NEPA Status |
|---|
| Not Started |

| Funding Status |
|---|
| N/A |

| Preliminary Engineering & Right of Way Status |
|---|
| Not Started |

| Prior LRTP Commitment |
|---|
| Phase 1 – 2034 LRTP Study |

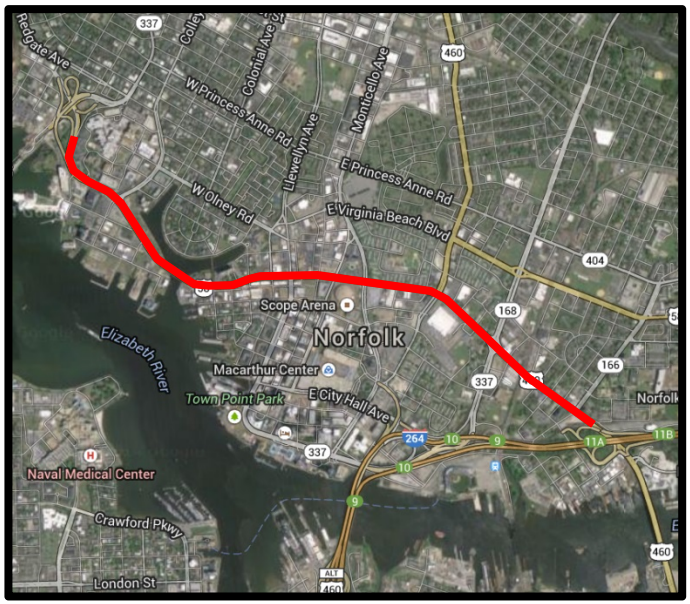
# Brambleton Avenue

## Project Description

**FROM:** Midtown Tunnel

**TO:** I-264

**DESCRIPTION OF WORK:** Widen from 6-lane principal arterial to 8-lane principal arterial




| Project Utility |
|---|
| 89 |

| Economic Vitality |
|---|
| 69 |

| Project Viability |
|---|
| 5 |

| Total Project Score |
|---|
| 163 |

| Estimated Total Project Cost, YOE* |
|---|
| $111.6 Million |

YOE – Year of Expenditure
Cost Source: City of Norfolk

## Summary of Project

- The Brambleton Avenue Candidate Project consists of corridor improvements to:
  - Enhance travel flow,
  - Increase pedestrian safety and comfort, and
  - Improve landscaping

## Overview of Project Status

| Project Category/System |
|---|
| Highway/Urban |

| NEPA Status |
|---|
| Not Started |

| Funding Status |
|---|
| N/A |

| Preliminary Engineering & Right of Way Status |
|---|
| Not started |

| Prior LRTP Commitment |
|---|
| 2034 Vision Plan |

# Table 3: 2040 LRTP Interchange/Intersection Candidate Projects

| 2040 Project ID | Project Name | From | To | Jurisdiction | PROJECT UTILITY TOTAL (MAX 100 POINTS) | ECONOMIC VITALITY TOTAL (MAX 100 POINTS) | PROJECT VIABILITY TOTAL (MAX 100 POINTS) | GRAND TOTAL SCORE (MAX 300 POINTS) |
|---|---|---|---|---|---|---|---|---|
| **INTERSTATE** | | | | | | | | |
| 2040-109 | Air Terminal Interchange | N/A | N/A | Norfolk | 80 | 95 | 23 | 198 |
| 2040-96 | I-64 at Denbigh Blvd (Rte 173) | N/A | N/A | Newport News | 81 | 95 | 0 | 176 |
| 2040-167 | I-264 at Independence Blvd | N/A | N/A | Virginia Beach | 79 | 85 | 5 | 169 |
| 2040-116 | I-64 at Northampton Blvd Interchange Improvement | N/A | N/A | Norfolk | 82 | 76 | 5 | 163 |
| 2040-45 | I-64 at Lasalle Ave | I-64 WB | Lasalle Ave | Hampton | 67 | 82 | 10 | 159 |
| 2040-46 | I-64 at N. King St | N/A | N/A | Hampton | 64 | 87 | 0 | 151 |
| 2040-115 | I-264 at Ballentine Blvd Diverging Diamond Interchange | N/A | N/A | Norfolk | 72 | 72 | 5 | 149 |
| 2040-47 | I-64 at Settlers Landing Rd | N/A | N/A | Hampton | 65 | 84 | 0 | 149 |
| 2040-118 | Military Hwy at I-64 -- New EB On-Ramp | N/A | N/A | Norfolk | 60 | 79 | 5 | 144 |
| 2040-168 | I-264 at Rosemont Rd | N/A | N/A | Virginia Beach | 69 | 63 | 5 | 137 |
| **PRIMARY** | | | | | | | | |
| 2040-208 | First Colonial Rd at Virginia Beach Blvd | N/A | N/A | Virginia Beach | 66 | 49 | 62 | 177 |
| 2040-205 | Monticello Ave at Ironbound Rd (Rte 615) | N/A | N/A | James City County | 44 | 32 | 87 | 163 |
| 2040-33 | Mt Pleasant Rd/Great Bridge Bypass | N/A | N/A | Chesapeake | 63 | 54 | 5 | 122 |
| 2040-209 | Rosemont Rd at Holland Rd | N/A | N/A | Virginia Beach | 50 | 39 | 8 | 97 |
| 2040-210 | Bypass Rd at Page St at Capitol Landing Rd | N/A | N/A | Williamsburg | 61 | 33 | 0 | 94 |
| 2040-29 | Great Bridge Blvd | Battlefield Blvd | Chesapeake Expressway Off Ramp | Chesapeake | 58 | 22 | 5 | 85 |
| 2040-261 | Laydon Way at Poquoson Ave at Little Florida Rd | N/A | N/A | Poquoson | 51 | 20 | 7 | 78 |
| 2040-56 | Richmond Rd (US 60) at Humelsine Pkwy (Rte 199) West Ramp | N/A | N/A | James City County | 39 | 22 | 5 | 66 |
| 2040-206 | Humelsine Pkwy (Rte 199) at Brookwood Dr | N/A | N/A | James City County | 24 | 12 | 5 | 41 |
| **SECONDARY** | | | | | | | | |
| 2040-204 | Centerville Rd at News Rd | 0.27 mi North of News Road | 0.19 mi South of News Rd | James City County | 37 | 5 | 5 | 47 |
| **URBAN** | | | | | | | | |
| 2040-126 | Elm Ave at Navy Gates 29 and 36 | N/A | N/A | Portsmouth | 74 | 38 | 0 | 112 |
| 2040-207 | Terminal Blvd at Diven St | N/A | N/A | Norfolk | 47 | 25 | 5 | 77 |

# Air Terminal Interchange

## Project Description

**FROM:** N/A

**TO:** N/A

**DESCRIPTION OF WORK:** Provide new grade-separated, full-access interchange to serve Naval Station Norfolk and ports


| Project Utility |
| --- |
| 80 |

| Economic Vitality |
| --- |
| 95 |

| Project Viability |
| --- |
| 23 |

| Total Project Score |
| --- |
| 198 |

| Estimated Total Project Cost, YOE* |
| --- |
| $68.5 Million |

*YOE – Year of Expenditure
Cost Source: VDOT SYIP

## Summary of Project

- The Air Terminal Interchange Candidate Project provides additional access to Naval Station Norfolk
- Candidate project helps alleviate congestion and improve Level-Of-Service on city and naval station streets
- Candidate project eliminates at-grade railroad crossings
- Candidate project connects ports directly to freeway system

## Overview of Project Status

| Project Category/System |
| --- |
| Interchange/Interstate |

| NEPA Status |
| --- |
| Not Started |

| Funding Status |
| --- |
| 15% Committed |

| Preliminary Engineering & Right of Way Status |
| --- |
| Project Design – 5% Complete; ROW – Not Started |

| Prior LRTP Commitment |
| --- |
| 2034 LRTP Study |

# First Colonial Road at Virginia Beach Boulevard

## Project Description

**FROM:** N/A

**TO:** N/A

**DESCRIPTION OF WORK:** Add continuous right turn lanes for all intersection movements


**Project Utility**
66

**Economic Vitality**
49

**Project Viability**
62

**Total Project Score**
177

**Estimated Total Project Cost, YOE***
$31 Million

YOE – Year of Expenditure
Cost Source: City of Virginia Beach

## Summary of Project

- Candidate project reduces congestion and improves incident management
- Candidate project improves travel time and reliability locally

## Overview of Project Status

**Project Category/System**
Interchange and Intersection/Primary

**NEPA Status**
Not Started

**Funding Status**
75% Committed

**Preliminary Engineering & Right of Way Status**
Project Design – 90% Complete; ROW – Not Started

**Prior LRTP Commitment**
2034 LRTP Locally Funded Project

# Centerville Road at News Road

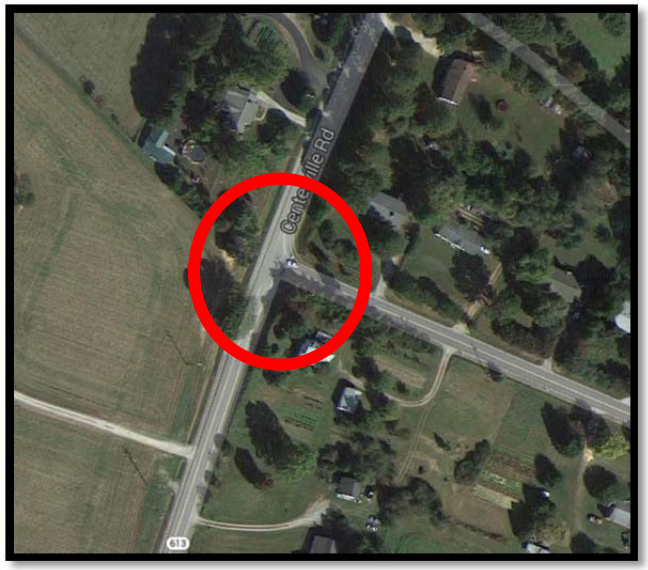
## Project Description

**FROM:** 0.27 mi North of News Road

**TO:** 0.19 mi South of News Road

**DESCRIPTION OF WORK:**

- Add right turn lane northbound on Centerville Road
- Add left turn lane southbound on Centerville Road
- Add right turn lane on News Road



| Project Utility |
| --- |
| 37 |

| Economic Vitality |
| --- |
| 5 |

| Project Viability |
| --- |
| 5 |

| Total Project Score |
| --- |
| 47 |

| Estimated Total Project Cost, YOE* |
| --- |
| $1.7 Million |

YOE – Year of Expenditure
Cost Source: VDOT

## Summary of Project

- The Centerville Road at News Road Candidate Project includes the addition of dedicated turn lanes from Centerville Road and News Road thereby enhancing intersection operations and safety

## Overview of Project Status

| Project Category/System |
| --- |
| Intersection/Secondary |

| NEPA Status |
| --- |
| Not Started |

| Funding Status |
| --- |
| N/A |

| Preliminary Engineering & Right of Way Status |
| --- |
| Not Started |

| Prior LRTP Commitment |
| --- |
| N/A |

# Elm Avenue at Navy Gates 29 & 36

## Project Description

**FROM:** N/A

**TO:** N/A

**DESCRIPTION OF WORK:** Intersection improvements


| Project Utility |
|---|
| 74 |

| Economic Vitality |
|---|
| 38 |

| Project Viability |
|---|
| 0 |

| Total Project Score |
|---|
| 112 |

| Estimated Total Project Cost, YOE* |
|---|
| $18.7 Million |

YOE – Year of Expenditure
Cost Source: City of Portsmouth

## Summary of Project

- Candidate project enhances intersection operations and safety
- Candidate project reduces congestion on arterial streets where queues currently form
- Candidate project improves travel time and reliability to major employment centers

## Overview of Project Status

| Project Category/System |
|---|
| Interchange and Intersection/Urban |

| NEPA Status |
|---|
| Not Started |

| Funding Status |
|---|
| N/A |

| Preliminary Engineering & Right of Way Status |
|---|
| Not Started |

| Prior LRTP Commitment |
|---|
| N/A |

# Table 4: 2040 LRTP Bridge and Tunnel Candidate Projects

| 2040 Project ID | Project Name | From | To | Jurisdiction | PROJECT UTILITY TOTAL (MAX 100 POINTS) | ECONOMIC VITALITY TOTAL (MAX 100 POINTS) | PROJECT VIABILITY TOTAL (MAX 100 POINTS) | GRAND TOTAL SCORE (MAX 300 POINTS) |
|---|---|---|---|---|---|---|---|---|
| **INTERSTATE** | | | | | | | | |
| 2040-74A | Hampton Roads Bridge Tunnel (8-Lanes) | I-64/I-664 (at Coliseum) | I-64/I-564 | Multi-jurisdictional | **74** | **95** | **18** | **187** |
| **PRIMARY** | | | | | | | | |
| 2040-27 | Deep Crk AIW Bridge Replacement and G.W. Hwy (US 17)/Moses Grandy Trail Intersection Improvements | Mill Creek Pkwy | Diamond Ave | Chesapeake | **87** | **48** | **42** | **177** |
| 2040-38 | Triple Decker Bridge (Interchange of US 13, US 460, and Norfolk Southern Rail Line) | N/A | N/A | Chesapeake | **83** | **37** | **8** | **128** |
| 2040-134 | Mills Godwin Bridge | Quail Hollow | Waterview Rd | Suffolk | **65** | **35** | **15** | **115** |
| 2040-58 | Jamestown Rd (Rte 31) Over Powhatan Creek | N/A | N/A | James City County | **43** | **10** | **13** | **66** |
| 2040-57 | Humelsine Pkwy (Rte 199) at Colonial Pkwy | N/A | N/A | James City County | **32** | **5** | **5** | **42** |
| **SECONDARY** | | | | | | | | |
| 2040-59 | Rte 601 Over Diascund Creek | 0.87 mi to Int Rte. 603 | 0.87 mi to Rte. 603 | James City County | **39** | **10** | **16** | **65** |
| **URBAN** | | | | | | | | |
| 2040-133 | Kings Hwy Bridge | Godwin Blvd (Rte 10) | Kings Hwy | Suffolk | **66** | **32** | **5** | **103** |
| 2040-10 | 22nd St Bridge | Liberty St | Wilson Rd | Chesapeake | **73** | **10** | **13** | **96** |
| 2040-239 | Fort Eustis Blvd Bridge Replacement | E. side of Lee Hall Reservoir | W. side of Lee Hall Reservoir | Newport News | **61** | **14** | **10** | **85** |
| 2040-129 | Paradise Creek Bridge (Rte 239) | N/A | N/A | Portsmouth | **53** | **19** | **8** | **80** |

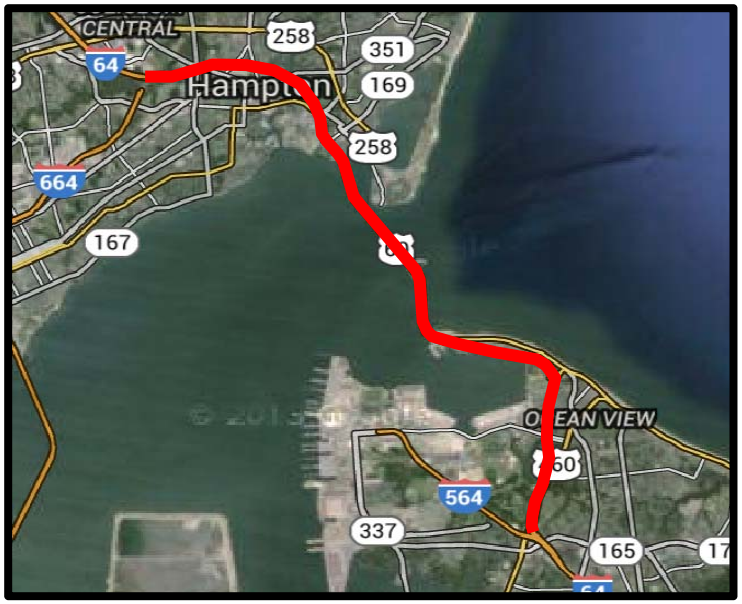
# Hampton Roads Bridge-Tunnel (8-Lanes)

## Project Description

**FROM:** I-64/I-664 (at Coliseum)

**TO:** I-64/I-564

**DESCRIPTION OF WORK:** Widen I-64 from 4 to 8 lanes between the I-64/I-664 interchange near the Hampton Coliseum and the I-64/I-564 interchange near Naval Station Norfolk




**Project Utility**
74

**Economic Vitality**
95

**Project Viability**
18

**Total Project Score**
187

**Estimated Total Project Cost, 2014 $'s**
$5.1 - $6.9 Billion

Cost Source: VDOT, 2012 I-64 HRBT EIS

## Summary of Project

- The Hampton Roads Bridge-Tunnel Candidate Project widens approximately 12 miles of I-64, including the HRBT, from 4 to 8 lanes
- Candidate project reduces severe recurring congestion at the primary gateway to South Hampton Roads
- Candidate project significantly improves regional travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations

## Overview of Project Status

**Project Category/System**
Bridge and Tunnel/Interstate

**NEPA Status**
Underway

**Funding Status**
N/A

**Preliminary Engineering & Right of Way Status**
Not Started

**Prior LRTP Commitment**
2034 LRTP Study

# Deep Creek Bridge Replacement and G.W. Highway/Moses Grandy Trail Intersection Improvements

## Project Description

**FROM:** Mill Creek Parkway

**TO:** Diamond Avenue

**DESCRIPTION OF WORK:** Bridge replacement


| Project Utility |
|---|
| 87 |

| Economic Vitality |
|---|
| 48 |

| Project Viability |
|---|
| 42 |

| Total Project Score |
|---|
| 177 |

| Estimated Total Project Cost, YOE* |
|---|
| $51.8 Million |

YOE – Year of Expenditure
Cost Source: City of Chesapeake

## Summary of Project

- The Deep Creek Bridge Replacement and G.W. Highway/Moses Grandy Trail Intersection Improvements Candidate Project consists of the U.S. 17 Bridge Replacement over Deep Creek with additional improvements to approaching roadways
- Candidate project significantly reduces travel time
- Candidate project supports plans for future growth

## Overview of Project Status

| Project Category/System |
|---|
| Bridge and Tunnel/Primary |

| NEPA Status |
|---|
| Not Started |

| Funding Status |
|---|
| 35% Committed |

| Preliminary Engineering & Right of Way Status |
|---|
| Project Design – 90% Complete; ROW – Not Started |

| Prior LRTP Commitment |
|---|
| 2034 LRTP Regionally Funded |

March 2015

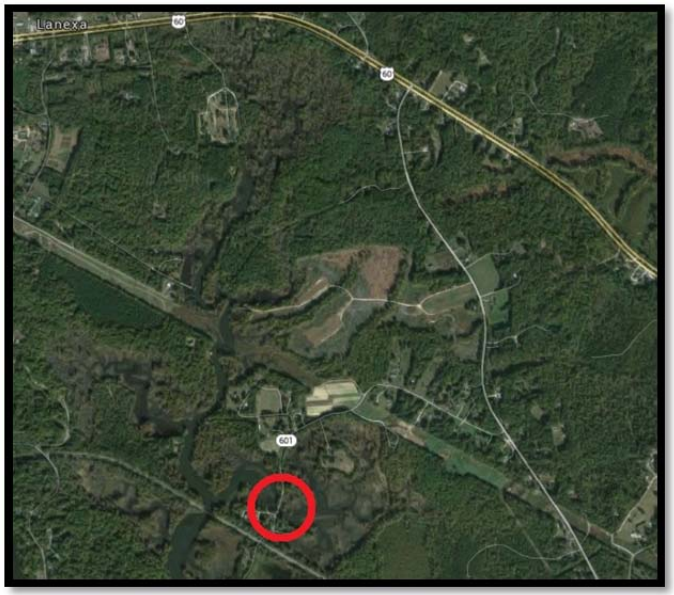
# Rte 601 Over Diascund Creek

## Project Description

**FROM:** 0.87 mi to Int Rte 603

**TO:** 0.87 mi to Int Rte 603

**DESCRIPTION OF WORK:** Bridge Replacement




| Project Utility |
|---|
| 39 |

| Economic Vitality |
|---|
| 10 |

| Project Viability |
|---|
| 16 |

| Total Project Score |
|---|
| 65 |

| Estimated Total Project Cost, YOE* |
|---|
| $2.3 Million |

YOE – Year of Expenditure
Cost Source: VDOT

## Summary of Project

- The Rte 601 Over Diascund Creek Candidate Project consists of a new bridge replacing the existing structure over Diascund Creek in James City County.
- Candidate project supports plans for future growth.

## Overview of Project Status

| Project Category/System |
|---|
| Bridge and Tunnel/Secondary |

| NEPA Status |
|---|
| Not Started |

| Funding Status |
|---|
| 19% Committed |

| Preliminary Engineering & Right of Way Status |
|---|
| Project Design – 10% Complete; ROW – Not Started |

| Prior LRTP Commitment |
|---|
| N/A |

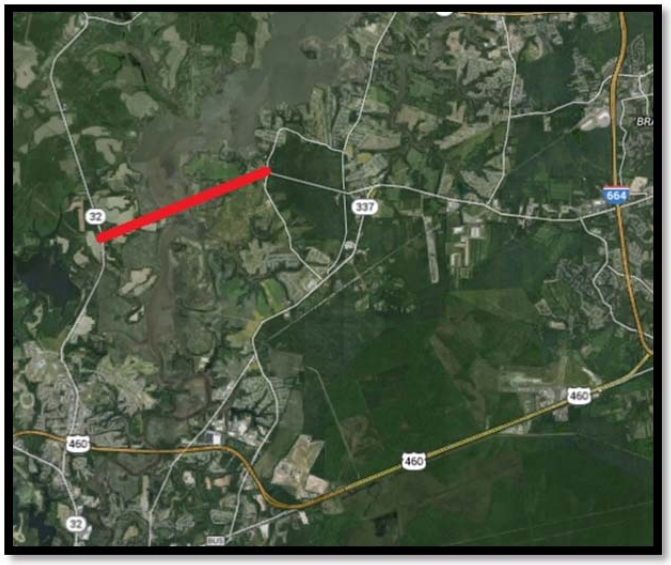
# Kings Highway Bridge

## Project Description

**FROM:** Godwin Boulevard (Route 10)

**TO:** Kings Highway

**DESCRIPTION OF WORK:** New bridge alignment




**Project Utility**
66

**Economic Vitality**
32

**Project Viability**
5

**Total Project Score**
103

**Estimated Total Project Cost, YOE***
$115 Million

YOE – Year of Expenditure
Cost Source: City of Suffolk

## Summary of Project

- The Kings Highway Bridge Candidate Project replaces the alignment that was previously closed due to deterioration
- Candidate project provides service to traffic between Nansemond Parkway and Godwin Boulevard

## Overview of Project Status

**Project Category/System**
Bridge and Tunnel/Urban

**NEPA Status**
Not Started

**Funding Status**
N/A

**Preliminary Engineering & Right of Way Status**
Not started

**Prior LRTP Commitment**
2034 Vision Plan

# Table 5: 2040 LRTP Multimodal Passenger Transportation Candidate Projects

| 2040 Project ID | Project Name | From | To | Jurisdiction | PROJECT UTILITY TOTAL (MAX 100 POINTS) | ECONOMIC VITALITY TOTAL (MAX 100 POINTS) | PROJECT VIABILITY TOTAL (MAX 100 POINTS) | GRAND TOTAL SCORE (MAX 300 POINTS) |
|---|---|---|---|---|---|---|---|---|
| **FIXED GUIDEWAY/LRT** | | | | | | | | |
| 2040-186 | Virginia Beach Transit Extension | Newtown Rd Station | Virginia Beach Oceanfront | Virginia Beach | **75** | **89** | **32** | **196** |
| 2040-119 | Naval Station Norfolk Transit Extension | Existing LRT | Naval Station Norfolk | Norfolk | **75** | **81** | **15** | **171** |
| 2040-81 | Portsmouth-Southside Light Rail | Portsmouth | Southside | Multi-jurisdictional | **75** | **65** | **10** | **150** |
| 2040-30 | Light Rail Transit Extension to Greenbrier Area | South Norfolk | Greenbrier Area | Chesapeake | **67** | **60** | **15** | **142** |
| 2040-80 | Peninsula Fixed Guideway (A1 Alignment) | Newport News City Hall | Denbigh Blvd (Rte 173) | Multi-jurisdictional | **67** | **52** | **10** | **129** |
| 2040-80A | Peninsula Fixed Guideway (A3 Alignment) | Christopher Newport University | Huntington Pointe | Multi-jurisdictional | **66** | **60** | **0** | **126** |
| 2040-213 | Virginia Beach Transit Extension North - Phase II | Town Center / Independence Blvd | Shore Dr | Virginia Beach | **45** | **65** | **5** | **115** |
| 2040-214 | Virginia Beach Transit Extension South - Phase III | Town Center / Independence Blvd | Virginia Beach Municipal Center | Virginia Beach | **52** | **56** | **5** | **113** |
| **MARITIME TRANSIT** | | | | | | | | |
| 2040-71 | Elizabeth River Ferry Expansion | Current Service Locations | ODU and Naval Station Norfolk | Multi-jurisdictional | **71** | **60** | **10** | **141** |
| 2040-72 | Ferry Service | Norfolk | Hampton | Multi-jurisdictional | **65** | **56** | **10** | **131** |
| 2040-73 | Ferry Service | Old Towne (Portsmouth) | Downtown Norfolk - Naval Station Norfolk | Multi-jurisdictional | **66** | **55** | **10** | **131** |
| **STATION** | | | | | | | | |
| 2040-141 | Suffolk Rail Station | N/A | N/A | Suffolk | **42** | **25** | **5** | **72** |
| 2040-62 | WATA Administrative Operations Center | N/A | N/A | James City County | **26** | **20** | **15** | **61** |
| 2040-127 | Hampton Roads Transit Transfer Station | N/A | N/A | Portsmouth | **31** | **25** | **5** | **61** |
| **RAIL** | | | | | | | | |
| 2040-76A | Higher-Speed and Intercity Passenger Rail - DRPT Tier I EIS ROD - Preferred Alternative | Hampton Roads | Richmond / Northeast Corridor | Multi-jurisdictional | **58** | **60** | **18** | **136** |
| 2040-79 | Peninsula Commuter Rail | Newport News | Williamsburg | Multi-jurisdictional | **48** | **72** | **10** | **130** |
| 2040-76A | High-Speed and Intercity Passenger Rail - HRTPO High Speed Rail Vision Plan - Option 4 Richmond Direct | Hampton Roads | Richmond / Northeast Corridor | Multi-jurisdictional | **66** | **40** | **0** | **106** |

# Virginia Beach Transit Extension

## Project Description

**FROM:** Newtown Road

**TO:** Virginia Beach Oceanfront

**DESCRIPTION OF WORK:** Construction of Fixed Guideway system along alignment of abandoned Norfolk Southern (NS) Railroad. Access options from east end of NS Railroad at Birdneck Rd to the Oceanfront are being evaluated.

| Project Utility |
| --- |
| 75 |

| Economic Vitality |
| --- |
| 89 |

| Project Viability |
| --- |
| 32 |

| Total Project Score |
| --- |
| 196 |

| Estimated Total Project Cost, YOE* |
| --- |
| $1.3 Billion |

YOE – Year of Expenditure
Cost Source: Hampton Roads Transit

## Summary of Project

- The Virginia Beach Transit Extension Candidate Project is currently under study
- Candidate project reduces emissions, is compatible with Virginia Beach's Strategic Growth Areas, and provides connectivity to the Norfolk LRT
- Candidate project provides new travel options for major employment centers and tourist destinations

## Overview of Project Status

| Project Category/System |
| --- |
| Transit/Fixed Guideway/LRT |

| NEPA Status |
| --- |
| Underway |

| Funding Status |
| --- |
| 12% Committed |

| Preliminary Engineering & Right of Way Status |
| --- |
| Underway |

| Prior LRTP Commitment |
| --- |
| 2034 LRTP Study |

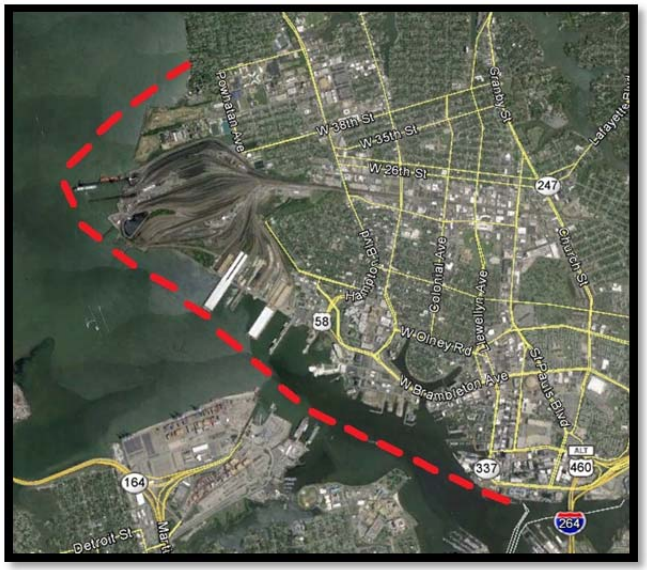
# Elizabeth River Ferry Expansion

## Project Description

**FROM:** Current Service Locations

**TO:** ODU and Naval Station Norfolk

**DESCRIPTION OF WORK:** Ferry expansion




| Project Utility |
|---|
| 71 |

| Economic Vitality |
|---|
| 60 |

| Project Viability |
|---|
| 10 |

| Total Project Score |
|---|
| 141 |

| Estimated Total Project Cost, YOE* |
|---|
| $8.9 Million |

YOE – Year of Expenditure
Cost Source: Hampton Roads Transit

## Summary of Project

- The Elizabeth River Ferry Expansion Candidate Project consists of the addition of a new ferry route servicing ODU and Naval Station Norfolk
- Candidate project supports increased density
- Candidate project provides new travel options for major employment centers and tourist destinations

## Overview of Project Status

| Project Category/System |
|---|
| Transit/Ferry |

| NEPA Status |
|---|
| Not Started |

| Funding Status |
|---|
| N/A |

| Preliminary Engineering & Right of Way Status |
|---|
| Not Started |

| Prior LRTP Commitment |
|---|
| N/A |

# High Speed and Intercity Passenger Rail – DRPT Tier I EIS

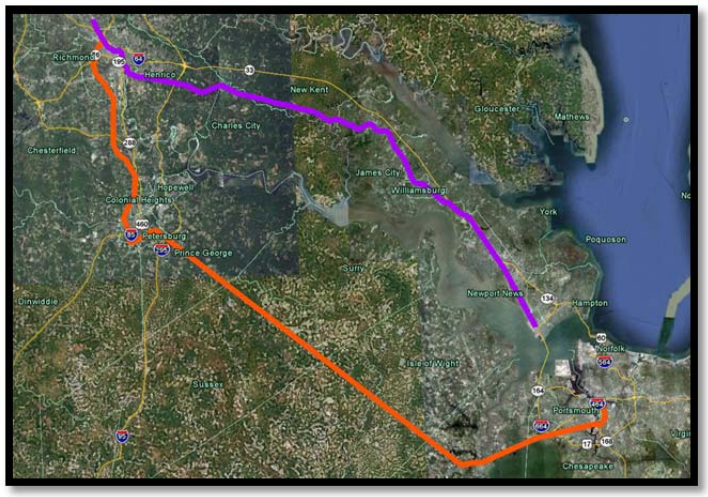
## Project Description

**FROM:** Hampton Roads

**TO:** Richmond Northeast Corridor

**DESCRIPTION OF WORK:**

- **Enhancement work along the existing Peninsula intercity passenger rail corridor to improve service/reliability (79-mph, 3 daily roundtrips)**
- **Enhancement work along the Norfolk Southern rail line to bring higher speed passenger rail service (90-mph, 6 daily roundtrips) to the Southside.**




| Project Utility |
|---|
| 58 |

| Economic Vitality |
|---|
| 60 |

| Project Viability |
|---|
| 18 |

| Total Project Score |
|---|
| 136 |

| Estimated Total Project Cost, YOE* |
|---|
| $475.4 Million |

YOE – Year of Expenditure
Cost Source: Tier I FEIS, 2012

## Summary of Project

- The High Speed and Intercity Passenger Rail Candidate Project is a significant regional transportation project for the Hampton Roads Region.
- The Final Tier I EIS ROD, which identifies a "Selected Alternative" for rail development, was issued by the FRA in December 2012.
- Completion of the Tier I Study allows the region to pursue funding for a Tier II process, which will study detailed impacts of the project, and get it closer towards completing the NEPA process.
- In November 2014, the HRTPO Board directed staff to work with DRPT to identify funding for the Tier II EIS, however, funding for the project has yet to be identified.

## Overview of Project Status

| Project Category/System |
|---|
| Transit/Passenger Rail |

| NEPA Status |
|---|
| ROD Issued December 2012 |

| Funding Status |
|---|
| N/A |

| Preliminary Engineering & Right of Way Status |
|---|
| Not Started |

| Prior LRTP Commitment |
|---|
| 2034 LRTP Study |

# Table 6: 2040 LRTP Intermodal Transportation Candidate Projects

| 2040 Project ID | Project Name | From | To | Purpose of Project | Jurisdiction | PROJECT UTILITY TOTAL (MAX 100 POINTS) | ECONOMIC VITALITY TOTAL (MAX 100 POINTS) | PROJECT VIABILITY TOTAL (MAX 100 POINTS) | GRAND TOTAL SCORE (MAX 300 POINTS) |
|---|---|---|---|---|---|---|---|---|---|
| 2040-114 | Hampton Blvd at Terminal Blvd | Trouville Ave/Portor St | Hampton Blvd | New Highway/Rail Underpass | Norfolk | 60 | 85 | 24 | 169 |
| 2040-34 | Portlock Rd | N/A | N/A | Replace existing at-grade railroad crossing of the Norfolk- | Chesapeake | 81 | 50 | 5 | 136 |
| 2040-25 | Freeman Ave | N/A | N/A | Replace the existing at- grade railroad crossing for the No | Chesapeake | 60 | 60 | 14 | 134 |
| 2040-142 | Finney Ave Flyover | Pinner St | Route 13/337 E Washington St | Provides grade seperated crossing of existing railroad in core downtown area | Suffolk | 59 | 50 | 15 | 124 |
| 2040-135 | North Suffolk Connector Rd | N/A | N/A | New two lane divided roadway | Suffolk | 70 | 30 | 5 | 105 |

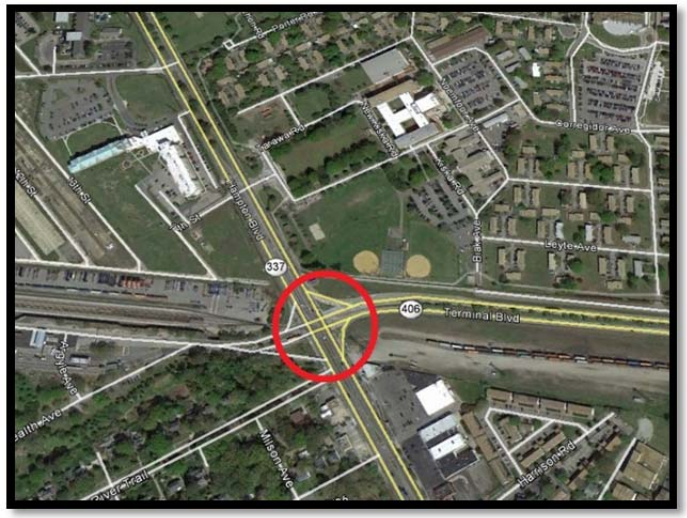
# Hampton Boulevard at Terminal Boulevard

## Project Description

**FROM:** Trouville Avenue/Portor Street

**TO:** Hampton Boulevard

**DESCRIPTION OF WORK:** New highway/rail underpass




| Project Utility |
|---|
| 60 |

| Economic Vitality |
|---|
| 85 |

| Project Viability |
|---|
| 24 |

| Total Project Score |
|---|
| 169 |

| Estimated Total Project Cost, YOE* |
|---|
| $132 Million |

YOE – Year of Expenditure
Cost Source: VDOT

## Summary of Project

- The Hampton Blvd at Terminal Blvd Candidate Project allows for unimpeded traffic flow via grade separation between rail and auto traffic
- Candidate project improves travel time and reliability to port facilities and defense installations

## Overview of Project Status

| Project Category/System |
|---|
| Intermodal |

| NEPA Status |
|---|
| Not Started |

| Funding Status |
|---|
| N/A |

| Preliminary Engineering & Right of Way Status |
|---|
| Project Design – 10% Complete; ROW – Not Started |

| Prior LRTP Commitment |
|---|
| 2034 Vision Plan |

# Table 7: 2040 LRTP Active Transportation Candidate Projects

| 2040 Project ID | Project Name | From | To | Jurisdiction | Improvement Description | PROJECT UTILITY TOTAL (MAX 100 POINTS) | PROJECT VIABILITY TOTAL (MAX 100 POINTS) | GRAND TOTAL SCORE (MAX 200 POINTS) |
|---|---|---|---|---|---|---|---|---|
| 2040-136 | Rail-to-Trail (Suffolk Seabord Coastline Trail, part of the South Hampton Roads Trail) | Pughsville Rd | Downtown Suffolk | Suffolk | Shared Use Path | 57 | 40 | 97 |
| 2040-226 | Scarborough Bridge | Magic Hollow Blvd | Old Clubhouse Rd | Virginia Beach | New facility - Shared Use Path | 76 | 5 | 81 |
| 2040-85 | South Hampton Roads Trail: Complete Trail (Suffolk to VB) | Suffolk | Virginia Beach | Multi-jurisdictional | Bicycle / Pedestrian Facility | 74 | 5 | 79 |
| 2040-69 | South Hampton Roads Trail: Virginia Beach (Bike Trails/Lanes Along Light Rail Tracks) | Norfolk | Oceanfront | Multi-jurisdictional | Bicycle / Pedestrian Facility | 72 | 5 | 77 |
| 2040-67 | Bike Path Along Shore Dr/Hampton Blvd/Little Creek Rd | Norfolk Elizabeth River Trail | Virginia Beach City Line | Multi-jurisdictional | Bike Lanes | 68 | 5 | 73 |
| 2040-185 | Violet Bank Dr Bike Trail | Kittery Dr | Selwood Dr | Virginia Beach | New faciilty - Shared Use Path | 65 | 8 | 73 |
| 2040-60 | Sidewalks along Longhill Rd over Route 199 | DePue Drive | Lane Place | James City County | Provide 5-foot sidewalk on both sides | 61 | 10 | 71 |
| 2040-37 | South Hampton Roads Trail: Western Branch | Taylor Rd | Poplar Hill Rd | Chesapeake | Convert the Commonwealth Railroad right-of-way to a shared use path | 54 | 15 | 69 |
| 2040-192 | Monticello Ave Shared-Use Path | Treyburn Drive | Ironbound Rd (Rte 615) | Williamsburg | This project is a 10' lighted shared-use path along Monticello Avenue between Treyburn Drive and Ironbound Road that will improve access and safety for pedestrians and cyclists | 54 | 15 | 69 |
| 2040-222 | Northampton Blvd Right-of-Way | Bayside Dr | Greenwell Rd | Virginia Beach | New facility - Shared Use Path | 64 | 5 | 69 |
| 2040-224 | Thalia Creek Greenway Phase - 1D | Constitution Dr | Virginia Beach Bvld | Virginia Beach | New facility - Shared Use Path | 64 | 5 | 69 |
| 2040-188 | Walkway at Virginia Beach Town Center Over I-264 | Thalia Creek Greenway | Mt. Trashmore Park | Virginia Beach | New facility - 14'-20' wide shared use path bridge | 59 | 5 | 64 |
| 2040-187 | Nimmo Trail | Nimmo Pkwy | Sandbridge Rd | Virginia Beach | New facility - Shared Use Path | 56 | 8 | 64 |
| 2040-225 | Level Green Powerline Corridor | Reon Dr | Chesapeake CL at S. Military Hwy | Virginia Beach | New facility - Shared Use Path | 53 | 8 | 61 |
| 2040-223 | Thalia Creek Greenway - Phase 1C | Bonney Rd | I-264 | Virginia Beach | New facility - Shared Use Path | 53 | 5 | 58 |
| 2040-18 | Construct multi-use path along Etheridge Manor Blvd/ Hanbury Rd | Centerville Tnpk | Johnstown Rd | Chesapeake | Construct new Shared Use Path | 48 | 8 | 56 |
| 2040-123 | Bike lanes on Churchland Blvd | Portsmouth Trail | High St | Portsmouth | Provide bike facility connection | 50 | 5 | 55 |
| 2040-228 | Shared Use Path Along Yorktown Rd | Cardinal Ln (Rte 670) | Victory Blvd (Rte 171) | York County | Shared Use Path | 49 | 5 | 54 |
| 2040-113 | Extend Elizabeth River Trail to Naval Station Norfolk | Cloncurry Road | Admiral Tausig Boulevard | Norfolk | Extension of Existing Pedestrian/Bicycle Trail with a bike lane on Hampton Boulevard to NI | 53 | 0 | 53 |
| 2040-193 | Shared Use Path Victory Blvd (Rte 171) | Hampton Hwy (Rt 134) | Carys Chapel Rd | York County | Shared Use Path | 47 | 5 | 52 |
| 2040-54 | Pocahontas Trail Reconstruction | James City County Fire Station #2 (8429 Pocahontas Trail) | James River Elementary School (8901 Pocahontas Trail) | James City County | Upgrade 1.9 mile segment of Pocahontas Trail with a 5' sidewalk and 5' paved shoulder with pedestrian lighting and bus pull offs. | 45 | 5 | 50 |
| 2040-88 | VA/NC Dismal Swamp Bike/Walk Trail Connection | VA | NC | Multi-jurisdictional | Bicycle / Pedestrian Facility | 45 | 5 | 50 |
| 2040-21 | Construct multi-use path trail along Dismal Swamp Canal | Existing Trailhead | North Carolina Border | Chesapeake | Extend Dismal Swamp Trail Shared Use Path south along US 17 to NC | 41 | 8 | 49 |
| 2040-66 | Shared Use Path - Yorktown Road | Tabb High School | Hampton Hwy (Rte 134) at Brick Kiln Cr | York County | Shared Use Path | 41 | 5 | 46 |
| 2040-65A | Bike Lanes on Greensprings Rd and Centerville Rd that connect to Capital Trail | Jamestown Rd (Rte 31) | John Tyler Hwy (Rte 5) | James City County | Bike Lanes | 41 | 5 | 46 |
| 2040-19 | Construct multi-use path along George Washington Hwy | Old Mill Rd | Deep Creek Park | Chesapeake | Shared Use Path north along S. George Washington Hwy. near Dismal Swamp Trail | 37 | 8 | 45 |
| 2040-51 | Monticello Ave Bike Lane | News Rd | Centerville Rd | James City County | Provide 4-foot wide bike lane on both sides | 39 | 5 | 44 |
| 2040-227 | Penniman Rd (Sidewalk / Multi Use Path) | Williamsburg CL | Marquis Center Pkwy (Rte 199) | York County | Sidewalk & Multi-Use Path | 38 | 5 | 43 |
| 2040-121 | Bike Path on Hunts Neck Rd (Rte 172) | Yorktown Rd | Pasture Rd | Poquoson | Provide 10' Shared Use Path | 26 | 0 | 26 |

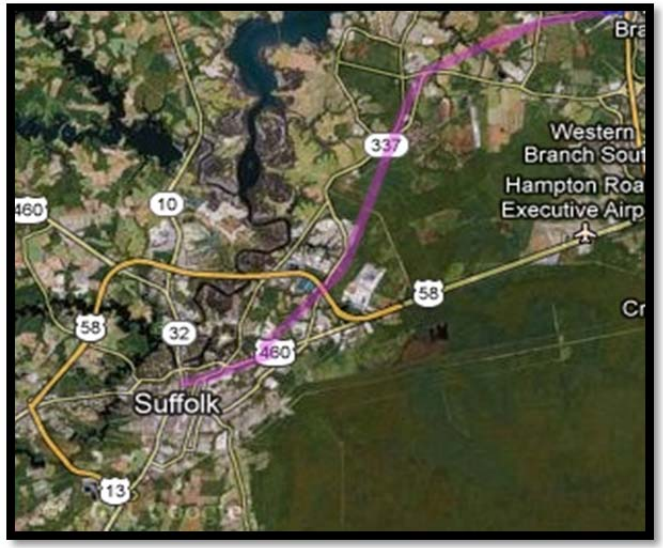
# Rail-to-Trail (Suffolk Seaboard Coastline Trail)
## (Part of the South Hampton Roads Trail)

### Project Description

**FROM:** Pughsville Road

**TO:** Downtown Suffolk

**DESCRIPTION OF WORK:** Construction of a 11.4 mile shared use path along abandoned rail line




| Project Utility |
|---|
| 57 |

| Economic Vitality |
|---|
| N/A |

| Project Viability |
|---|
| 40 |

| Total Project Score |
|---|
| 97 |

| Estimated Total Project Cost, YOE* |
|---|
| $6.8 Million |

YOE – Year of Expenditure
Cost Source: City of Suffolk

### Summary of Project

- The Rail-to-Trail (Suffolk Seaboard Coastline Trail) Candidate Project is the Suffolk segment of the South Hampton Roads Trail
- Candidate project connects to the existing short segment near the Suffolk Seaboard Station Railroad Museum
- Candidate project improves safety

### Overview of Project Status

| Project Category/System |
|---|
| Active Transportation |

| NEPA Status |
|---|
| Complete |

| Funding Status |
|---|
| 25% Committed |

| Preliminary Engineering & Right of Way Status |
|---|
| Project Design – 25% Complete; ROW - Complete |

| Prior LRTP Commitment |
|---|
| N/A |

March 2015

# APPENDIX

# Methodology of Applying HRTPO Project Prioritization Tool to the Scoring of 2040 Long-Range Transportation Plan Candidate Projects

Description of Calculations: Project Utility, Economic Vitality, and Project Viability

the heartbeat of HAMPTON ROADS TPO
TRANSPORTATION PLANNING ORGANIZATION

January 2015

# Background Section

Note: The columns in the gray area are used to calculate values for the Tool Performance Measures, mostly for the Utility leg of the Tool.

### INRIX Data

Based on whether travel time and speed data is collected by INRIX on that roadway segment.

### Existing capacity

For both Highways and Bridges/Tunnels, the existing capacity is based on the daily volume that is the threshold between LOS E & F based on the existing roadway class of that segment.

### Future capacity

For both Highways and Bridges/Tunnels, the future capacity is based on the daily volume that is the threshold between LOS E & F based on the proposed roadway class of that segment.

### ADT

For both Highways and Bridges/Tunnels, ADT was determined by using the daily volume for a representative segment within the project limits. If the facility does not currently exist, a value of "N/A" was reported and the daily volume was used for a parallel facility.

### EPDO Crash Rate

For roadway segments, the EPDO crash rate per million vehicle-miles of travel (VMT) from the years 2009-2013 was used. EPDO crash rates provide more weight to those more severe crashes by placing a weight of 1 on Property Damage only crashes, a weight of 3 on injury (INJ) crashes, and a weight of 12 on fatality (FAT) crashes. For each project, VDOT crash shapefiles were used.

For intersections, the EPDO Crash Rate per million entering vehicles was used. Data for intersections reflect all crashes within 250 feet (0.05 miles) of the intersection.

For interchanges, the EPDO Crash Rate per million VMT was used. Data for interchanges reflect all crashes within 0.5 miles of the center of the interchange for freeways, and all crashes within the interchange area for arterials.

The EPDO Crash Rate for each facility was compared to a regional average EPDO Crash Rate. For freeway segments and intersections, the average is based on the average from the HRTPO Regional Safety Study. This average is 1.41 for freeways and 1.15 for intersections. For

interchanges, the regional average EPDO Crash Rate was determined using the regional rate for freeways combined with the regional rate for ramps (based on VDOT crash and VMT data). This average is 1.57. For all other facilities, the regional average EPDO Crash Rate is based on statewide Virginia averages by roadway type from the year 2012 using information included in VDOT's "2012 Summary of Crash Data".

## Future ADT

The Regional Travel Demand Model was used to calculate the Future Average Daily Traffic (ADT) for highway, interchange, bridge & tunnel, and intermodal projects.

## Estimated Cost of Project

Estimated costs of projects are expressed in Year-of-Expenditure (YOE) dollars. Stakeholders submitted associated costs for candidate projects in two ways:

1) Project costs were submitted in YOE dollars, along with the estimated program date/period. This information was provided by localities and/or VDOT.
2) Project costs were submitted in current year dollars. In this case, localities and/or VDOT supplied the estimated program date/period (cost band time period, see below). The midpoint inflation factor for each cost band was then applied to current year estimate to convert to YOE (based on 3% inflation rate).

| Current | Near | | | | | | | | Middle | | | | | | | | | Far | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2014 | 2015 | 2016 | 2017 | **2018** | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | **2027** | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | **2036** | 2037 | 2038 | 2039 | 2040 |
| 1 | 1.03 | 1.061 | 1.093 | **1.126** | 1.159 | 1.194 | 1.23 | 1.267 | 1.305 | 1.344 | 1.384 | 1.426 | **1.469** | 1.513 | 1.558 | 1.605 | 1.653 | 1.702 | 1.754 | 1.806 | 1.86 | **1.916** | 1.974 | 2.033 | 2.094 | 2.157 |

Midpoint Inflation Factor for each Cost Band:

| **Midpoint Inflation Factor for each Cost Band:** | | |
|---|---|---|
| **Near** | (2015-2022) | 1.126 |
| **Middle** | (2023-2031) | 1.469 |
| **Far** | (2032-2040) | 1.916 |

## Estimated Cost of Project (Active Transportation)

If not provided by locality stakeholders, the estimated costs of active transportation projects were calculated using the VDOT Planning Level Cost Estimation Tool. The mid-range costs per mile estimates (average of low estimate and high estimate) for the Hampton Roads district were used.

All project costs were expressed in Year-of-Expenditure (YOE) dollars; locality submitted implementation years were used where available, in cases where no data was provided a 2040 implementation year was applied. Unit costs for bike lanes, shared use paths, sidewalks, were applied based on the locality submitted description of the project. Depending on the project location, the costs of a bridge over water crossings were estimated. Right of Way and utility costs were not included in the estimates.

### 2040 Daily VMT

Future ADT multiplied by length of project.

### 2040 Daily VMT for Interchanges

The Regional Travel Demand Model was used to calculate the 2040 Daily Vehicle Miles Traveled (VMT) for interchange and intersection projects. The 2040 volumes on the Northbound, Southbound, Eastbound, and Westbound approaches of an interchange or intersection were plugged into a formula that calculated the overall VMT.

### Bridge Detour Length (Bridge and Tunnel)

The bridge detour length is the length of the shortest path from one end of the bridge/tunnel to the other end.

### Bridge Detour VMT

The bridge detour VMT was calculated by multiplying the most recent weekday count by the segment length for each segment along the shortest detour route. CMP segments were split as necessary to create the route, with revised segment lengths being used to calculate the VMT, and non-CMP counts were used when non-CMP roadways were included in the detour route.

# Project Utility

Note: The source of most of these score components is columns in the Background Section and this can be seen by the formulas in the cells.

## Congestion Level

1. Highways; 3. Bridge and Tunnel

### (a) Percent Reduction between Existing and Future V/C Ratios

(Existing V/C-Future V/C)/Existing V/C.

For new roadways: use Existing V/C and Future V/C of parallel facility

### (b) Existing Peak Period Congestion Level (TTI) and Existing Peak Period Level of Service (No Inrix Data)

Congestion levels were determined using the travel time index (TTI) for roadways with INRIX data and using Level of Service for roadways where INRIX data is not available. The travel time index is a ratio that compares travel times on a particular roadway segment during peak travel periods with travel times during uncongested, free-flow conditions. The higher the travel time index, the more congested the roadway is.

HRTPO uses the following thresholds to determine congestion levels based on the travel time index:

| Congestion Level | | Freeway | Arterial |
|---|---|---|---|
| Low | LOW | TTI < 1.15 | TTI < 1.25 |
| Moderate | MOD | 1.15 ≤ TTI < 1.3 | 1.25 ≤ TTI < 1.4 |
| Severe | SEV | TTI ≥ 1.3 | TTI ≥ 1.4 |

Level of service is a measure used to describe congestion levels based on Highway Capacity Manual analysis methods. Congestion levels based on Levels-of-Service are shown in the following table:

| Congestion Level | | HCM LOS |
|---|---|---|
| Low | LOW | A-C |
| Moderate | MOD | D |
| Severe | SEV | E-F |

The worst TTI and LOS during the day for that roadway segment is used, regardless of direction or peak period.

### (c) Impact to Nearby Roadway

Future ADT – Existing ADT

For new roadways: use Future ADT

## 2. Interchanges

### (a) Existing Queue Conditions

Based on Number of Interstate and Arterial Approaches from where queues currently form (1 to 4 approaches)

### (b) Queue Improvements

Number of Interstate and Arterial Approaches improved by project (1 to 4 approaches)

### (c) Number of Movements Added or Improved

Based on improved left and right movements (Max: 8 movements)

# Infrastructure Condition (Bridge and Tunnel Only)

### (a) Bridge Sufficiency Rating

The bridge sufficiency rating is the lowest bridge sufficiency rating given to a bridge within the project limits from the bridge database.

### (b) Age of Tunnel

The age of tunnel reported is the oldest tunnel within the project limits.

### (c) Last Major Repair

Provided by stakeholder (based on horizon year)

### (d) Costs for Necessary Repairs/Upgrades

Provided by stakeholder

# System Continuity and Connectivity

1. Highways; 2. Interchanges; 3. Bridge and Tunnel; 4. Transit; 6. Active Transportation

### Degree of Regional Impact

Regional, Multi-jurisdictional, Local.  Provided by stakeholders

6. Active Transportation

### Elimination of Barriers or Completion of Gaps across a Major Barrier (Active Transportation Only)

Does the project eliminate a barrier or complete a gap across a major barrier? Examples include:

- Providing a crossing across a major roadway
- Providing a connection across a body of water
- Providing alternate Pedestrian or Bicycle travel paths away from a major roadway

### Connections to Existing Bike/Ped Facilities (Active Transportation Only)

Does the project connect two or more existing active transportation facilities by completing a gap (Yes/No)? Active Transportation Existing Facilities Map (dated October 2014) was used as standard.

### Provides Access to Transit, Local/Regional Destinations, High Density Areas (Active Transportation Only)

0 to 3+ Enhancements. Provided by stakeholders.

## Cost Effectiveness

#### 1. Highways; 2. Interchanges; 3. Bridge and Tunnel; 4. Transit; 5. Intermodal

Estimated cost (YOE)/2040 Daily VMT

#### 6. Active Transportation

Project Cost (YOE)/Population Served (within 1.5 mile radius of project)

## Land Use Compatibility

#### 1. Highways; 2. Interchanges; 3. Bridge and Tunnel; 4. Transit; 6. Active Transportation

Compatible and Officially Documented, Compatible but Not Officially Documented, Not Compatible. Provided by stakeholders

## Safety and Security

#### 1. Highways; 2. Interchanges; 3. Bridge and Tunnel

### (a) Critical Crash Ratio

Actual EPDO Crash Rate/Average EPDO Crash Rate for Roadway Type

### (b) Improvement to Incident Management or Evacuation

Yes/No, Provided by stakeholders

### (c) Diversion Impact Due to Failure (Bridges and Tunnels Only)

Existing ADT multiplied by detour length, plus existing detour route VMT

#### 6. Active Transportation

### Crash History

Average Number of Bike/Ped Crashes per Year (2009-2013)

### Project a Safety Improvement

Yes/No. Provided by stakeholders.

## Modal Enhancements

#### 1. Highways; 2. Interchanges; 3. Bridge and Tunnel

### Project Improves Vehicular Access

Yes and Regional, Yes but Not Regional, No. Provided by stakeholders

#### 1. Highways; 2. Interchanges; 3. Bridge and Tunnel; 4. Transit; 5. Intermodal; 6. Active Transportation

### Additional Dedicated Facilities for Alternative Modes

0 to 3+ Enhancements. Provided by stakeholders.

### Unimpeded Commercial Maritime/Rail Traffic (Bridges and Tunnels Only)

Yes/No. Provided by stakeholders.

# Existing Usage and/or Prospective Ridership (Transit Only)

Passengers per Day. Computed by dividing Estimated Annual Ridership (provided by stakeholders) by assumed 250 working days per year.

# User Benefit (Transit Only)

## Total Annual Travel Time Savings per Rider

For each transit project, an average travel speed of 24 mph was assumed. This was compared to an inferior transit average travel speed of 10 mph for the same distance that would be covered by each proposed project. The resulting improvement in travel time was then doubled (to account for round trip) and multiplied by an assumed 250 working days per year; this result was then multiplied by the forecasted Passengers per Day to obtain the Annual Travel Time Savings associated with each project. To calculate Total Annual Travel Time Savings per Rider, the Annual Travel Time Savings was divided by the Estimated Annual Ridership (Annual Travel Time Savings in Hours per Year/Estimated Annual Ridership).

## Total Annual Travel Time Savings per Rider for Intercity Rail Projects

Calculated travel time savings per rider based on difference between existing and proposed schedule times (derived from rail studies). This difference was then multiplied by estimated ridership.

# Air Quality (Transit Only)

## Emissions Reduced per Year

The difference between total carbon dioxide, methane, and nitrous oxide emissions (in tons per commuter) of single-occupant passenger cars and transit was calculated. Then, this difference was multiplied by the number of estimated annual trips for each project.

| Travel Mode | $CO_2$, $CH_4$, and $N_2O$ Emissions (tons per passenger-mile) |
|---|---|
| Car | $4.707\times10^{-4}$ |
| Transit | $1.863\times10^{-4}$ |

# Better Accommodates Intermodal Movements (Intermodal Only)

## Degree of Conflict for Intermodal Movements

Conflict Free Intermodal Movements, Limited Conflict Intermodal Movements, Intermodal Movements Conflict.  Provided by stakeholders.

# Improves Rail or Vehicular Access (Intermodal Only)

## Project Improves Vehicular Access

Yes and Regional, Yes but Not Regional, No.  Provided by stakeholders.

# Economic Vitality

## Total Reduction in Travel Time

### 1. Highway; 3. Bridge and Tunnel

Total reduction in travel time is based on the total travel time savings (in vehicle-hours) in the peak direction during the peak hour.

For roadway widenings:

Existing speeds were estimated for the peak direction/peak hour using FDOT software based on various roadway and peak hour characteristics. Future speeds were also determined based on the same existing roadway and peak hour characteristics but replacing the existing number of lanes with the future number of lanes. The difference between the existing and future speeds was used to calculate the total travel time savings.

For those roadways with INRIX data, if the roadway experiences moderate or severe congestion and the INRIX speeds were lower than the FDOT software speeds, then the INRIX speeds were used as the existing speed. The FDOT future speed is still used, and the difference between the INRIX and future speeds was used to calculate the total travel time savings.

For future roadways:

The process is similar to the process used for roadway widenings. However, the existing and future speeds were estimated for the parallel facility, with future speeds based on an estimated drop in volumes on the parallel facility based on the new facility opening.

For railroad overpass projects:

Delay was calculated based on a procedure used to estimate delay for CMAQ railroad overpass projects. This is based on the volume on the roadway, the number of train crossings per day, and the average obstruction per train (which was assumed to be 10 minutes except for the Freeman Avenue overpass which was 20 minutes based on information from Chesapeake). This delay was then converted to a peak hour, peak direction delay using peak hour volume characteristics.

The thresholds for total reduction in travel time (for the peak hour peak direction) are as follows:

Very High – Total Reduction > 20 hours
High – 10 hours < Total Reduction < 20 hours
Medium – 5 hours < Total Reduction < 10 hours
Low – 2 hours < Total Reduction < 5 hours
Very Low – Total Reduction < 2 hours

## 2. Interchanges

Source of congestion: gray section (project background)
Source of system: gray section (project background)

| | Severely congested (E/F) | Moderate congestion (D) | Low congestion (A-C) |
|---|---|---|---|
| Interstate | Very high | High | Low |
| Primary | High | Medium | Low |
| Secondary | Medium | Low | Very low |
| Urban (Primary) | High | Medium | Low |
| Urban (Secondary) | Medium | Low | Very low |

## 4. Transit: (N/A)

## 5. Intermodal

See Highway or Interchange, as appropriate.

6. Active Transportation (Bicycle/Pedestrian): (N/A)

# Labor Market Access

1. Highway; 2. Interchange; 3. Bridge and Tunnel; 5. Intermodal

## (a) Increases Travel Time Reliability

Travel time reliability impacts were determined using the following categories:
For projects that are related to railroad overpasses or replacing drawbridges with fixed span bridges, a Very High Travel Time Reliability is used.

For any projects that don't result in an increase in capacity, a Low Travel Time Reliability is used.

For roadways with INRIX data, the Planning Time Index (PTI) was used. The highest Planning Time Index within the project limits from the year 2013 was used, regardless of direction or peak period. Travel Time Reliability was rated as follows:

Very High – PTI > 2.5
High – 2.0 < PTI < 2.5
Medium-High – 1.75 < PTI < 2.0
Medium – 1.5 < PTI < 1.75
Medium-Low – 1.25 < PTI < 1.5
Low – PTI < 1.25

For roadways without INRIX data, Travel Time Reliability was rated as follows:

Very High – Congested facility (LOS E or F), High number of crashes, few available and uncongested diversion routes, high traffic volumes

High – Congested facility (LOS E or F), Medium to High number of crashes, few or some available and uncongested diversion routes, medium traffic volumes

Medium-High – Congested facility (LOS E or F), Low to Medium number of crashes, many diversion routes available, any traffic volumes

Medium – Either a congested facility (LOS E or F) with low crashes, many diversion routes available, and lower traffic volumes, OR an uncongested facility (LOS A to D) with a high number of crashes, few diversion routes available, and medium to high traffic volumes

Medium-Low – Uncongested facility (LOS A to D), Medium number of crashes, many diversion routes available, low to medium traffic volumes

Low – Uncongested facility (LOS A to D), Low number of crashes, many diversion routes available, low traffic volumes, OR if the facility is a realignment with no new capacity.

For existing interchanges/intersections, the average of the PTI's for the legs of the interchange/intersection were used, and Travel Time Reliability using the above thresholds were used. For existing interchanges/intersections without INRIX data, the same methodology from roadways without INRIX data was used. For new interchanges, the travel time reliability of an adjacent interchange was used.

## (b) Increases Access for High Density Employment Areas

Based on future employment density of appropriate TAZ(s)
(w/ GIS, overlay projects and TAZs colored by four levels of employment density)

Determined employment density by dividing 2040 forecasted total employment by area (square meters). TAZs with an employment density of 25 employees/square meter were identified and classified into 9 groups (Peninsula: Williamsburg, Oyster Point, Newport News Shipyard; Southside: Norfolk Naval Station, Downtown Norfolk/Portsmouth, Virginia Beach Town Center, Oceana, Greenbrier, and Downtown Suffolk).

Total forecasted employment numbers for each of the 9 identified groups were summed; 4 thresholds for Very High, High, Medium, and Low were established based on Natural Breaks.

Very High: 41,501 – 74,898 Total Employees
High: 26, 069 – 41,500 Total Employees
Medium: 5,640 – 26, 068 Total Employees
Low: TAZs with less than 25 employees/area

For Intermodal Projects: Yes/No response

## 4. Transit

### (a) Increases Access for Major Employment Centers

TAZs within ½ mile of transit alignment identified; total employment summed for these TAZs

Points awarded on a sliding scale 0-20 points:

20 Points (max): Total Employment >= 250,000
0 Points: Total Employment <=75,000

### (b) Increases Travel Time Reliability

Transit projects are scored based on whether they increase travel time reliability or not (yes/no). All fixed guideway transit and ferry transit projects are scored "yes". All stations/operations centers are scored "no".

### (c) Increases Frequency of Service

New LRT and Ferry projects automatically increase frequency of transit service; bus transfer stations do not.

### (d) Provides Access to Institutions of Higher Education

Institutions of higher education used (4-year, not-for-profit): ODU, NSU, Va. Wesleyan, Regent, Hampton University, CNU, William & Mary.

## 6. Active Transportation (Bicycle/Pedestrian): (N/A)

# Addresses the Needs of Basic Sector Industries

## 1. Highway; 2. Interchange; 3. Bridge and Tunnel

### (a) Improves Access to Major Military Bases

"Major" based on DOD report ("Base Structure Report", DOD, 2014). 9 facilities have much higher employment than the rest. Access improvement determined via examination of GIS map with projects and major facilities.

9 Major Military Facilities:

1. Dam Neck
2. Fort Eustis
3. Fort Story
4. Langley AFB
5. Little Creek Naval Amphibious Base
6. Naval Medical Center Portsmouth
7. Norfolk Naval Shipyard
8. Norfolk Naval Base
9. Oceana Naval Air Station

Points assigned based on the following matrix:

| Access: | None Military Road | Road Serving the Military | STRAHNET |
|---|---|---|---|
| None | Low | Low | Low |
| Near | Low | Medium | Medium |
| Direct | Medium | High | High |

### (b) NHS/Military/STRAHNET

Based on whether the roadway is part of the National Highway System, Strategic Highway Network (STRAHNET), or is a roadway serving the military. Roadways serving the military were determined in HRTPO's Military Needs Study.

### (c) Improves Access to Major Tourist Areas

Major Tourist Areas: Oceanfront, Historic Triangle (Williamsburg, Jamestown, Yorktown), and Busch Gardens.
Access improvement determined via examination of GIS map with projects and major areas.

Points assigned based on the following matrix:

| Access: | Local | Principal | Interstate |
|---|---|---|---|
| None | Low | Low | Low |
| Near | Low | Medium | Medium |
| Direct | Medium | High | High |

### (d) Travel Time for trips to the ports

Based on the HRTPO Existing and Future Truck Delay in Hampton Roads study. Broken down into < 5 hours/mile, 5-10 hours/mile, and > 10 hours/mile thresholds. For interchange/intersection projects, the average of each leg of the interchange/intersection is used.

## 4. Transit

### (a) Provides/Improves Access for Defense Installations

Based on same "Major" bases identified under Highway section (above)
Access improvement determined via examination of GIS map with projects and major facilities.

10 Points: < 0.25 Miles
5 Points: >= 0.25 Miles – 0.5 Miles
0 Points: >= 0.5 Miles

### (b) Provides/Improves Access for Tourist Destinations

Major Tourist Areas: Oceanfront, Historic Triangle (Williamsburg, Jamestown, Yorktown), and Busch Gardens.
Access improvement determined via examination of GIS map with projects and major areas.

10 Points: Direct Access
5 Points: Near Access
0 Points: No Access

## 5. Intermodal

### (a) Increases Access to the Port

Google Maps was used to determine whether the facility would increase direct access to airports in the region.
5 Points: Yes
0 Points: No

### (b) Improves Flow of Rail

Based on whether facility will improve mobility of rail.
Mobility improvement of rail determined using project description and Google Maps. Google Maps was used to determine whether the facility was near a railroad to affect movement.

5 Points: Yes
0 Points: No

### (c) Increases Access to Airports

Google Maps was used to determine whether the facility would increase direct access to airports in the region.

5 Points: Yes
0 Points: No

### 6. Active Transportation (Bicycle/Pedestrian): (N/A)

## Increased Opportunity

### (a) Provides New or Increased Access Opportunities

Based on change in capacity or reliability:

- New alignment: "New Opportunity" (10 points)
- Widening: "Increased Opportunity" (5 points)
- Removal of Obstacle (e.g. rail crossing): "Increased Opportunity" (5 points)
- Improvements w/o additional capacity (e.g. bridge replacement or road reconstruction): "No Additional Opportunity" (0 points)

### (b) Supports Plans for Future Growth

Based on "Land Use/Future Development Compatibility" in Utility leg:

- For "compatible and officially documented": yes, supports plans for future growth
- For "compatible and not officially documented" or "not compatible": no, does not support plans for future growth

## Economic Distress Factors

### (4. Transit only)

### (a) Provides New Access to the Network

New LRT and Ferry projects provide new access; transfer stations do not.

## (b) Provides Access to Areas with High Unemployment

Localities with unemployment rates >6% in Sept. 2014: Hampton, NN, Norfolk, Portsmouth, and Wlmbg.

## (c) Provides Access to Low Income Areas

Access provided to low income areas was determined via the examination of a GIS map that contained American Community Survey (ACS) data and the 2040 LRTP Candidate Projects. The map showed the percentages of households with incomes in the past 12 months below poverty level. The regional average of households below poverty level is 11.90%.

10 Points: If transit project provides access to low income areas with percentages above the regional average.
0 Points: If transit project does not provide access to low income areas with percentages above the regional average.

# Project Viability

**(same for all categories)**

### Percentage of Funding Committed

0-100%. Provided by stakeholders.

### Project is included in the currently adopted LRTP (or Transit Vision Plan for transit projects, comprehensive plan for Active Transportation projects)

Yes/No. Provided by stakeholders.

### Percentage of Project Design Complete

0-100%. Provided by stakeholders.

### Environmental Documents

Full (NEPA has been completed), Partial (NEPA has been initiated), None. Provided by stakeholders.

### Environmental Documents Decisions Obtained

Yes/No. Provided by stakeholders.

### Right-of-Way and Utilities

Full (both ROW and Utilities have been coordinated), Partial (either ROW or Utilities have been coordinated), None. Provided by stakeholders.

### Additional Environmental Permits

Yes/No/Not Needed. Provided by stakeholders.