

HAMPTON ROADS

Prioritization of Transportation Projects

Project Evaluation and Scoring



HAMPTON ROADS
TPO
TRANSPORTATION PLANNING ORGANIZATION

December 2010

T10-09

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TITLE:

Prioritization of Transportation Projects: Project Evaluation and Scoring

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ABSTRACT:

At its July 2010 meeting, the HRTPO Board approved the transportation project prioritization methodology report, which was the culmination of a year-long effort to create a tool for prioritizing projects.

The analysis, evaluation, and scoring of candidate transportation projects for the 2034 Long-Range Transportation Plan is summarized within the document. The document will serve as a guiding tool for the region to develop regional transportation priorities, which in turn will provide a framework for pursuit of funding for the region's transportation system. Furthermore, this document will be used for the development of a fiscally-constrained 2034 Long-Range Transportation Plan.

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OVERVIEW OF THE HRTPO PRIORITIZATION OF TRANSPORTATION PROJECTS

In July 2009, the Hampton Roads Transportation Planning Organization (HRTPO), with the support of the Virginia Department of Transportation (VDOT), and its consultant Kimley-Horn and Associates (KHA), embarked on the development of a program prioritization tool for regional transportation investments in Hampton Roads. The program prioritization tool serves to prioritize candidate regional transportation projects based on their technical merits and regional benefits in light of scarce financial resources.

The prioritization methodology evaluates transportation projects based on three components: Project Utility, Project Viability, and Economic Vitality. The Hampton Roads Program Priorities Methodology and associated report was approved by the HRTPO Board on July 21, 2010 and the HRTPO staff was directed to apply the methodology for the evaluation of candidate transportation projects under consideration for the 2034 Long-Range Transportation Plan (LRTP). The HRTPO staff conducted a thorough analysis of over 150 proposed candidate regional transportation projects (see Figure 1) as submitted by HRTPO member organizations and input from the public.

At the direction of the HRTPO Board, a single score has been produced for each project by adding the three component scores. The component scores as presented in the following pages are to facilitate understanding of how the projects arrived at a given total score and to provide the information needed for each reader to judge the value of a given project.

This document is intended to provide an overview of scores and facilitate their understanding in an efficient manner. One-page snapshots are included in this document for projects that have previously been part of regional priority discussions, plus additional high-scoring Interstate and Primary projects (see Figure 2 for a map of projects with single-page snapshots). Additionally, Appendix B includes maps of the estimated location of trip origins and destinations for some of the major regional projects in the year 2034. These were provided to the HRTPO Board at their November 2010 meeting as additional information in conjunction with the draft prioritization scores.

It is envisioned that the scoring of transportation projects will require periodic review and maintenance to reflect changes in project definition and project status. Of particular note is the recent emergence of public-private partnerships (“P3’s”) in funding transportation projects in the region. It is expected that the knowledge gained during the progression of this funding mechanism will inform the next iteration of the prioritization tool.

Figure 1: Map of All Candidate Projects.

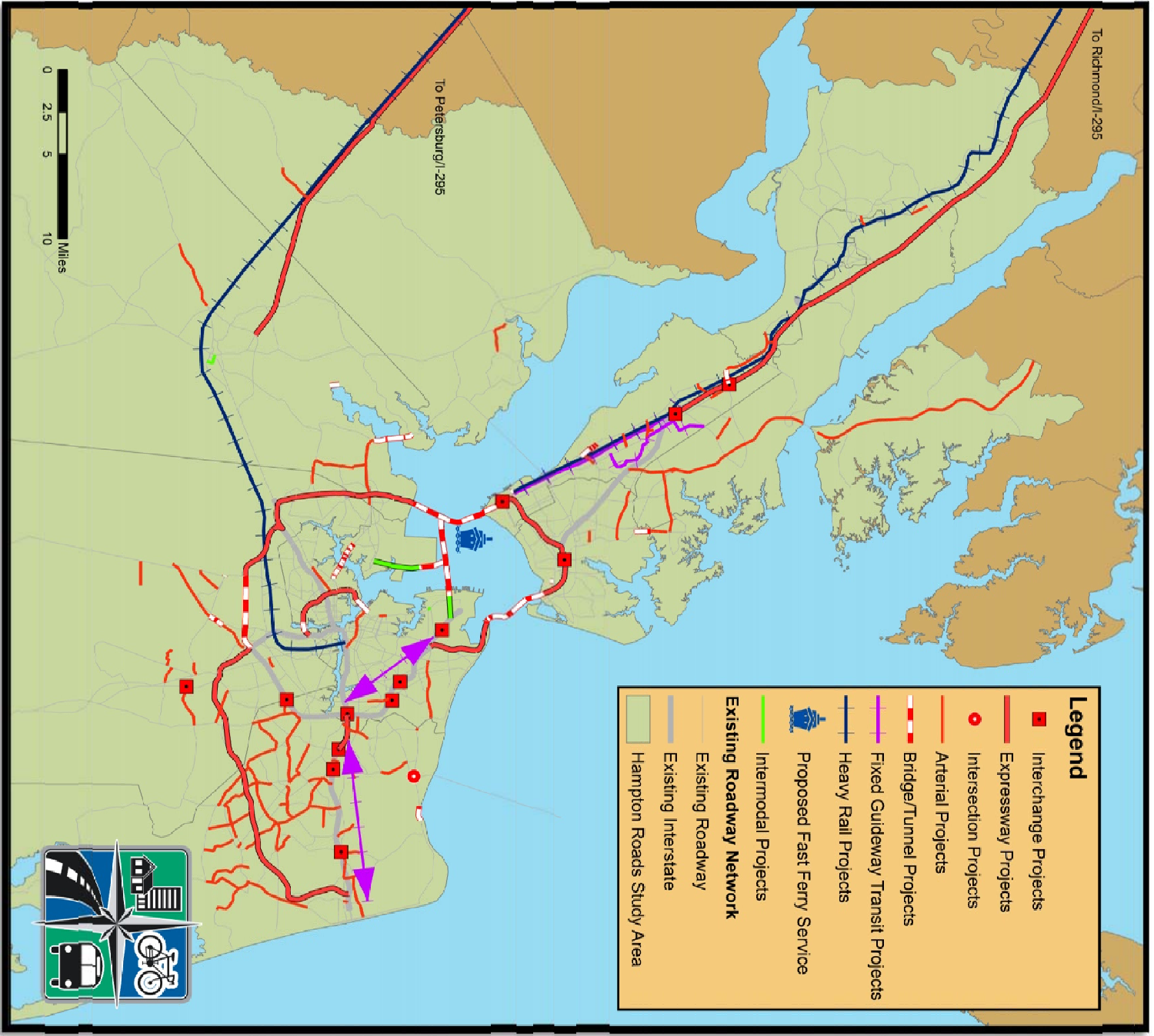
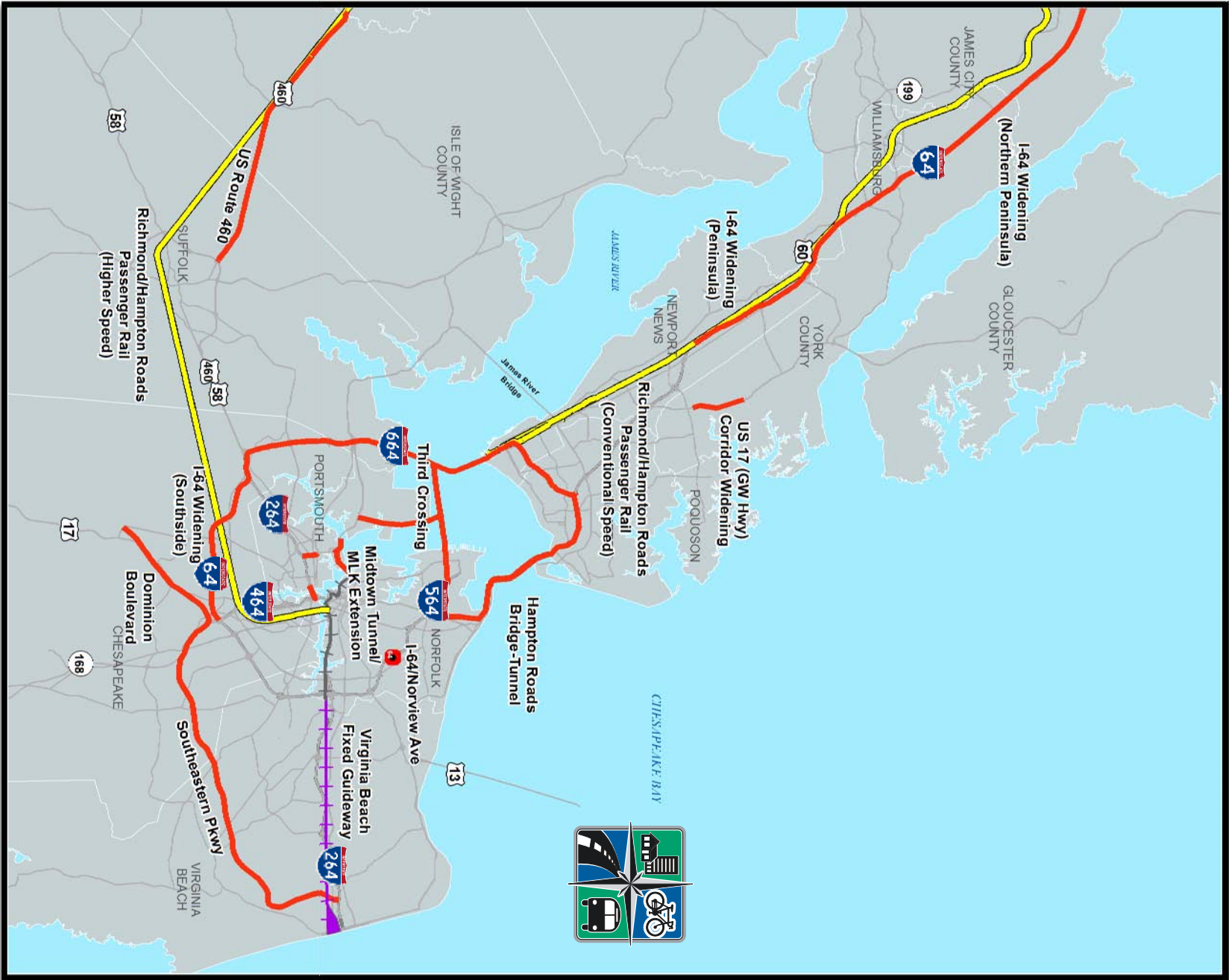


Figure 2: Map of Candidate Projects with One-page Snapshots



Bridge and Tunnel Projects

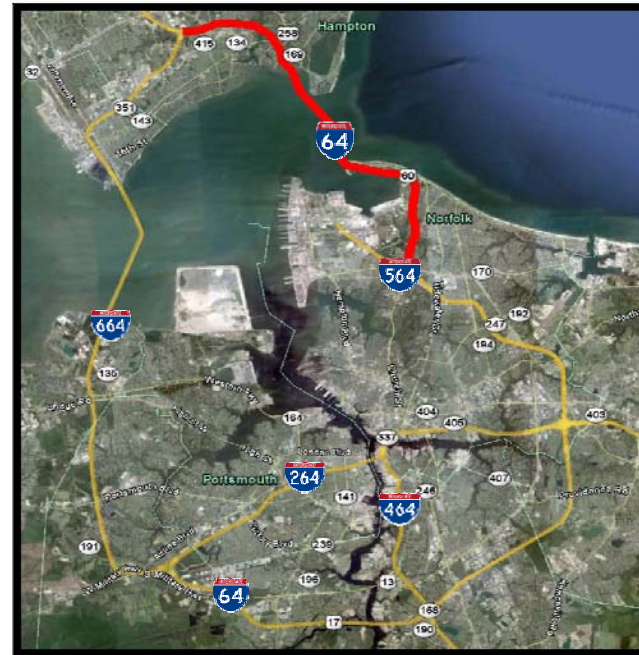
Table 1: Bridge and Tunnel Projects With Snapshots on Following Pages

See Appendix A for all “Bridge and Tunnel” project scores.

Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
INTERSTATE							
HRBT/I-64 (8-lane)	I-64 / I-664 Coliseum Junction	I-64 / I-564 Junction	Multi	75	95	38	208
Third Crossing: Craney Island Connector and Eastern E-W Tunnel Connector	VA 164	I-564	Multi	69	100	34	203
Third Crossing: Complete Implementation	Peninsula	Southside	Multi	71	100	30	201
Third Crossing: Craney Island Connector and East-West Bridge-Tunnel Connector	VA 164 & I-64	I-564	Multi	68	90	32	190
Third Crossing: East-West Bridge-Tunnel Connector	I-564	I-664	Multi	68	90	29	187
Third Crossing: I-664 Widening	I-64 / I-664 Coliseum Junction	I-64 / I-664 Bowers Hill Junction	Multi	65	82	32	179
HRBT/I-64 (6-lane)	Settler's Landing Rd	I-64 / I-564 Junction	Multi	68	95	8	171
I-64 Southside Widening (includes High-Rise Bridge replacement)	I-64 / I-464 Junction	I-64 / I-664 Bowers Hill Junction	CHE	75	85	0	160
PRIMARY							
Midtown Tunnel / MLK Freeway extension	Hampton Blvd	I-264	Multi	74	82	86	242
Dominion Boulevard	Oak Grove Connector	Cedar Road	CHE	95	45	81	221

Project Description

DESCRIPTION OF WORK: Per recent PPTA proposal submitted to VDOT, expand capacity across Hampton Roads from 4 lanes to 8 lanes and expand approaches from 4 lanes to 6 lanes.



75

95

38

208

Cost Source: Virginia Department of Transportation PPTA Proposal

- Development of an EIS for an expansion of the HRBT was recently begun. VDOT also recently received a PPTA proposal for the expansion and is accepting proposals for 120 days.
- Project reduces severe recurring congestion at the primary gateway to South Hampton Roads.
- Project significantly improves regional travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations.

Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
HRBT/I-64 (8-lane)	I-64 / I-664 Coliseum Junction	I-64 / I-564 Junction	Multi	208
Third Crossing: Craney Island Connector and Eastern E-W Tunnel Connector	VA 164	I-564	Multi	203
Third Crossing: Complete Implementation	Peninsula	Southside	Multi	201
Third Crossing: Craney Island Connector and East-West Bridge- Tunnel Connector	VA 164 & I-64	I-564	Multi	190
Third Crossing: East-West Bridge- Tunnel Connector	I-564	I-664	Multi	187
Third Crossing: I-664 Widening	I-64 / I-664 Coliseum Junction	I-64 / I-664 Bowers Hill Junction	Multi	179
HRBT/I-64 (6-lane)	Settler's Landing Rd	I-64 / I-564 Junction	Multi	171
I-64 Southside Widening (includes High-Rise Bridge replacement)	I-64 / I-664 Junction	I-64 / I-664 Bowers Hill Junction	CHE	160



Third Crossing: Craney Island Connector and Eastern E-W Tunnel

Project Description

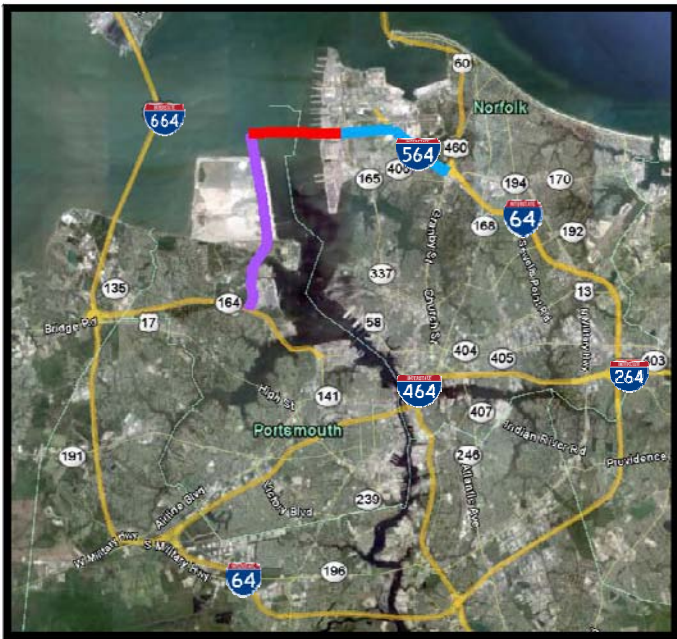
SYSTEM: Interstate (Bridges and Tunnels)

FROM: I-64/I-564

TO: VA-164

DESCRIPTION OF WORK:

- **New 4-lane East-West Bridge-Tunnel connector from Craney Island to Norfolk**
- **New 4-lane limited access Craney Island Connector from E-W B/T Connector to VA-164**
- **New 4-lane limited access Intermodal Connector from I-564 to E-W B/T Connector; widen I-564**



Project Utility

69

Economic Vitality

100

Project Viability

34

Total Project Score

203

Estimated Total Construction Cost

\$2.1 Billion

Cost Source: Virginia Department of Transportation

Summary of Prioritization Scores

- This project is composed of components of the Third Crossing, which has a NEPA process completed and ROD rendered.
- The project provides a new access opportunity inside the Beltway and access to Craney Island.
- Project significantly improves travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations.

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
HRBT/I-64 (8-lane)	I-64 / I-664 Coliseum Junction	I-64 / I-564 Junction	Multi	208
Third Crossing: Craney Island Connector and Eastern E-W Tunnel Connector	VA 164	I-564	Multi	203
Third Crossing: Complete Implementation	Peninsula	Southside	Multi	201
Third Crossing: Craney Island Connector and East-West Bridge- Tunnel Connector	VA 164 & I-64	I-564	Multi	190
Third Crossing: East-West Bridge- Tunnel Connector	I-564	I-664	Multi	187
Third Crossing: I-664 Widening	I-64 / I-664 Coliseum Junction	I-64 / I-664 Bowers Hill Junction	Multi	179
HRBT/I-64 (6-lane)	Settler's Landing Rd	I-64 / I-564 Junction	Multi	171
I-64 Southside Widening (includes High-Rise Bridge replacement)	I-64 / I-464 Junction	I-64 / I-664 Bowers Hill Junction	CHE	160



Third Crossing: Complete Implementation

Project Description

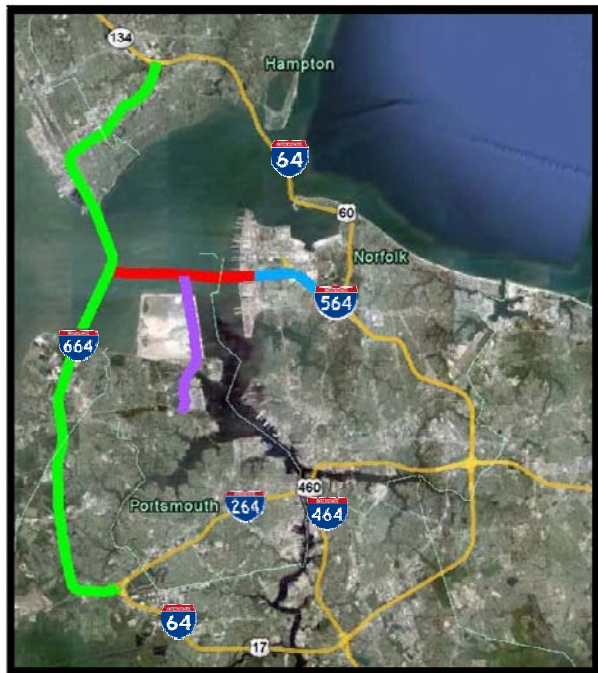
SYSTEM: Interstate (Bridges and Tunnels)

FROM: Peninsula

TO: Southside

DESCRIPTION OF WORK:

- **New 4-lane multimodal East-West Bridge-Tunnel connector from I-664 to Norfolk,**
- **New 4-lane limited access Craney Island Connector from E-W B/T Connector midpoint to VA-164,**
- **New 4-lane limited access multimodal Intermodal Connector from I-564 to E-W B/T Connector; widen I-564**
- **Widen I-664 to 6-lanes (CH/SU) and 8-lanes plus multi-modal lanes (NN/HM)**



Project Utility

71

Economic Vitality

100

Project Viability

30

Total Project Score

201

Estimated Total Construction Cost
\$5.4 Billion

Cost Source: Virginia Department of Transportation

Summary of Prioritization Scores

- The Third Crossing Complete Implementation project has a completed NEPA process and ROD rendered.
- The project provides new multi-modal options between the Peninsula and Southside and associated benefits of a new facility (Craney Island access, evacuation routes).
- Project significantly improves travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations.

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
HRBT/I-64 (8-lane)	I-64 / I-664 Coliseum Junction	I-64 / I-564 Junction	Multi	208
Third Crossing: Craney Island Connector and Eastern E-W Tunnel Connector	VA 164	I-564	Multi	203
Third Crossing: Complete Implementation	Peninsula	Southside	Multi	201
Third Crossing: Craney Island Connector and East-West Bridge- Tunnel Connector	VA 164 & I-64	I-564	Multi	190
Third Crossing: East-West Bridge- Tunnel Connector	I-564	I-664	Multi	187
Third Crossing: I-664 Widening	I-64 / I-664 Coliseum Junction	I-64 / I-664 Bowers Hill Junction	Multi	179
HRBT/I-64 (6-lane)	Settler's Landing Rd	I-64 / I-564 Junction	Multi	171
I-64 Southside Widening (includes High-Rise Bridge replacement)	I-64 / I-464 Junction	I-64 / I-664 Bowers Hill Junction	CHE	160



Third Crossing: East-West Bridge-Tunnel Connector & Craney Island Connector

Project Description

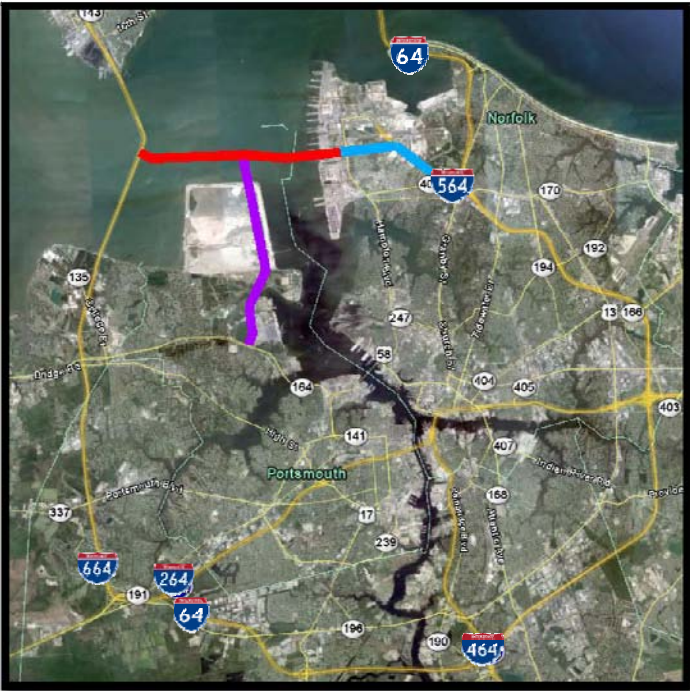
SYSTEM: Interstate (Bridges and Tunnels)

FROM: I-64/I-564

TO: I-564 (Future) / I-664 & VA-164

DESCRIPTION OF WORK:

- **New 4-lane multimodal East-West Bridge-Tunnel connector from I-664 to Norfolk**
- **New 4-lane limited access Craney Island Connector from E-W B/T Connector to VA-164**
- **New 4-lane limited access multimodal Intermodal Connector from I-564 to E-W B/T Connector**
- **Widen I-564 from I-64 to future Intermodal Connector to 8-lanes**



Project Utility

68

Economic Vitality

90

Project Viability

32

Total Project Score

190

Estimated Total Construction Cost
\$2.9 Billion

Cost Source: Virginia Department of Transportation

Summary of Prioritization Scores

- This project is a component of the Third Crossing which has a NEPA process completed and ROD rendered.
- The project provides a new access opportunity inside the Beltway and evacuation route.
- Project improves travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations.

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
HRBT/I-64 (8-lane)	I-64 / I-664 Coliseum Junction	I-64 / I-564 Junction	Multi	208
Third Crossing: Craney Island Connector and Eastern E-W Tunnel Connector	VA 164	I-564	Multi	203
Third Crossing: Complete Implementation	Peninsula	Southside	Multi	201
Third Crossing: Craney Island Connector and East-West Bridge- Tunnel Connector	VA 164 & I-64	I-564	Multi	190
Third Crossing: East-West Bridge- Tunnel Connector	I-564	I-664	Multi	187
Third Crossing: I-664 Widening	I-64 / I-664 Coliseum Junction	I-64 / I-664 Bowers Hill Junction	Multi	179
HRBT/I-64 (6-lane)	Settler's Landing Rd	I-64 / I-564 Junction	Multi	171
I-64 Southside Widening (includes High-Rise Bridge replacement)	I-64 / I-464 Junction	I-64 / I-664 Bowers Hill Junction	CHE	160

INTERSTATE 564 **Third Crossing: East-West Bridge-Tunnel Connector**

Project Description

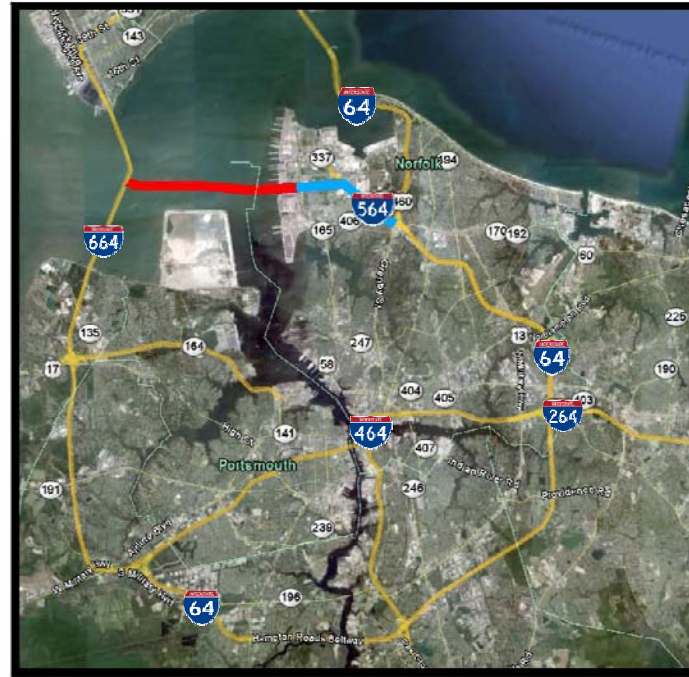
SYSTEM: Interstate (Bridges and Tunnels)

FROM: I-64/I-564

TO: I-564 (Future) / I-664

DESCRIPTION OF WORK:

- **New 4-lane multimodal East-West Bridge-Tunnel connector from I-664 to Norfolk**
- **New 4-lane limited access multimodal Intermodal Connector from I-564 to E-W B/T Connector**
- **Widen I-564 from I-64 to future Intermodal Connector to 8-lanes**



Project Utility

68

Economic Vitality

90

Project Viability

29

Total Project Score

187

Estimated Total Construction Cost

\$2.2 Billion

Cost Source: Virginia Department of Transportation

Summary of Prioritization Scores

- This project is a component of the Third Crossing which has a NEPA process completed and ROD rendered.
- The project provides a new access opportunity inside the Beltway and evacuation route.
- Project improves travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations.

Overview of Prioritization Ranking

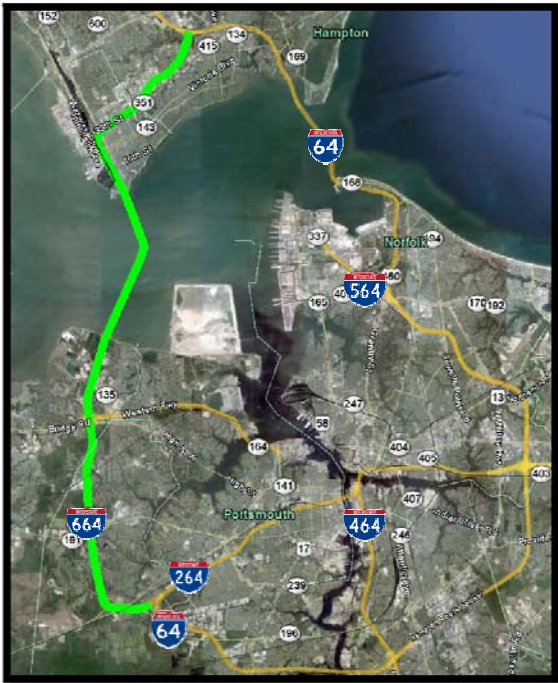
Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
HRBT/I-64 (8-lane)	I-64 / I-664 Coliseum Junction	I-64 / I-564 Junction	Multi	208
Third Crossing: Craney Island Connector and Eastern E-W Tunnel Connector	VA 164	I-564	Multi	203
Third Crossing: Complete Implementation	Peninsula	Southside	Multi	201
Third Crossing: Craney Island Connector and East-West Bridge- Tunnel Connector	VA 164 & I-64	I-564	Multi	190
Third Crossing: East-West Bridge- Tunnel Connector	I-564	I-664	Multi	187
Third Crossing: I-664 Widening	I-64 / I-664 Coliseum Junction	I-64 / I-664 Bowers Hill Junction	Multi	179
HRBT/I-64 (6-lane)	Settler's Landing Rd	I-64 / I-564 Junction	Multi	171
I-64 Southside Widening (includes High-Rise Bridge replacement)	I-64 / I-464 Junction	I-64 / I-664 Bowers Hill Junction	CHE	160



Third Crossing: I-664 Widening

Project Description

SYSTEM: Interstate (Bridges and Tunnels)
FROM: I-64/I-264/I-664 at Bowers Hill
TO: I-64/I-664 at Coliseum
DESCRIPTION OF WORK: Widen I-664 to 6-lanes (CH/SU) and 8-lanes (NN/HM)



Project Utility

65

Economic Vitality

82

Project Viability

32

Total Project Score

179

Estimated Total Construction Cost
\$2.5 Billion

Cost Source: Virginia Department of Transportation

Summary of Prioritization Scores

- This project is a component of the Third Crossing which has a NEPA process completed and ROD rendered.
- Project would expand capacity between Peninsula and Southside and improve recurring congestion at Bowers Hill.
- Project improves regional travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations.

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
HRBT/I-64 (8-lane)	I-64 / I-664 Coliseum Junction	I-64 / I-564 Junction	Multi	208
Third Crossing: Craney Island Connector and Eastern E-W Tunnel Connector	VA 164	I-564	Multi	203
Third Crossing: Complete Implementation	Peninsula	Southside	Multi	201
Third Crossing: Craney Island Connector and East-West Bridge- Tunnel Connector	VA 164 & I-64	I-564	Multi	190
Third Crossing: East-West Bridge- Tunnel Connector	I-564	I-664	Multi	187
Third Crossing: I-664 Widening	I-64 / I-664 Coliseum Junction	I-64 / I-664 Bowers Hill Junction	Multi	179
HRBT/I-64 (6-lane)	Settler's Landing Rd	I-64 / I-564 Junction	Multi	171
I-64 Southside Widening (includes High-Rise Bridge replacement)	I-64 / I-464 Junction	I-64 / I-664 Bowers Hill Junction	CHE	160



Hampton Roads Bridge-Tunnel (6-lane Option)

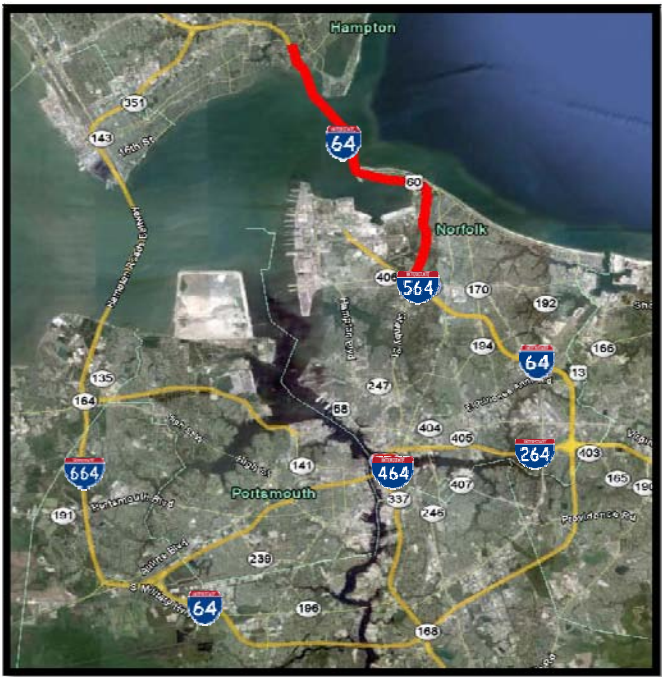
Project Description

SYSTEM: Interstate (Bridges and Tunnels)

FROM: Settler's Landing Road

TO: I-64/I-564

DESCRIPTION OF WORK: Add capacity by widening from 2 lanes in each direction to 3 general purpose lanes in each direction.



Project Utility

68

Economic Vitality

95

Project Viability

8

Total Project Score

171

Estimated Total Construction Cost

\$3.0 Billion

Cost Source: HRTPO Planning Level Estimate

Summary of Prioritization Scores

- Development of an EIS for an expansion of the HRBT was recently begun.
- Project provides for expanded capacity between Peninsula and Southside.
- Project improves regional travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations.

Overview of Prioritization Ranking

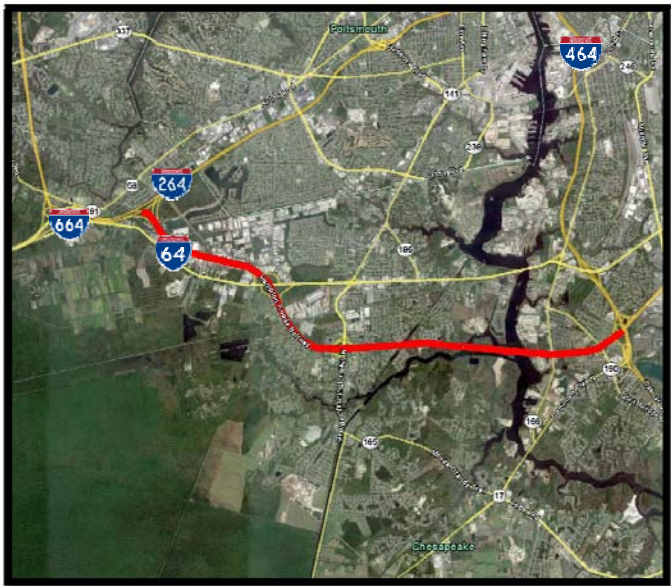
Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
HRBT/I-64 (8-lane)	I-64 / I-664 Coliseum Junction	I-64 / I-564 Junction	Multi	208
Third Crossing: Craney Island Connector and Eastern E-W Tunnel Connector	VA 164	I-564	Multi	203
Third Crossing: Complete Implementation	Peninsula	Southside	Multi	201
Third Crossing: Craney Island Connector and East-West Bridge- Tunnel Connector	VA 164 & I-64	I-564	Multi	190
Third Crossing: East-West Bridge- Tunnel Connector	I-564	I-664	Multi	187
Third Crossing: I-664 Widening	I-64 / I-664 Coliseum Junction	I-64 / I-664 Bowers Hill Junction	Multi	179
HRBT/I-64 (6-lane)	Settler's Landing Rd	I-64 / I-564 Junction	Multi	171
I-64 Southside Widening (includes High-Rise Bridge replacement)	I-64 / I-464 Junction	I-64 / I-664 Bowers Hill Junction	CHE	160



Southside Widening

Project Description

SYSTEM: Interstate (Highways)
FROM: I-64/I-464
TO: I-64/I-264/I-664 at Bowers Hill
DESCRIPTION OF WORK: Add capacity by widening from 2 lanes in each direction to 3 general purpose lanes in each direction. Replace the High-Rise Bridge



Project Utility

75

Economic Vitality

85

Project Viability

0

Total Project Score

160

Estimated Total Construction Cost

\$1.1 Billion

Cost Source: Virginia Department of Transportation

Summary of Prioritization Scores

- The I-64 Southside Widening project has no progress towards an EIS.
- 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 Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
HRBT/I-64 (8-lane)	I-64 / I-664 Coliseum Junction	I-64 / I-564 Junction	Multi	208
Third Crossing: Craney Island Connector and Eastern E-W Tunnel Connector	VA 164	I-564	Multi	203
Third Crossing: Complete Implementation	Peninsula	Southside	Multi	201
Third Crossing: Craney Island Connector and East-West Bridge- Tunnel Connector	VA 164 & I-64	I-564	Multi	190
Third Crossing: East-West Bridge- Tunnel Connector	I-564	I-664	Multi	187
Third Crossing: I-664 Widening	I-64 / I-664 Coliseum Junction	I-64 / I-664 Bowers Hill Junction	Multi	179
HRBT/I-64 (6-lane)	Settler's Landing Rd	I-64 / I-564 Junction	Multi	171
I-64 Southside Widening (includes High-Rise Bridge replacement)	I-64 / I-464 Junction	I-64 / I-664 Bowers Hill Junction	CHE	160



Midtown Tunnel and Martin L. King Freeway extension

Project Description

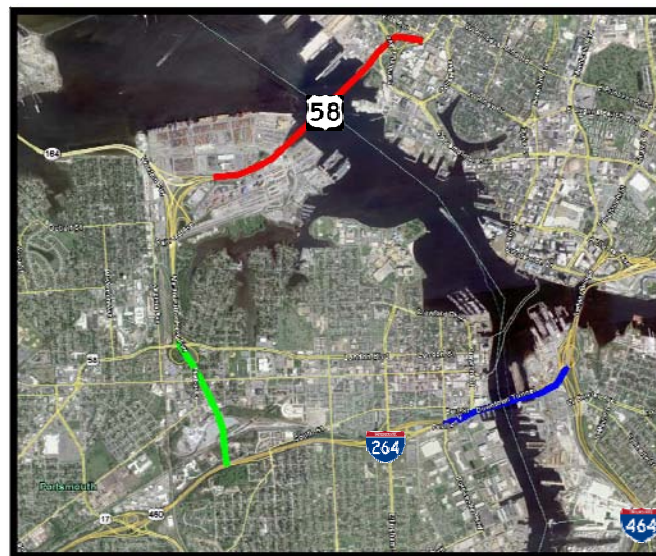
SYSTEM: Primary (Bridges and Tunnels)

FROM: Hampton Boulevard

TO: I-264

DESCRIPTION OF WORK:

- **Build new 2-lane tunnel, upgrade existing 2-lane tunnel**
- **Extend MLK Freeway from existing termini to I-264**
- **Safety improvements at the Downtown Tunnel**



Project Utility

74

Economic Vitality

82

Project Viability

86

Total Project Score

242

Estimated Total Construction Cost

\$1.3 Billion

Cost Source: Virginia Department of Transportation

Summary of Prioritization Scores

- The Midtown Tunnel/MLK Freeway Extension project is currently undergoing PPTA negotiations; NEPA process is complete and ROD rendered.
- Project reduces significant recurring congestion, and serves the region with expanded capacity across the Elizabeth River.
- Project greatly improves travel time and reliability to major employment centers, port facilities, defense installations, and tourist destinations.

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
PRIMARY				
Midtown Tunnel / MLK Freeway extension	Hampton Blvd	I-264	Multi	242
Dominion Boulevard	Oak Grove Connector	Cedar Road	CHE	221
MLK Freeway extension to I-464	I-464	I-264/MLK Freeway North	POR	176

17 Dominion Boulevard

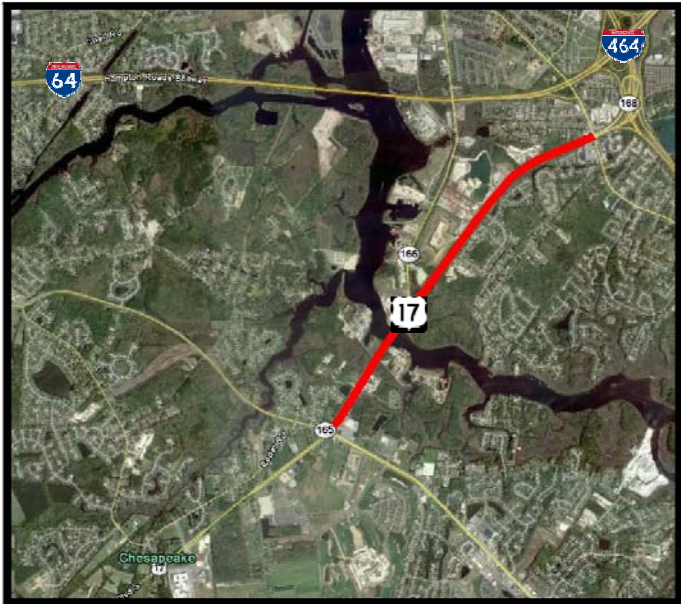
Project Description

SYSTEM: Primary (Bridges and Tunnels)

FROM: Great Bridge Boulevard

TO: Cedar Road

DESCRIPTION OF WORK: Widen from 2-lane undivided arterial to a 4-lane limited access highway, add urban interchanges at Great Bridge Blvd, Bainbridge Blvd, and Cedar Rd, replacing the Steel drawbridge into a fixed span bridge.



Project Utility

95

Economic Vitality

45

Project Viability

81

Total Project Score

221

Estimated Total Construction Cost

\$435 Million

Cost Source: City of Chesapeake

Summary of Prioritization Scores

- The Dominion Boulevard project has a NEPA process complete and FONSI rendered, and ROW Acquisition/Utilities Coordination underway. Tolling options are being evaluated.
- Project reduces congestion by upgrading a 2-lane road to a limited-access 4-lane facility with a fixed span bridge.
- Project provides moderate travel time and reliability improvements to major employment centers and tourist destinations.

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
PRIMARY				
Midtown Tunnel / MLK Freeway extension	Hampton Blvd	I-264	Multi	242
Dominion Boulevard	Oak Grove Connector	Cedar Road	CHE	221
MLK Freeway extension to I-464	I-464	I-264/MLK Freeway North	POR	176

Highway Projects

Table 2: Highway Projects With Snapshots on Following Pages

See Appendix A for all “Highway” project scores.

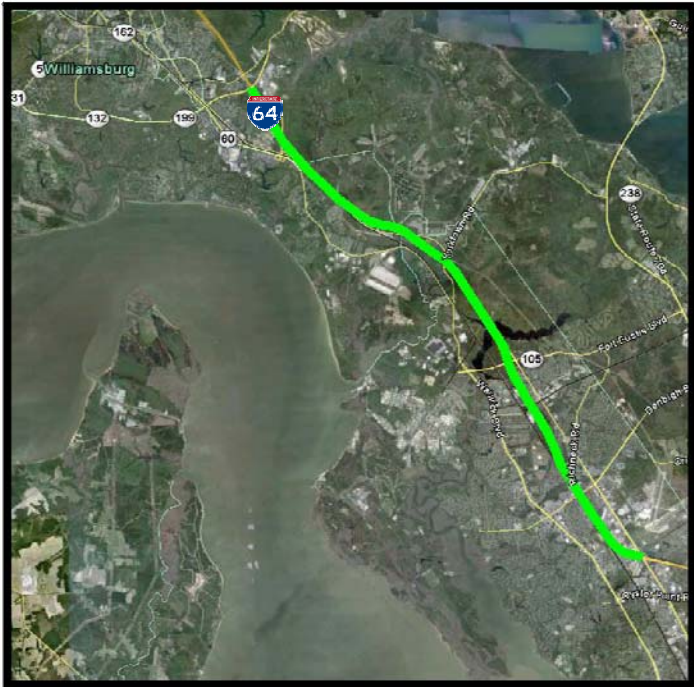
Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
INTERSTATE							
I-64 Peninsula Widening	Jefferson Ave (Exit 255)	Route 199 (Exit 242)	Multi	85	75	18	178
I-64 Northern Peninsula Widening	Route 199 (Exit 242)	New Kent CL	Multi	73	38	8	119
PRIMARY							
Route 17 (G.W. Memorial Highway)	Hampton Hwy (Route 134)	Dare Rd	YORK	82	40	80	202
US 460 Relocation	Suffolk Bypass at US 58	Prince George County at I-295	Multi	71	53	63	187
Southeastern Parkway & Greenbelt	I-264	Chesapeake Expy	Multi	80	80	20	180



Peninsula Widening

Project Description

SYSTEM: Interstate (Highways)
FROM: Jefferson Avenue (Exit 255)
TO: VA-199 (Exit 242)
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

85

Economic Vitality

75

Project Viability

18

Total Project Score

178

Estimated Total Construction Cost
\$779 Million

Cost Source: Virginia Department of Transportation

Summary of Prioritization Scores

- A VDOT study of I-64 between Hampton Roads and Richmond was recently begun.
- Project reduces congestion, improves safety, and expands upon an evacuation route.
- Project moderately improves region-wide travel time savings to major employment centers, port facilities, defense installations, and tourist destinations.

Overview of Prioritization Ranking

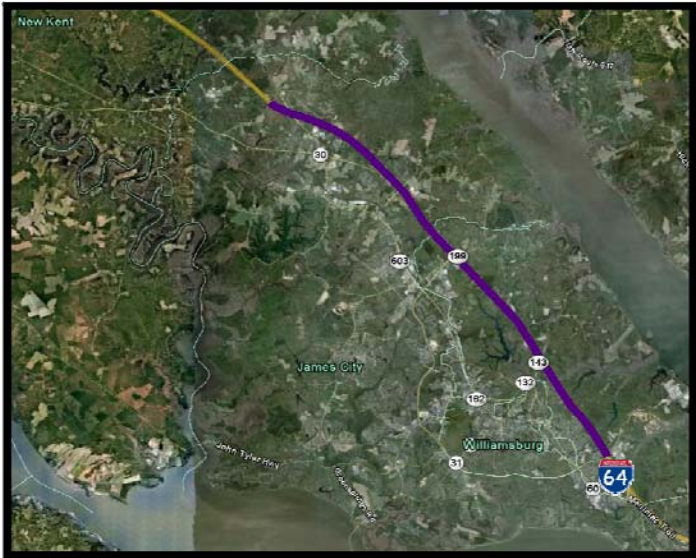
Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
I-64 Peninsula Widening	Jefferson Ave (Exit 255)	Route 199 (Exit 242)	Multi	178
I-64 Northern Peninsula Widening	Route 199 (Exit 242)	New Kent CL	Multi	119



Northern Peninsula Widening

Project Description

SYSTEM: Interstate (Highways)
FROM: VA-199 (Exit 242)
TO: VA-30 (Exit 227)
DESCRIPTION OF WORK: Analysis of I-64 corridor to Richmond is currently being addressed in VDOT study. Evaluated for prioritization as a widening to 4 lanes in each direction.



Project Utility

73

Economic Vitality

38

Project Viability

8

Total Project Score

119

Estimated Total Construction Cost

\$1.1 Billion

Cost Source: HRTPO Planning Level Estimate for I-64 in Hampton Roads.

Summary of Prioritization Scores

- A VDOT study of I-64 between Hampton Roads and Richmond was recently begun. EIS has not been completed.
- Project improves safety and expands capacity of an evacuation route.
- Project moderately improves travel time and reliability to tourist destinations.

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
I-64 Peninsula Widening	Jefferson Ave (Exit 255)	Route 199 (Exit 242)	Multi	178
I-64 Northern Peninsula Widening	Route 199 (Exit 242)	New Kent CL	Multi	119

17 George Washington Memorial Highway Corridor Widening

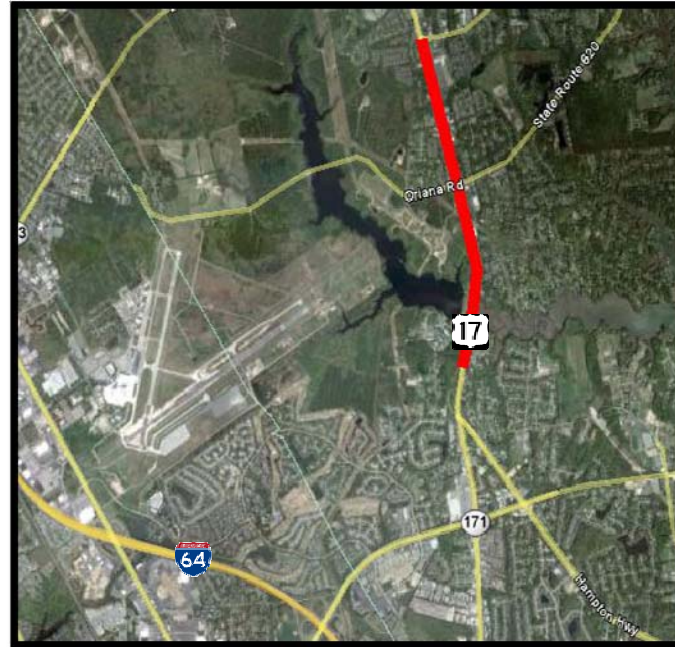
Project Description

SYSTEM: Primary (Highways)

FROM: Hampton Highway

TO: Dare Road

DESCRIPTION OF WORK: Widen from 4-lane divided arterial to a 6-lane divided arterial.



Project Utility

82

Economic Vitality

40

Project Viability

80

Total Project Score

202

Estimated Total Construction Cost

\$57 Million

Cost Source: Virginia Department of Transportation

Summary of Prioritization Scores

- The project has a NEPA process complete and ROD rendered, and design and ROW/utilities underway.
- Project improves an evacuation route and improves safety.
- Project provides moderate travel time and reliability improvements to major employment centers.

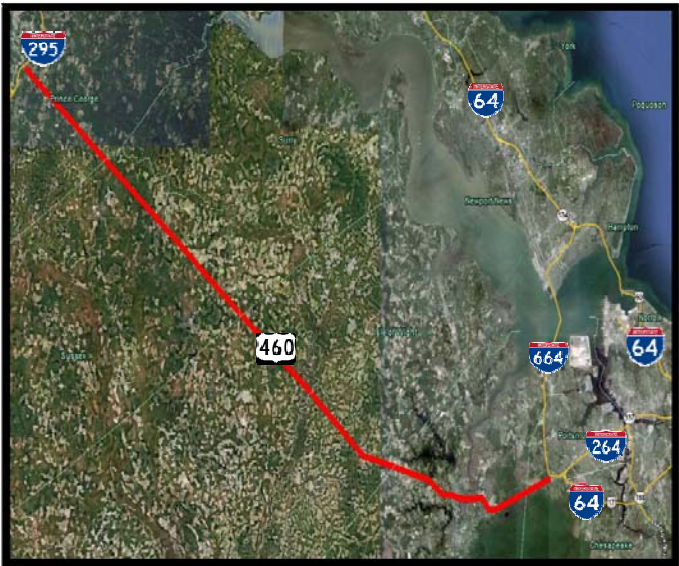
Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
PRIMARY				
Route 17 (G.W. Memorial Highway)	Hampton Hwy (Route 134)	Dare Rd	YORK	202
US 460 Relocation	Suffolk Bypass at US 58	Prince George County at I-295	Multi	187
Southeastern Parkway & Greenbelt	I-264	Chesapeake Expy	Multi	180
Route 17 (G.W. Memorial Highway)	Dare Rd	Denbigh Blvd/Goodwin Neck Rd (Route 173)	YORK	146
Route 60 Relocated	Newport News CL	Blow Flats Rd	JCC	140
Route 17 (G.W. Memorial Highway)	Newport News CL	Victory Blvd (Route 171)	YORK	109
Route 17 (G.W. Memorial Highway)	Denbigh Blvd/Goodwin Neck Rd (Route 173)	Fort Eustis Blvd (Route 105)	YORK	109
Route 17 (G.W. Memorial Highway)	Victory Blvd (Route 171)	Hampton Hwy (Route 134)	YORK	108
Route 171 (Victory Boulevard)	Hampton Hwy (Route 134)	Poquoson CL	YORK	106
Route 17 (G.W. Memorial Highway)	Fort Eustis Blvd (Route 105)	Coleman Bridge	YORK	106

460 Corridor Improvements

Project Description

SYSTEM: Primary (Highways)
FROM: Suffolk Bypass
TO: I-295 (Prince George County, VA)
DESCRIPTION OF WORK: Build new 4-lane limited access tollway parallel to existing undivided arterial. VDOT is currently reviewing three PPTA proposals, with construction costs ranging from \$1.5 Billion to \$2.7 Billion.



Project Utility

71

Economic Vitality

53

Project Viability

63

Total Project Score

187

Estimated Total Construction Cost
\$1.5 to \$2.7 Billion

Cost Source: Virginia Department of Transportation PPTA Proposals (range)

Summary of Prioritization Scores

- The US Route 460 project has NEPA process complete and ROD rendered and three PPTA proposals being reviewed. The amount of public subsidy varies by proposal.
- Project provides for a new limited-access route to/from the region, providing for a greatly enhanced evacuation route and improved safety.
- Project greatly improves travel time and reliability to port facilities, defense installations, and tourist destinations.

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
PRIMARY				
Route 17 (G.W. Memorial Highway)	Hampton Hwy (Route 134)	Dare Rd	YORK	202
US 460 Relocation	Suffolk Bypass at US 58	Prince George County at I-295	Multi	187
Southeastern Parkway & Greenbelt	I-264	Chesapeake Expy	Multi	180
Route 17 (G.W. Memorial Highway)	Dare Rd	Denbigh Blvd/Goodwin Neck Rd (Route 173)	YORK	146
Route 60 Relocated	Newport News CL	Blow Flats Rd	JCC	140
Route 17 (G.W. Memorial Highway)	Newport News CL	Victory Blvd (Route 171)	YORK	109
Route 17 (G.W. Memorial Highway)	Denbigh Blvd/Goodwin Neck Rd (Route 173)	Fort Eustis Blvd (Route 105)	YORK	109
Route 17 (G.W. Memorial Highway)	Victory Blvd (Route 171)	Hampton Hwy (Route 134)	YORK	108
Route 171 (Victory Boulevard)	Hampton Hwy (Route 134)	Poquoson CL	YORK	106
Route 17 (G.W. Memorial Highway)	Fort Eustis Blvd (Route 105)	Coleman Bridge	YORK	106

Southeastern Parkway and Greenbelt

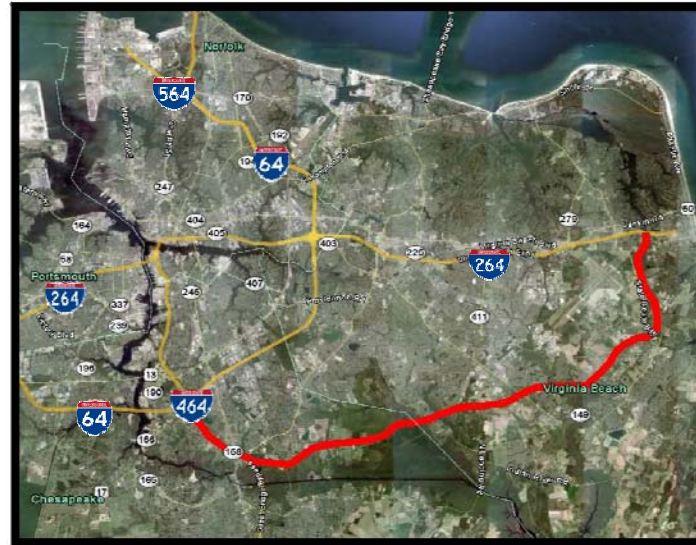
Project Description

SYSTEM: Primary (Highways)

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

80

Economic Vitality

80

Project Viability

20

Total Project Score

180

Estimated Total Construction Cost

\$2.5 Billion

Cost Source: City of Virginia Beach

Summary of Prioritization Scores

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

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
PRIMARY				
Route 17 (G.W. Memorial Highway)	Hampton Hwy (Route 134)	Dare Rd	YORK	202
US 460 Relocation	Suffolk Bypass at US 58	Prince George County at I-295	Multi	187
Southeastern Parkway & Greenbelt	I-264	Chesapeake Expy	Multi	180
Route 17 (G.W. Memorial Highway)	Dare Rd	Denbigh Blvd/Goodwin Neck Rd (Route 173)	YORK	146
Route 60 Relocated	Newport News CL	Blow Flats Rd	JCC	140
Route 17 (G.W. Memorial Highway)	Newport News CL	Victory Blvd (Route 171)	YORK	109
Route 17 (G.W. Memorial Highway)	Denbigh Blvd/Goodwin Neck Rd (Route 173)	Fort Eustis Blvd (Route 105)	YORK	109
Route 17 (G.W. Memorial Highway)	Victory Blvd (Route 171)	Hampton Hwy (Route 134)	YORK	108
Route 171 (Victory Boulevard)	Hampton Hwy (Route 134)	Poquoson CL	YORK	106
Route 17 (G.W. Memorial Highway)	Fort Eustis Blvd (Route 105)	Coleman Bridge	YORK	106

Multimodal Passenger Transportation Projects

Table 3: Multimodal Passenger Transportation Projects with Snapshots on Following Pages

See Appendix A for all Transit project scores.

Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
FIXED GUIDEWAY							
VB Fixed Guideway Transit Project	Norfolk CL @ LRT terminus (Newtown Rd)	Oceanfront	VB	87	94	23	204

A snapshot of the **Richmond to Hampton Roads Passenger Rail Project** is also provided on the following pages.

Virginia Beach Fixed Guideway Project

Project Description

SYSTEM: Fixed Guideway

FROM: Newtown Road Station

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 Road to the Oceanfront are being evaluated.



Project Utility

87

Economic Vitality

94

Project Viability

23

Total Project Score

204

Estimated Total Construction Cost

Costs are currently being developed as part of Virginia Beach Transit Extension Study

Cost Source: Hampton Roads Transit

Summary of Prioritization Scores

- The Virginia Beach Fixed Guideway project is currently under study (Virginia Beach Transit Extension Study); ROW acquisition/utilities coordination underway.
- Project reduces emissions, is compatible with Virginia Beach's Strategic Growth Areas, and provides connectivity to the Norfolk LRT.
- Project provides new travel options for major employment centers and tourist destinations.

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
FIXED GUIDEWAY				
VB Fixed Guideway Transit Project	Norfolk CL @ LRT terminus (Newtown Rd)	Oceanfront	VB	204
Naval Station Norfolk Fixed Guideway Transit Project	Norfolk CL @ LRT terminus (Newtown Rd)	Naval Station Norfolk	NOR	187
Peninsula Fixed Guideway Transit Project (A3 Alignment)	Christopher Newport University	Huntington Pointe	NN	113
Peninsula Fixed Guideway Transit Project (A1 Alignment)	Newport News City Hall	Denbigh Blvd	NN	111

Richmond to Hampton Roads Passenger Rail Project

Project Description

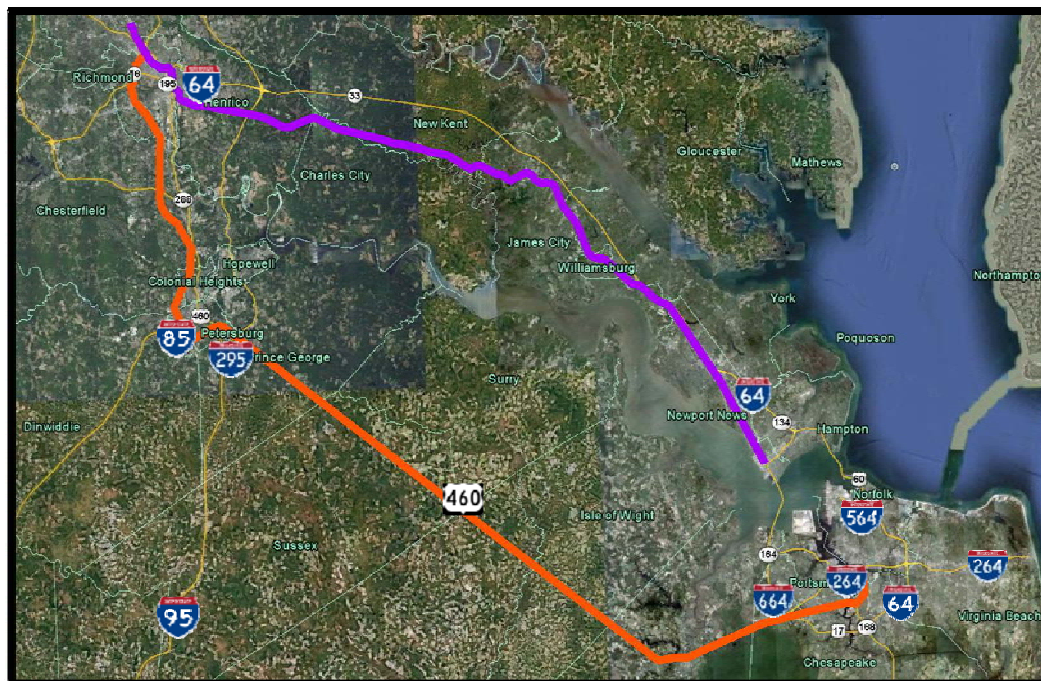
SYSTEM: Intercity Passenger Rail

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.



Summary of Prioritization Scores

The Richmond to Hampton Roads Passenger Rail Project is a significant regional transportation project for the Hampton Roads region. A Tier I EIS is currently being finalized with the FRA, which then will allow the region to pursue a Tier II EIS process, studying detailed impacts of the project, and get it closer towards completing the NEPA process. The DRPT has invested \$90 million to bring an introductory, daily roundtrip service to the Southside, starting in FY 2014, and the City of Norfolk is building a multimodal transit station to provide passenger rail service with connectivity to other regional transit services. Prioritization scoring was not developed for this project since no similar projects are under consideration and the region has been supportive of the project endorsed by the HRTPO Board.

**Estimated Total
Construction Cost
\$785 Million**

Cost Source: Virginia Department of Rail and Public Transportation

\$475 million cost (2008 dollars) in DEIS was converted to year-of-expenditure dollars using assumed 2025 date of operation per Richmond to Hampton Roads Passenger Rail Project Tier I DEIS.

Intermodal Transportation Projects

Table 4: Intermodal Transportation Projects With Snapshots on Following Pages

See Appendix A for all Intermodal Transportation project scores.

Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
URBAN							
Craney Island Access Road	VA 164 and Median Rail	Craney Island Marine Terminal with Interchange and Connection to Elizabeth River Crossing	POR	75	60	54	189

A snapshot of the **Intermodal Connector Project** is also provided on the following pages.

Craney Island Access Road

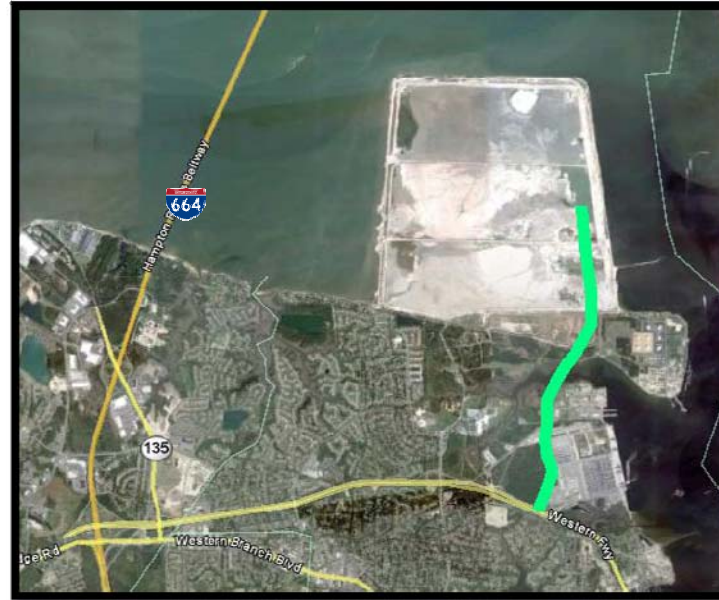
Project Description

SYSTEM: Urban

FROM: VA-164

TO: Craney Island Marine Terminal (Future)

DESCRIPTION OF WORK: Construction of two lane undivided arterial from VA-164 (Western Freeway) to Craney Island Marine Terminal (Future). Construction of an interchange at VA-164 for the new arterial.



Project Utility

75

Economic Vitality

60

Project Viability

54

Total Project Score

189

Estimated Total Construction Cost
\$400 Million

Cost Source: Virginia Port Authority

Summary of Prioritization Scores

- The Craney Island Access Road project is currently under environmental review, partially funded, and ROW acquisition/utilities coordination underway.
- Project provides conflict-free, direct intermodal roadway access for future Craney Island Marine Terminal.
- Project allows further economic development of future Craney Island Marine Terminal

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
URBAN				
Craney Island Access Road	VA 164 and Median Rail	Craney Island Marine Terminal with Interchange and Connection to Elizabeth River Crossing	POR	189
Finney Ave Flyover	Pinner St	Route 13/337 E Washington St	SUF	139
Hampton Blvd (Route 337) Interchange - Int'l Terminal Blvd Gate Improvement	Trouville Ave/Portor St	Hampton Blvd	NOR	115



Intermodal Connector

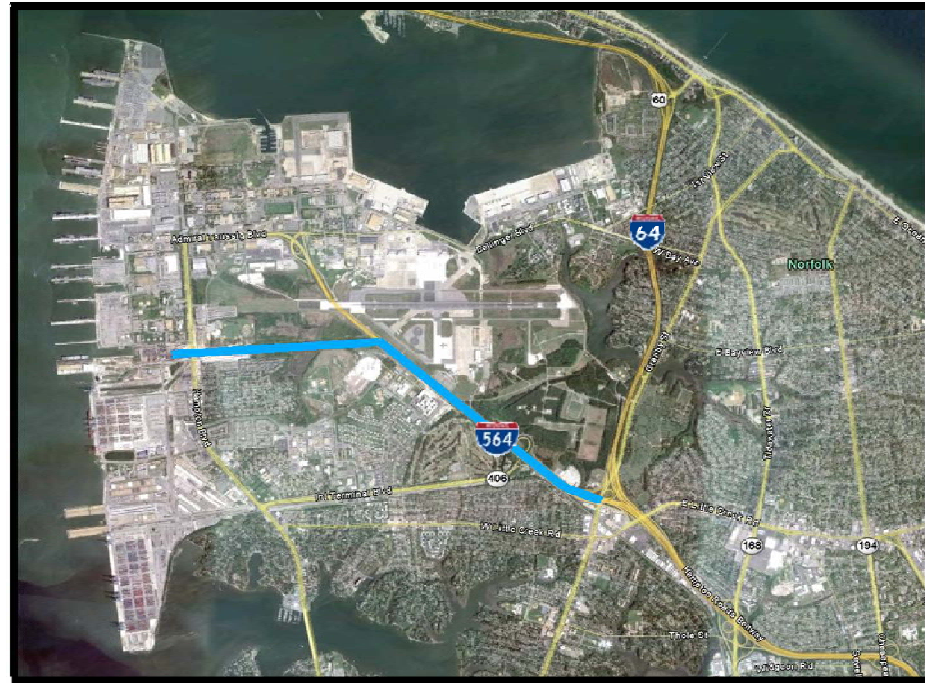
Project Description

SYSTEM: Interstate

FROM: I-564 / I-64 Junction

TO: Hampton Boulevard

DESCRIPTION OF WORK: New 4-lane limited access multimodal Intermodal Connector from I-564 to Hampton Blvd and Future E-W B/T Connector; widen I-564



Summary of Prioritization Scores

- Intermodal Connector is a component of the Third Crossing, which has a ROD. The Intermodal Connector project is not evaluated in the prioritization tool due to the Intermodal Connector being fully funded in the current SYIP.
- Project provides conflict free intermodal movements, provides added access point to Naval Station Norfolk, and improves freight and military traffic flow in the area.
- Project significantly improves travel time and reliability to major employment centers, defense installations, and port facilities.

**Estimated Total
Construction Cost
\$170 Million**

Cost Source: Virginia Department of
Transportation

Highway Interchange Projects

Table 5: Highway Interchange Projects With Snapshots on Following Pages

See Appendix A for all Highway Interchange project scores.

Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
INTERSTATE							
I-64 @ Norview Avenue Interchange	Interstate 64 Eastbound	Norview Avenue Eastbound/Westbound	NOR	67	32	97	196



Interchange at Norview Avenue

Project Description

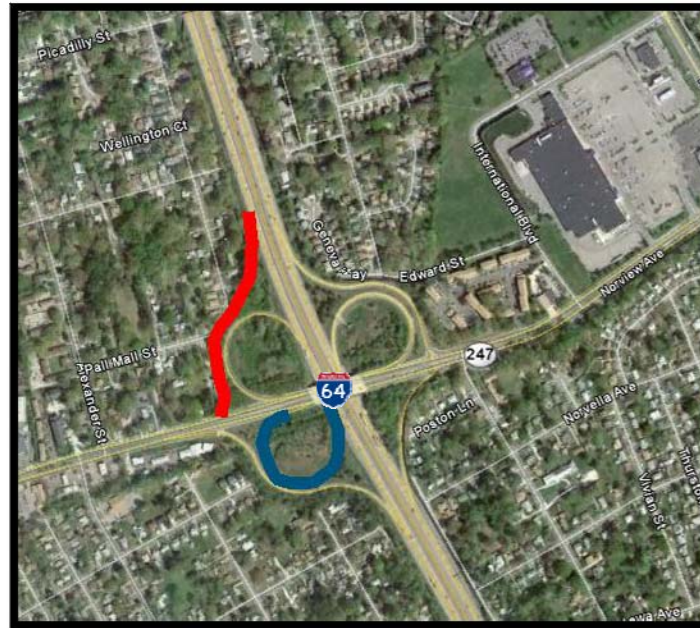
SYSTEM: Interstate

FROM: Interstate 64 EB

TO: Norview Avenue EB/WB

DESCRIPTION OF WORK:

- Closure of existing I-64 at Norview exit ramp.
- Construction of new exit ramp north of interchange, accessing EB and WB Norview Avenue



Project Utility

67

Economic Vitality

32

Project Viability

97

Total Project Score

196

Estimated Total Construction Cost

\$7.9 Million

Cost Source: Virginia Department of Transportation

Summary of Prioritization Scores

- The Interstate 64 Interchange at Norview Avenue project design is nearly complete. ROW acquisition/utilities coordination underway.
- Project provides enhanced safety benefits and reduces conflict movements.
- Project provides enhanced access to Norfolk International Airport.

Overview of Prioritization Ranking

Project Name	From	To	Jurisdiction	Total Project Score
INTERSTATE				
I-64 @ Norview Avenue Interchange	Interstate 64 Eastbound	Norview Avenue Eastbound/Westbound	NOR	196
I-264/Witchduck Interchange	NA	NA	VB	192
I-264 EB Ramp from I-64 WB	Curlew Drive	Witchduck Road	Multi	179
I-64 Interchange @ LaSalle Avenue	Interstate 64 Westbound	LaSalle Avenue	HM	170
I-264/Independence Blvd Interchange	NA	NA	VB	168
I-64/464 Interchange	Interstate 64 Eastbound	Interstate 464 Northbound	CHE	154
I-564 @ Chambers Field (Air Terminal Interchange)	NA	NA	NOR	150
I-64 @ Ft. Eustis Blvd	NA	NA	NN	149
I-264/Lynnhaven Interchange Phase II	NA	NA	VB	137

Appendix A: Complete Prioritization Scores

In the following pages, a listing of prioritization scores for all candidate projects is included. Projects are organized by project category (highways, highway interchanges, bridges and tunnels, transit, and intermodal). Projects are further organized by roadway system, except transit (organized by transit mode).

The following tables have notated the projects scoring highest within each component in the tool as well as the total project score. For highway projects, the top ten projects are notated. For highway interchanges and bridges and tunnels, the top five projects are notated. For intermodal and transit projects, the top two projects are notated.

Highway Projects

Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
INTERSTATE							
I-64 Peninsula Widening	Jefferson Ave (Exit 255)	Rte 199 (Exit 242)	Multi	85	75	18	178
I-64 Northern Peninsula Widening	Rte 199 (Exit 242)	New Kent CL	Multi	73	38	8	119
PRIMARY							
Route 17 (G.W. Memorial Highway)	Hampton Hwy (Route 134)	Dare Rd	YORK	82	40	80	202
US 460 Relocation	Suffolk Bypass at US 58	Prince George County at I-295	Multi	71	53	63	187
Southeastern Parkway	I-264	Chesapeake Expy	Multi	80	80	20	180
Route 17 (G.W. Memorial Highway)	Dare Rd	Denbigh Blvd/Goodwin Neck Rd (Route 173)	YORK	79	32	35	146
Route 60 Relocated	Newport News CL	Blow Flats Rd	JCC	67	27	46	140
Route 17 (G.W. Memorial Highway)	Newport News CL	Victory Blvd (Route 171)	YORK	78	26	5	109
Route 17 (G.W. Memorial Highway)	Denbigh Blvd/Goodwin Neck Rd (Route 173)	Fort Eustis Blvd (Route 105)	YORK	78	26	5	109
Route 17 (G.W. Memorial Highway)	Victory Blvd (Route 171)	Hampton Hwy (Route 134)	YORK	73	30	5	108
Route 171 (Victory Boulevard)	Hampton Hwy (Route 134)	Poquoson CL	YORK	75	26	5	106
Route 17 (G.W. Memorial Highway)	Fort Eustis Blvd (Route 105)	Coleman Bridge	YORK	71	30	5	106
Route 17 (G.W. Memorial Highway)	1 mi North of Coleman Bridge	Main St	GLO	67	30	5	102
Route 171 (Victory Boulevard)	George Washington Memorial Hwy (Route 17)	Hampton Hwy (Route 134)	YORK	67	23	5	95
Route 17 (G.W. Memorial Highway)	Main St	Ark Rd	GLO	49	21	5	75
US 258 Widening	US 460	Sunset Dr	IoW	48	15	8	71
SECONDARY							
South Church Street	Battery Park Rd	Talbot Dr	IoW	57	17	13	87
Mooretown Road Extension	Northern Terminus of Mooretown Rd	Rochambeau Dr/Croaker Rd	JCC	51	20	5	76
Battery Park Road	S. Church St	Nike Park Rd	IoW	41	20	5	66
Skiffes Creek Connector (Rte 60/143 Connector)	Green Mount Pkwy Int	Merrimac Tr (Rte 143)	JCC	34	25	5	64
URBAN							
Lynnhaven Pkwy	Centerville Tnpk	Indian River Rd	VB	62	30	99	191
Holland Road (Route 58)	Route 58 Bypass Ramp	0.7 miles west of Manning Bridge Rd	SUF	75	34	71	180
Middle Ground Blvd	Jefferson Ave	Warwick Blvd (Rte 60)	NN	55	38	79	172
Wythe Creek Road	Alphus St	Hampton CL	POQ	63	26	78	167
Nansemond Pkwy (Route 337) Phase II	Helen St (Phase I Limits)	Chesapeake CL	SUF	62	19	78	159
Military Hwy	Lowery Rd	Robin Hood Rd	NOR	69	26	62	157
Seaboard Road	Nimmo Pkwy	Princess Anne Rd	VB	38	22	95	155
Bridge Road (Route 17)	Mills Godwin Bridge	Chesapeake CL	SUF	70	34	50	154
Turnpike Road	Portsmouth Blvd	Constitution Ave	POR	38	12	92	142
Holland Road	Nimmo Pkwy	Dam Neck Rd	VB	58	22	61	141
Witchduck Road	I-264	Virginia Beach Blvd	VB	80	28	33	141
Saunders Road	Newport News CL	Big Bethel Rd	HM	48	25	66	139
Portsmouth Boulevard	Joliff Rd	Chesapeake City Line	CHE	53	22	63	138
Route 60 Relocated	Fort Eustis Blvd	James City CL	NN	65	22	48	135
Mt. Pleasant Road, Phase 1	Chesapeake Expy	Etheridge Rd	CHE	59	26	49	134
Wythe Creek Road & Bridge	Commander Shepard Blvd	Poquoson CL	HM	70	24	30	124
Cedar Road	Albermarle Dr	Battlefield Blvd	CHE	80	26	15	121
J. Clyde Morris Blvd (Route 17)	I-64	York CL	NN	74	27	13	114
Dam Neck Road	Holland Rd	Drakesmile Rd	VB	67	47	0	114
Holland Road	Rosemont Rd	Independence Blvd	VB	76	28	10	114
Laskin Road	Republic Rd	Oriole Dr	VB	38	17	59	114
Dam Neck Road	Drakesmile Rd	London Bridge Rd	VB	68	41	0	109
Indian River Road	Lynnhaven Pkwy	Elbow Rd	VB	40	17	52	109
Atkinson Boulevard Phase 1	Warwick Blvd (Rte 60)	Jefferson Ave	NN	53	22	32	107
Virginia Beach Blvd	Glenrock Rd	Newtown Rd	NOR	65	24	15	104
Indian River Road	Centerville Tnpk	Ferrell Pkwy	VB	72	22	10	104
Mt. Pleasant Road, Phase 2	Etheridge Rd	Centerville Tnpk	CHE	62	26	15	103
First Colonial Rd	Old Donation Pkwy	VA Beach Blvd	VB	65	28	10	103
Oyster Point Road	Jefferson Ave	Warwick Blvd (Rte 60)	NN	73	28	0	101
Brambleton Ave	Midtown Tunnel	I-264	NOR	67	26	7	100
Laskin Road	Oriole Dr	30th/31st St	VB	46	17	37	100
Newtown Road	Baker Rd	Virginia Beach Blvd	VB	76	24	0	100

Highway Projects

Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
URBAN							
Jefferson Avenue (Route 143)	Green Grove Lane	Fort Eustis Blvd (Route 105)	NN	65	21	13	99
Hampton Blvd	21st St	38th St	NOR	57	31	10	98
Elbow Rd/Dam Neck Rd	Indian River Rd	Princess Anne Road	VB	41	22	35	98
West Neck Pkwy Ext'd	Elbow Rd	North Landing Rd	VB	61	27	10	98
Little Creek Road	Tidewater Dr	Shore Dr	NOR	55	23	19	97
Victory Blvd	Wythe Creek Rd	York CL	POQ	65	22	10	97
Centerville Tnpk	Kempsville Rd	Indian River Rd	VB	60	27	10	97
Rosemont Road	Virginia Beach Blvd	Holland Rd	VB	58	28	10	96
South Independence Blvd	Holland Rd	South Plaza Trail	VB	70	26	0	96
Independence Blvd	Haygood Rd	Northampton Blvd	VB	58	26	10	94
Princess Anne Road	Providence Rd	Salem Rd	VB	71	23	0	94
Providence Road	Kempsville Rd	Princess Anne Rd	VB	56	26	10	92
Centerville Tnpk	Chesapeake CL	Kempsville Rd	VB	54	26	10	90
Dam Neck Road	Princess Anne Rd	Holland Rd	VB	67	23	0	90
Liberty Parkway (Patrick Henry Place)	Oyster Point Rd	Freedom Way	NN	32	27	30	89
Shore Drive	Norfolk CL	Diamond Springs Rd	VB	60	28	0	88
Independence Blvd	Denhigh Blvd (Route 173)	Fort Eustis Blvd (Route 105)	NN	47	20	20	87
Rosemont Road	Buckner Blvd	Lynnhaven Pkwy	VB	59	28	0	87
Newtown Road	Virginia Beach Blvd	Curlew Dr	NOR	57	24	5	86
General Booth Blvd	Oceana Blvd	Dam Neck Rd	VB	69	17	0	86
Ironbound Road (Rt. 615)	Richmond Road	Longhill Connector	WBG	49	22	15	86
Hanbury Road	Johnstown Rd	Battlefield Blvd	CHE	46	24	15	85
General Booth Blvd	Princess Anne Rd	Dam Neck Rd	VB	52	22	10	84
North Great Neck Road	Virginia Beach Blvd	Wolfsnare Rd	VB	58	26	0	84
Ferrell Pkwy	Indian Lakes Blvd	Indian River Rd	VB	58	24	0	82
Ferrell Pkwy	Pleasant Valley Rd	Salem Rd	VB	60	22	0	82
Lynnhaven Pkwy	Holland Rd	Princess Anne Rd	VB	58	24	0	82
Ferrell Pkwy	Indian Lakes Blvd	Pleasant Valley Rd	VB	59	22	0	81
Coliseum Drive Connector	Coliseum Dr at Sentara	Armistead Ave	HM	40	25	15	80
Holland Road	Dam Neck Rd	Rosemont Rd	VB	48	17	10	75
Nimmo Pkwy	Indian River Rd/North Landing Rd	West Neck Rd Ext'd	VB	33	31	10	74
Laskin Road	Great Neck Road	Republic Rd	VB	49	22	0	71
Sandbridge Road	Princess Anne Rd	Atwoodtown Rd	VB	41	20	10	71
East Crossing of I-264	Constitution Dr (Extension)	South Independence Blvd	VB	46	24	0	70
Princess Anne Road	Upton Dr	General Booth Blvd	VB	38	22	10	70
West Neck Road	North Landing Rd	Indian River Rd	VB	42	17	10	69
Shoulders Hill Road (Route 626)	Bridge Rd (Route 17)	Nansemond Pkwy (Route 337)	SUF	48	17	3	68
West Crossing of I-264	Aragona Blvd	Bonney Rd	VB	44	24	0	68
General Booth Blvd	Birdneck Rd	Oceana Blvd	VB	45	22	0	67
Salem Road	Elbow Rd	Independence Blvd	VB	40	17	10	67
Virginia Beach Blvd	I-264	First Colonial Rd	VB	50	17	0	67
West Neck Pkwy Ext'd	North Landing Rd	Indian River Rd	VB	30	27	10	67
Butts Station Road	Kempsville Rd	Centerville Tnpk	CHE	44	17	5	66
London Bridge Road	Dam Neck Rd	Shipp's Corner Rd	VB	44	22	0	66
G.W. Memorial Highway (Route 17)	Sawyers Mill Rd	Moses Grandy Trail	CHE	29	21	15	65
Jeanne Street	Constitution Dr	Independence Blvd	VB	38	17	10	65
Waters Road Phase 2	Old Vintage Rd	Johnstown Rd	CHE	46	12	5	63
North Lynnhaven Road	Kings Grant Rd	Virginia Beach Blvd	VB	46	17	0	63
Silina Drive	Rosemont Rd	South Lynnhave Rd	VB	46	17	0	63
Woodlake Drive Extended	Woodlake Dr	Battlefield Blvd	CHE	36	20	6	62
South Lynnhaven Road	Virginia Beach Blvd	Lynnhaven Pkwy	VB	44	17	0	61
Airport Access Road	West Rd	Dominion Blvd (US 17 South)	CHE	29	25	5	59
Birdneck Road	I-264	Virginia Beach Blvd	VB	42	17	0	59
Cleveland Street	Witchduck Road	Clearfield Ave	VB	42	17	0	59
Princess Anne Road	Sandbridge Rd	Indian River Rd	VB	34	22	0	56
Harpersville Road	Warwick Blvd (Rte 60)	Jefferson Ave	NN	33	22	0	55
Indian River Road	Elbow Rd	North Landing Rd	VB	28	17	10	55
Waters Road Phase 1	Washington Dr	Old Vintage Rd	CHE	33	12	5	50
Indian River Road	West Neck Rd	North Landing Rd	VB	28	20	0	48
Salem Road	Elbow Rd	North Landing Rd	VB	30	17	0	47
Seaboard Road	Princess Anne Rd (North)	Princess Anne Rd (South)	VB	29	17	0	46

Highway Interchange Projects

Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
INTERSTATE							
I-64/Norview Ave Interchange	Interstate 64 Eastbound	Norview Avenue Eastbound/Westbound	NOR	67	32	97	196
I-264/Witchduck Interchange	NA	NA	VB	92	63	37	192
I-264 EB Ramp from I-64 WB	Curlew Dr	Witchduck Rd	Multi	74	64	41	179
I-64 Interchange @ Lasalle Avenue	Interstate 64 Westbound	Lasalle Avenue	HM	66	34	70	170
I-264/Independence Blvd Interchange	NA	NA	VB	90	67	11	168
I-64/464 Interchange	Interstate 64 Eastbound	Interstate 464 Northbound	CHE	75	54	25	154
I-564 @ Chambers Field (Air Terminal Interchange)	NA	NA	NOR	74	53	23	150
I-64 @ Ft. Eustis Blvd	NA	NA	NN	85	49	15	149
I-264/Lynnhaven Interchange Phase II	NA	NA	VB	71	51	23	145
I-64 Interchange @ Bland Blvd/Denbigh Blvd	NA	NA	NN	75	52	14	141
I-64/City Line Interchange and Arterial	I-64	Centerville Tnpk	Multi	55	38	21	114
I-64 @ Military Hwy	Military Highway Northbound	I-64 Eastbound	NOR	43	32	5	80
I-664/Terminal Avenue Interchange	I-664 at Terminal Interchange	Jefferson Ave via 12th St.	NN	41	24	0	65
PRIMARY							
Chesapeake Expressway Interchange @ Mt. Pleasant Road	NA	NA	CHE	61	26	15	102
URBAN							
Northampton Blvd/Shore Dr Interchange	NA	NA	VB	58	31	10	99

Bridge and Tunnel Projects							
Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
INTERSTATE							
HRBT/I-64 (8-lane)	I-64 / I-664 Coliseum Junction	I-64 / I-564 Junction	Multi	75	95	38	208
Third Crossing: Craney Island Connector and Eastern E-W Tunnel Connector	VA 164	I-564	Multi	69	100	34	203
Third Crossing: Complete Implementation	Peninsula	Southside	Multi	71	100	30	201
Third Crossing: East-West Bridge-Tunnel Connector & Craney Island Connector	I-564	VA 164 & I-664	Multi	68	90	32	190
Third Crossing: East-West Bridge-Tunnel Connector	I-564	I-664	Multi	68	90	29	187
Third Crossing: I-664 Widening	I-64 / I-664 Coliseum Junction	I-64 / I-664 Bowers Hill Junction	Multi	65	82	32	179
HRBT/I-64 (6-lane)	Settler’s Landing Rd	I-64 / I-564 Junction	Multi	68	95	8	171
I-64 Southside Widening (includes High-Rise Bridge replacement)	I-64 / I-464 Junction	I-64 / I-664 Bowers Hill Junction	CHE	75	85	0	160
PRIMARY							
Midtown Tunnel / MLK Freeway extension	Hampton Blvd	I-264	Multi	74	82	86	242
Dominion Boulevard	Oak Grove Connector	Cedar Road	CHE	95	45	81	221
MLK Freeway extension to I-464	I-464	I-264/MLK Fwy North	POR	86	90	0	176
URBAN							
Route 60 John Lesner Bridge (Shore Drive)	East Stratford Rd	Vista Circle	VB	66	52	55	173
Fort Eustis Boulevard Bridge Replacements over Lee Hall Reservoir	Warwick Blvd	I-64	NN	58	28	80	166
Route 17 (Bridge Rd)	Crittenden Rd	Bennets Pasture Rd	SUF	64	36	50	150
Kings Highway Bridge	Governors Wharf	Lighthouse Dr	SUF	60	29	50	139
Warwick Blvd Bridge Replacement over Lake Maury	Gatewood Rd	J. Clyde Morris Blvd	NN	68	17	50	135
High Street (Churchland Bridge)	Shenadoah St	High Point Dr	POR	64	23	45	132
Washington Avenue Bridge Replacement over Northrop Grumman Railroad Spur	39th St	41st St	NN	56	2	53	111
Bridge Street Bridge	Rudd Ln	Marrow St	HM	49	0	53	102

Multimodal Passenger Transportation Projects

Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
Fixed Guideway							
VB Fixed Guideway Transit Project	Norfolk CL @ LRT terminus (Newtown Rd)	Oceanfront	VB	87	94	23	204
Naval Station Norfolk Fixed Guideway Transit Project	Norfolk CL @ LRT terminus (Newtown Rd)	Naval Station Norfolk	NOR	89	88	10	187
Peninsula Fixed Guideway Transit Project (A3 Alignment)	Christopher Newport University	Huntington Pointe	NN	63	40	10	113
Peninsula Fixed Guideway Transit Project (A1 Alignment)	Newport News City Hall	Denbigh Blvd	NN	54	57	0	111
Maritime Transit							
Fast Ferry Service	Newport News	Naval Station Norfolk and Norfolk Waterside	Multi	63	67	0	130
Passenger Rail							
Richmond to Hampton Roads Passenger Rail Project	Richmond	Hampton Roads	Multi	N/A	N/A	N/A	N/A

Intermodal Transportation Projects

Project Name	From	To	Jurisdiction	Project Utility	Economic Vitality	Project Viability	Total Project Score
URBAN							
Craney Island Access Road	VA 164 and Median Rail	Craney Island Marine Terminal with Interchange and Connection to Elizabeth River Crossing	POR	75	60	54	189
Finney Ave Flyover	Pinner St	Route 13/337 E Washington St	SUF	74	50	15	139
Hampton Blvd (Route 337) Interchange - Int'l Terminal Blvd Gate Improvement	Trouville Ave/Portor St	Hampton Blvd	NOR	60	55	0	115

Appendix B: Regional Transportation Project Dot Maps

In the following pages, a collection of dot maps for projects covered in this report is included. The dot maps cover trip ends that would use the project, and highlight the usage of the proposed project within the region.

Projects with dot maps include the following:

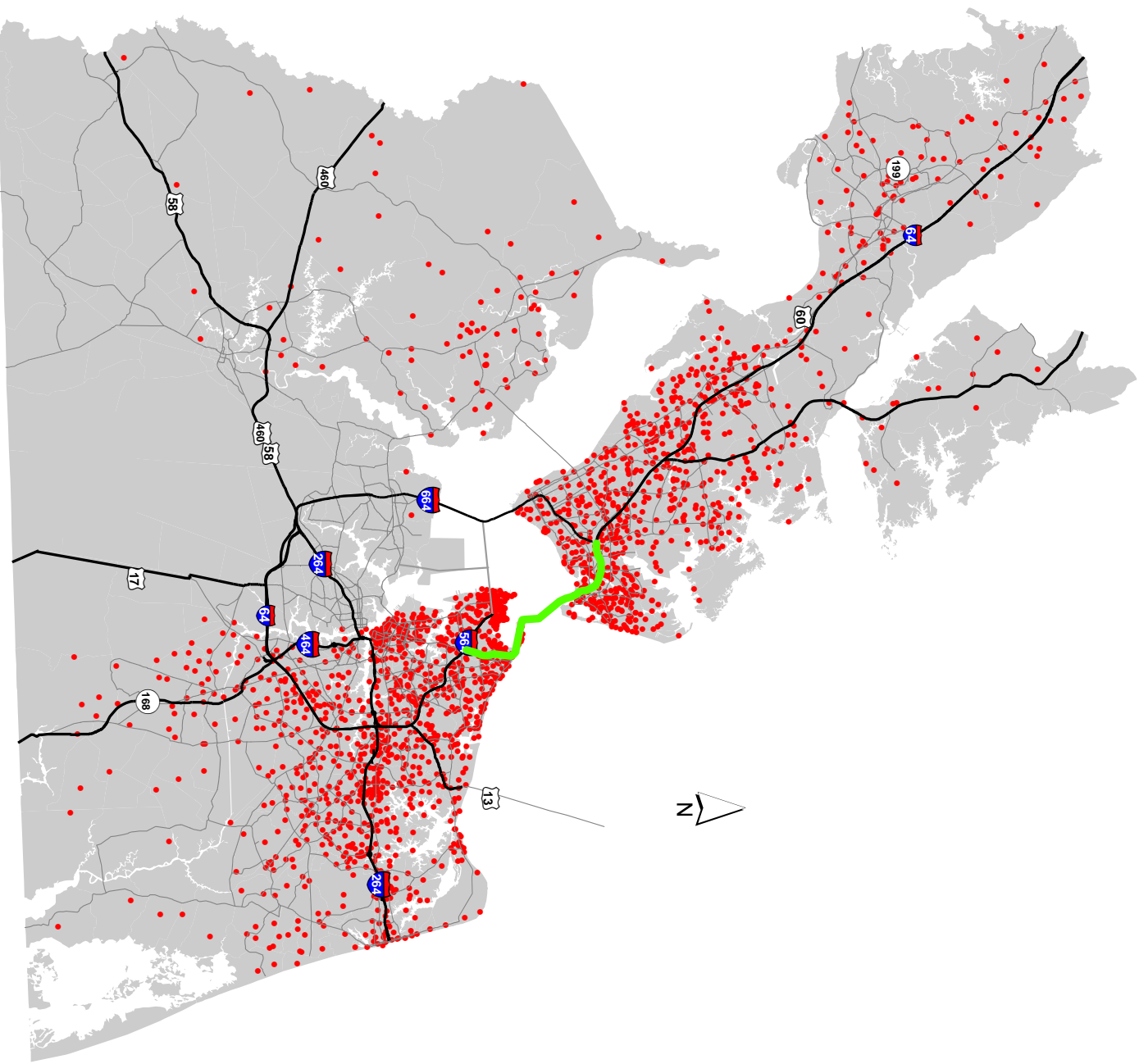
- Hampton Roads Bridge-Tunnel (8 lanes)
- Third Crossing: Complete Implementation
- Midtown Tunnel / Martin L. King Freeway Extension / Downtown Tunnel
- Dominion Boulevard
- I-64 Southside Widening
- I-64 Peninsula Widening
- US Route 460
- Southeastern Parkway and Greenbelt

Hampton Roads Bridge-Tunnel (8 lanes)

1 Dot = 100 Trip Ends

There are two trip ends for each trip, one at the place of origin and one at the destination.

Estimate is for the year 2034.

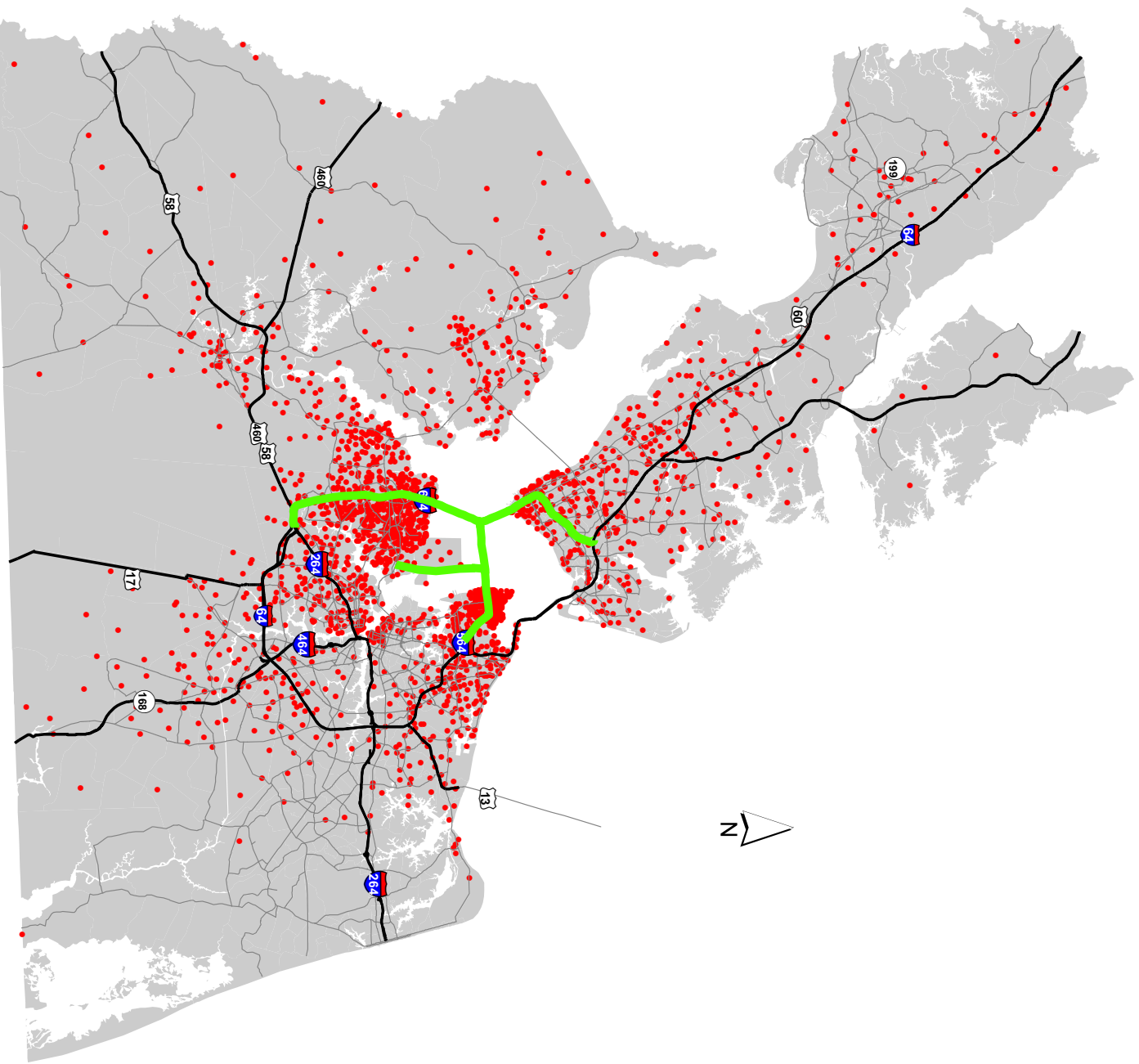


Third Crossing: Complete Implementation

1 Dot = 100 Trip Ends

There are two trip ends for each trip, one at the place of origin and one at the destination.

Estimate is for the year 2034.

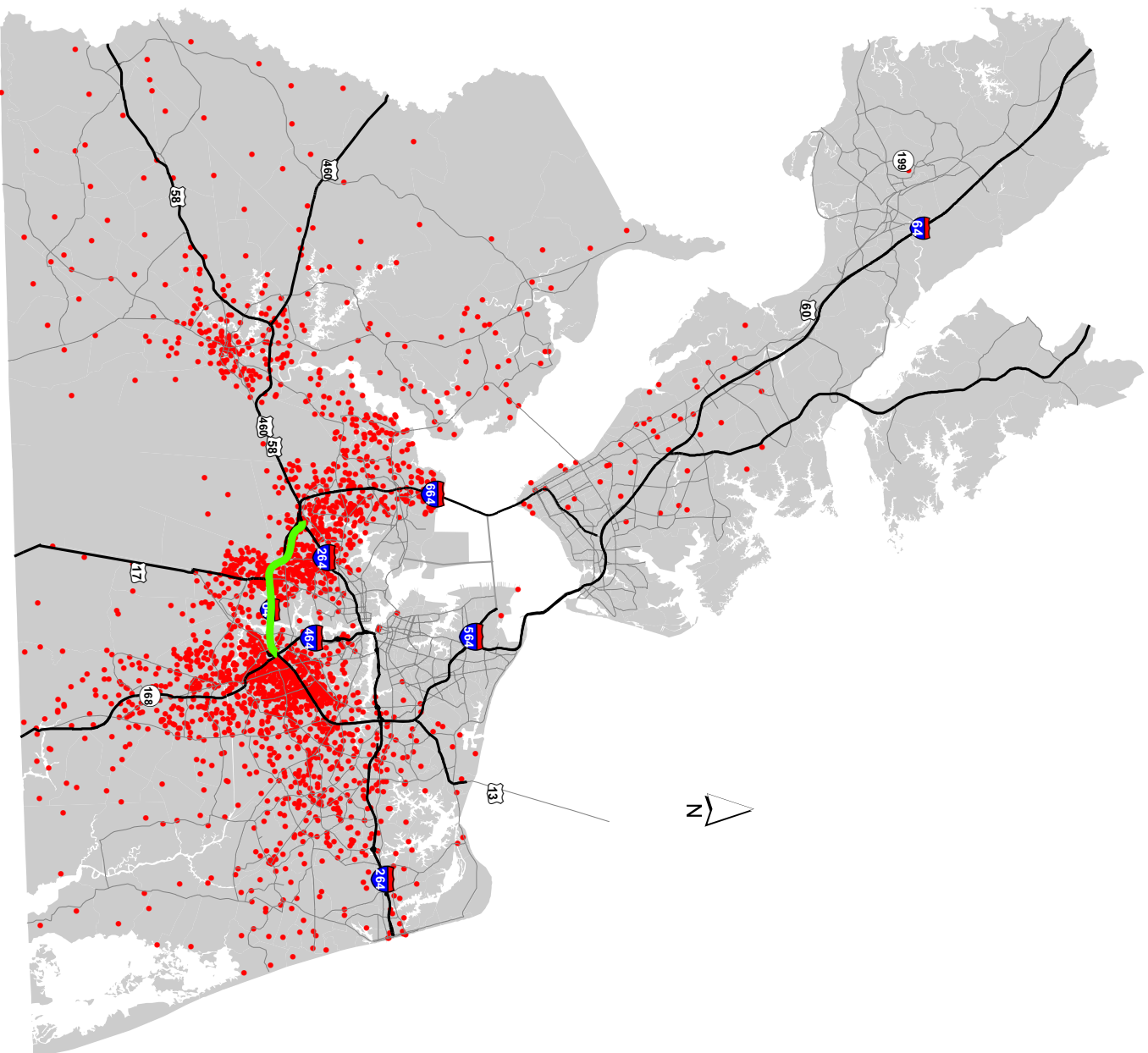


I-64 Southside Widening

1 Dot = 100 Trip Ends

There are two trip ends for each trip, one at the place of origin and one at the destination.

Estimate is for the year 2034.

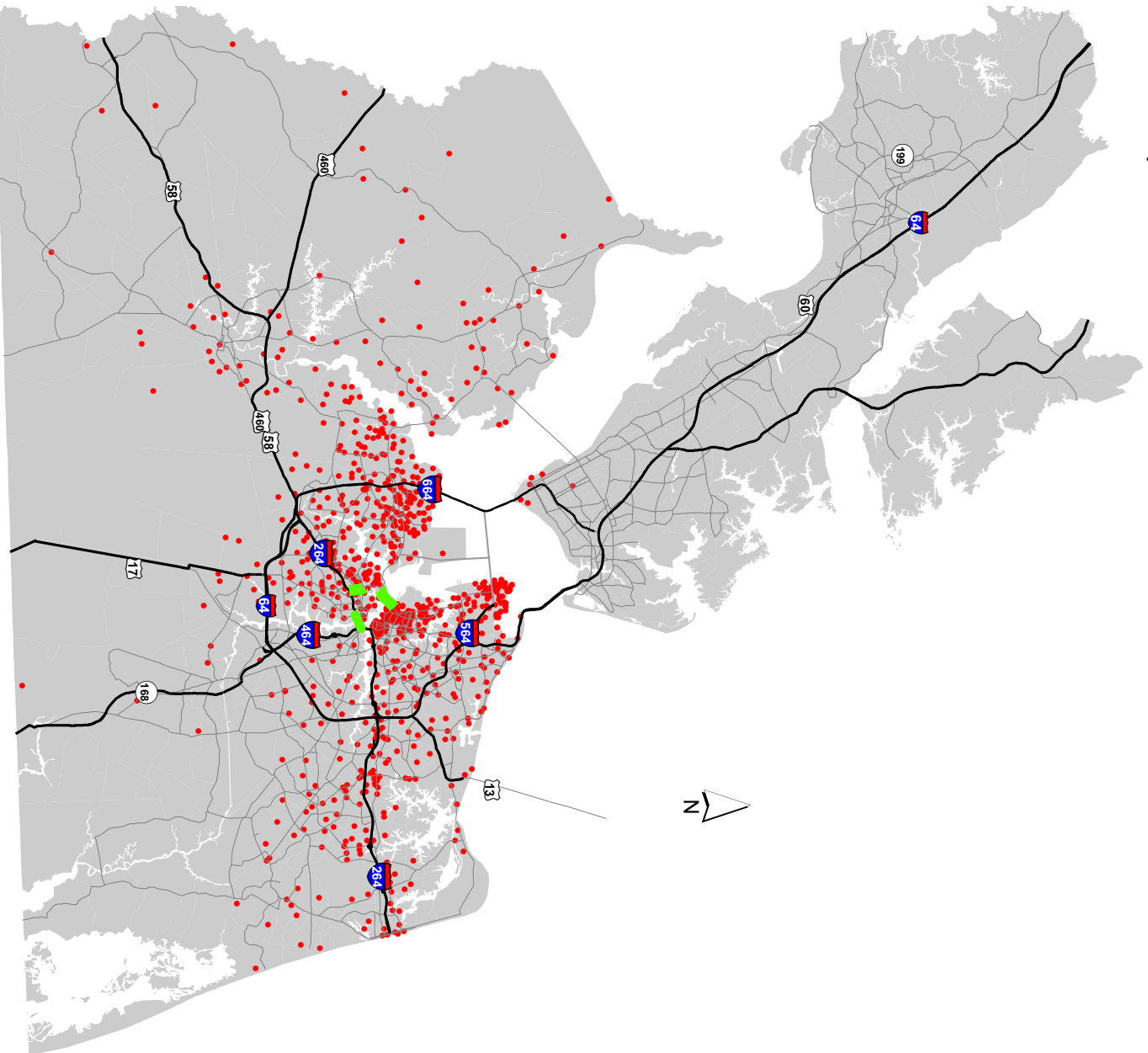


Midtown Tunnel / Martin L. King Freeway extension / Downtown Tunnel

1 Dot = 100 Trip Ends

There are two trip ends for each trip, one at the place of origin and one at the destination.

Estimate is for the year 2034.

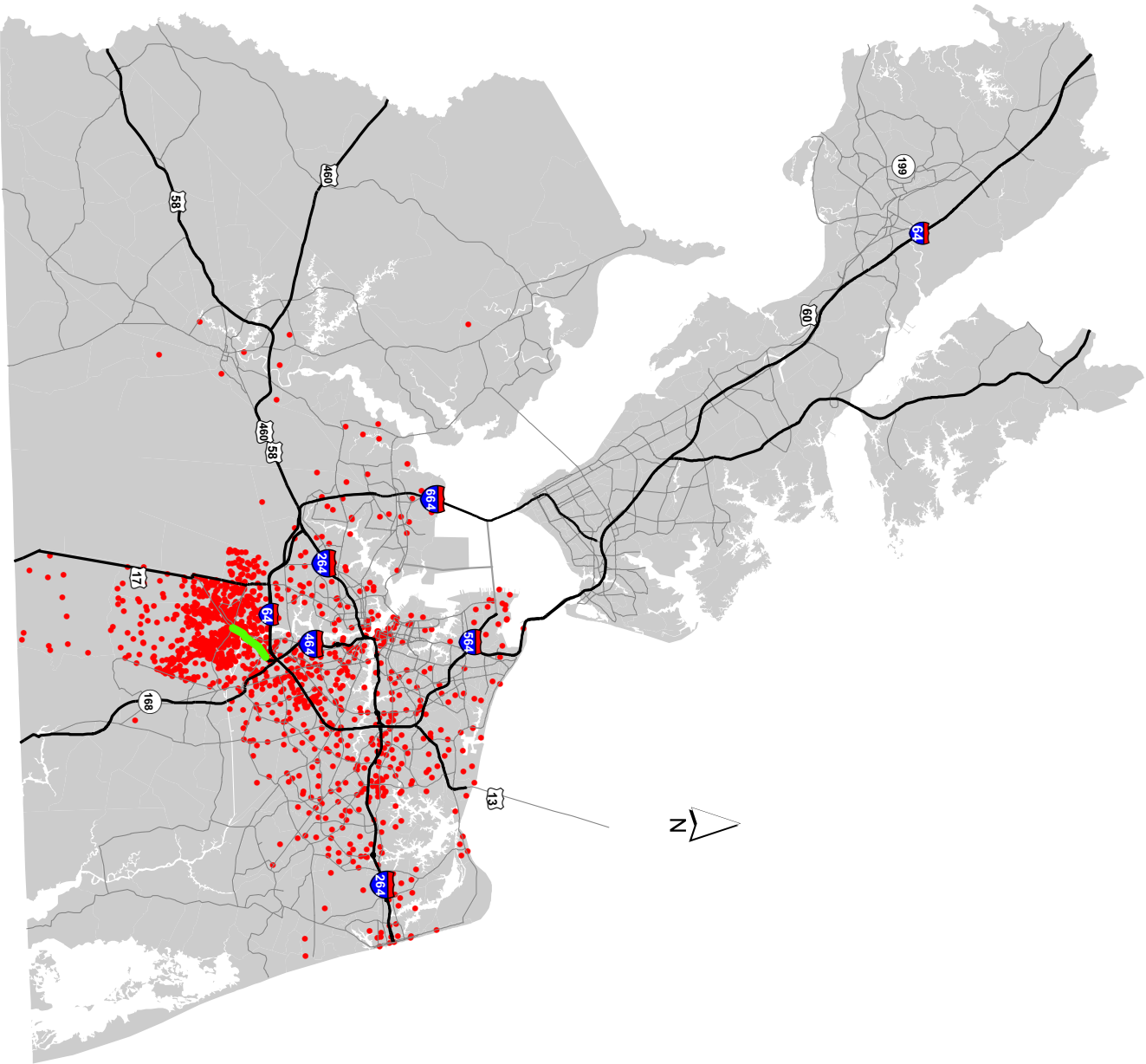


Dominion Boulevard

1 Dot = 100 Trip Ends

There are two trip ends for each trip, one at the place of origin and one at the destination.

Estimate is for the year 2034.

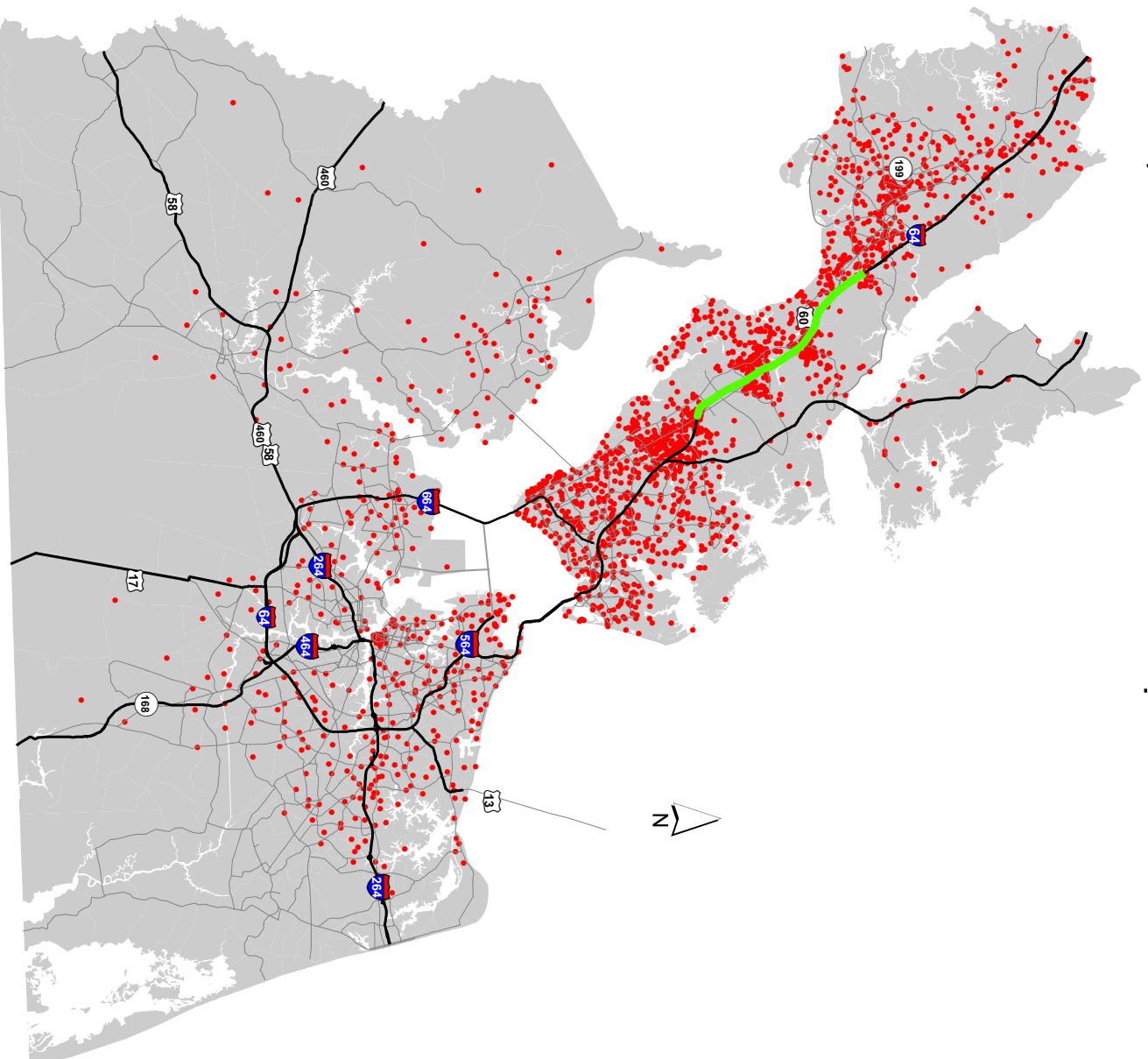


I-64 Peninsula Widening

1 Dot = 100 Trip Ends

There are two trip ends for each trip, one at the place of origin and one at the destination.

Estimate is for the year 2034.

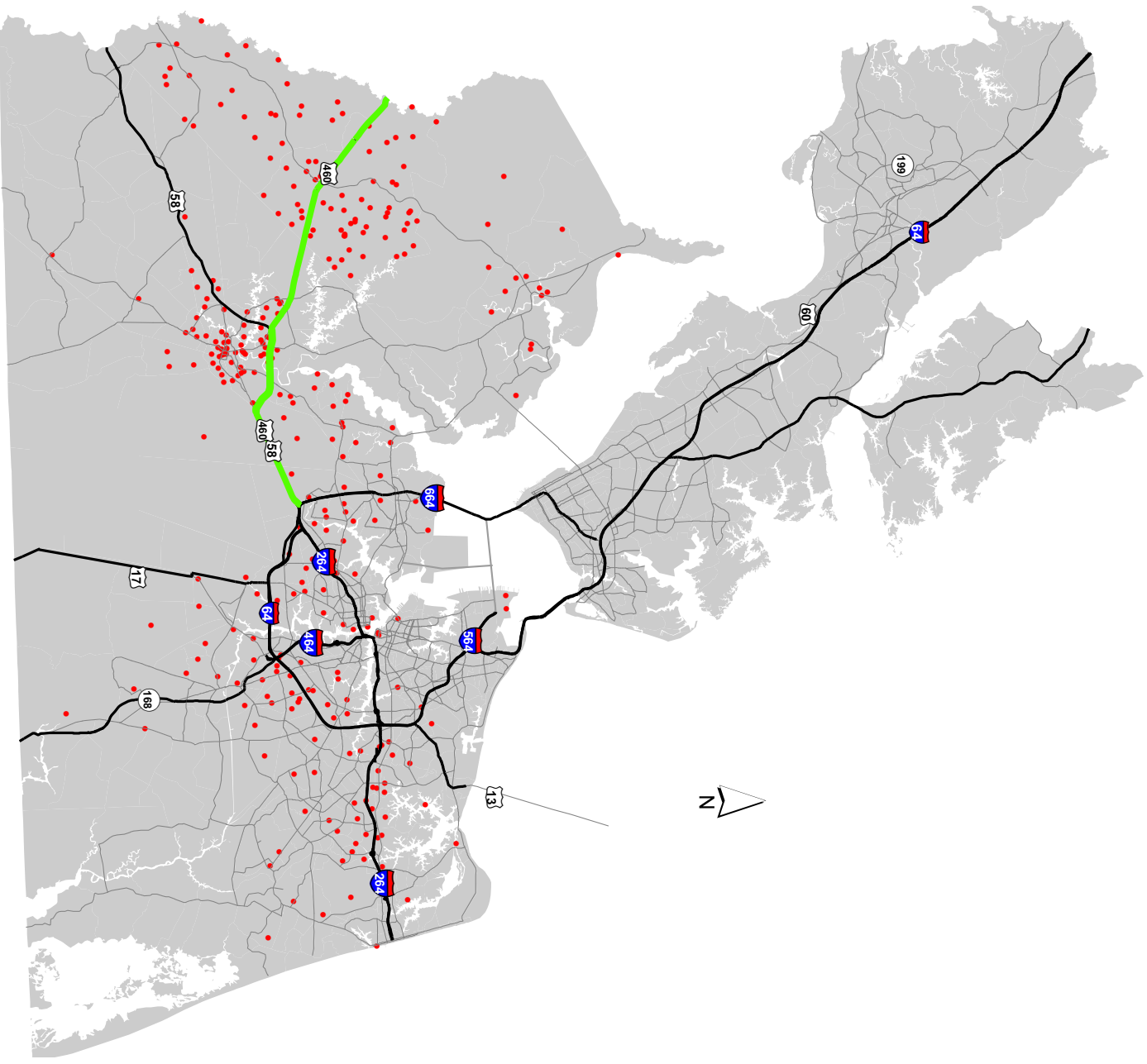


US Route 460

1 Dot = 100 Trip Ends

There are two trip ends for each trip, one at the place of origin and one at the destination.

Estimate is for the year 2034.

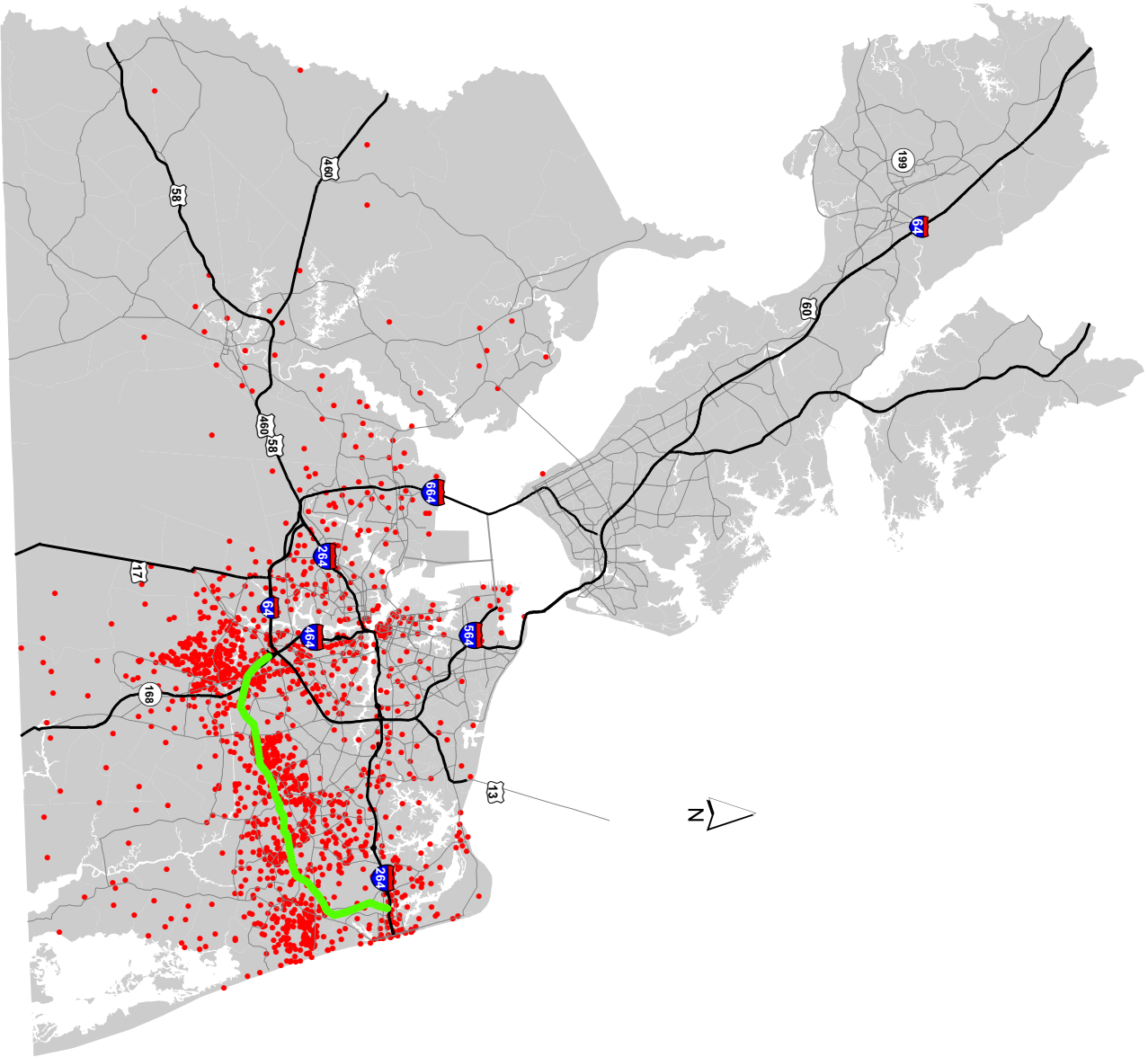


Southeastern Parkway and Greenbelt

1 Dot = 100 Trip Ends

There are two trip ends for each trip, one at the place of origin and one at the destination.

Estimate is for the year 2034.



Appendix C: Evaluation Criterion

In the following pages, an overview of the evaluation criterion and their weighting within each project evaluation category is included. In addition, a glossary of evaluation criterion is included, providing a definition of the evaluation criterion and how certain criteria were calculated and identify the data source.

Appendix C1: Evaluation Criterion

“Highways” Weighting Factors		
Criteria and <i>Subcriteria</i>	Total Points	# of Criteria
PROJECT UTILITY		
Congestion Level:	30	3
System Continuity and Connectivity	25	1
Safety and Security:	15	2
Cost Effectiveness (Cost/VMT)	15	1
Land Use/Future Development Compatibility	10	1
Modal Enhancements:	5	2
PROJECT UTILITY TOTAL	100	10
ECONOMIC VITALITY		
Total Reduction in Travel Time	30	1
Labor Market Access:	20	2
Addresses the Needs of Basic Sector Industries:	30	4
Increases Opportunity:	20	2
ECONOMIC VITALITY TOTAL	100	9
PROJECT VIABILITY		
Funding	50	1
Process-/Project Readiness	50	6
PROJECT VIABILITY TOTAL	100	7
TOTAL	300	26

"Interchange" Weighting Factors		
Criteria and Subcriteria	Weighting	# of Criteria
PROJECT UTILITY		
Congestion Level:	30	3
System Continuity and Connectivity	25	1
Safety and Security:	15	2
Cost Effectiveness (Cost/VMT)	15	1
Land Use/Future Development Compatibility	10	1
Modal Enhancements:	5	2
PROJECT UTILITY TOTAL	100	10
ECONOMIC VITALITY		
Total Reduction in Travel Time	30	1
Labor Market Access:	20	2
Addresses the Needs of Basic Sector Industries:	30	4
Increases Opportunity:	20	2
ECONOMIC VITALITY TOTAL	100	9
PROJECT VIABILITY		
Funding	50	1
Process/Project Readiness	50	6
PROJECT VIABILITY TOTAL	100	7
TOTAL	300	26

“Intermodal” Weighting Factors		
Criteria and Subcriteria	Weighting	# of Criteria
PROJECT UTILITY		
Better Accommodates Intermodal Movements	30	1
Improves Vehicular Access	30	1
Cost Effectiveness	25	1
Enhances Access to Other Modes	15	1
PROJECT UTILITY TOTAL	100	4
ECONOMIC VITALITY		
Total Reduction in Travel Time	20	1
Labor Market Access:	20	2
Impact on Truck Movement	15	1
Improves Interaction between Modes of Travel:	15	3
Increased Opportunity:	30	2
ECONOMIC VITALITY TOTAL	100	9
PROJECT VIABILITY		
Funding	50	1
Process/Project Readiness	50	6
PROJECT VIABILITY TOTAL	100	7
TOTAL	300	20

“Bridge and Tunnel” Weighting Factors		
Criteria and <i>Subcriteria</i>	Weighting	# of Criteria
PROJECT UTILITY		
Congestion Level:	30	3
Infrastructure Condition (Bridge Sufficiency, Tunnel Condition, Obsolescence)	20	
<i>Bridges</i>		1
<i>Tunnels</i>		3
System Continuity and Connectivity	10	1
Safety and Security:	10	3
Cost Effectiveness (Cost/VT)	15	1
Land Use/Future Development Compatibility	10	1
Modal Enhancements:	5	3
PROJECT UTILITY TOTAL	100	16
ECONOMIC VITALITY		
Total Reduction in Travel Time	30	1
Labor Market Access:	20	2
Addresses the Needs of Basic Sector Industries:	30	4
Increases Opportunity:	20	2
ECONOMIC VITALITY TOTAL	100	9
PROJECT VIABILITY		
Funding	50	1
Process/Project Readiness	50	6
PROJECT VIABILITY TOTAL	100	7
TOTAL	300	32

“Transit” Weighting Factors		
Criteria and <i>Subcriteria</i>	Weighting	# of Criteria
PROJECT UTILITY		
Existing Usage/Ridership, Coverage Area/Population	20	1
System Continuity and Connectivity:	20	2
User Benefit (Annual Travel Time Savings per Rider)	15	2
Land Use/Future Development Compatibility	15	1
Air Quality/Emissions Reduction	10	1
Cost Effectiveness (Annualized Costs/Annual Riders)	15	1
Enhances Other Categories	5	1
PROJECT UTILITY TOTAL	100	9
ECONOMIC VITALITY		
Labor Market Access:	45	4
Addresses the Needs of Basic Sector Industries:	20	2
Increases Opportunity:	20	2
Economic Distress Factors:	15	2
ECONOMIC VITALITY TOTAL	100	10
PROJECT VIABILITY		
Funding	50	1
Process/Project Readiness	50	6
PROJECT VIABILITY TOTAL	100	7
TOTAL	300	26

"Highways" Weighting Factors	
Criteria and Subcriteria	Weighting
PROJECT UTILITY	
Congestion Level:	30
% Reduction in Existing and Future V/C Ratios	10
Existing V/C Ratio	10
Impact to Nearby Roadways	10
System Continuity and Connectivity	25
Degree of Regional Impact	
Safety and Security:	15
Critical Crash Ratio	8
Improvements to Incident Management or Evacuation Routes	7
Cost Effectiveness (Cost/VMT)	15
Land Use/Future Development Compatibility	10
Modal Enhancements:	5
Enhances Other Categories	3
Improves Vehicular Access	2
PROJECT UTILITY TOTAL	100
ECONOMIC VITALITY	
Total Reduction in Travel Time	30
Labor Market Access:	20
Increases Travel Time Reliability	10
Increases Access for Major Employment Centers	10
Addresses the Needs of Basic Sector Industries:	30
Increases Access to Tourist Destinations	10
Increases Access for Defense Installations	6
Increase Access for Defense Installations – STRAHNET	4
Increases Access to Port Facilities	10
Increases Opportunity:	20
Provides New or Increased Access	10
Supports Plans for Future Growth	10
ECONOMIC VITALITY TOTAL	100
PROJECT VIABILITY	
Funding	50
Percentage of Funding Committed	50
Process/Project Readiness	50
Prior Commitment (is project in L RTP)	10
Percentage of Project Design Complete	10
Environmental Documents Complete	15
Environmental Decisions Obtained	5
ROW Obtained and Utilities Coordinated	5
Additional Environmental Permits Obtained	5
PROJECT VIABILITY TOTAL	100

"Interchange" Weighting Factors	
Criteria and Subcriteria	Weighting
PROJECT UTILITY	
Congestion Level:	30
<i>Interchange Improvements</i>	10
<i>Existing Queuing</i>	10
<i>Number of Movements Improved</i>	10
System Continuity and Connectivity	25
Safety and Security:	15
<i>Critical Crash Ratio</i>	8
<i>Improvements to Incident Management or Evacuation Routes</i>	7
Cost Effectiveness (Cost/VT)	15
Land Use/Future Development Compatibility	10
Modal Enhancements:	5
<i>Enhances Other Categories</i>	3
<i>Improves Vehicular Access</i>	2
PROJECT UTILITY TOTAL	100
ECONOMIC VITALITY	
Total Reduction in Travel Time	30
Labor Market Access:	20
<i>Increases Travel Time Reliability</i>	10
<i>Increases Access for Major Employment Centers</i>	10
Addresses the Needs of Basic Sector Industries:	30
<i>Increases Access to Tourist Destinations</i>	10
<i>Increases Access for Defense Installations</i>	6
<i>Increase Access for Defense Installations – STRAHNET</i>	4
<i>Increases Access to Port Facilities</i>	10
Increases Opportunity:	20
<i>Provides New or Increased Access</i>	10
<i>Supports Plans for Future Growth</i>	10
ECONOMIC VITALITY TOTAL	100
PROJECT VIABILITY	
Funding	50
<i>Percentage of Funding Committed</i>	50
Process/Project Readiness	50
<i>Prior Commitment (Is project in L RTP)</i>	10
<i>Percentage of Project Design Complete</i>	10
<i>Environmental Documents Complete</i>	15
<i>Environmental Decisions Obtained</i>	5
<i>ROW Obtained and Utilities Coordinated</i>	5
<i>Additional Environmental Permits Obtained</i>	5
PROJECT VIABILITY TOTAL	100

“Intermodal” Weighting Factors	
Criteria and Subcriteria	Weighting
PROJECT UTILITY	
Better Accommodates Intermodal Movements	30
Improves Vehicular Access	30
Cost Effectiveness	25
Enhances Access to Other Modes	15
PROJECT UTILITY TOTAL	100
ECONOMIC VITALITY	
Total Reduction in Travel Time	20
Labor Market Access:	20
<i>Increases Travel Time Reliability</i>	15
<i>Increases Access for Major Employment Centers</i>	5
Impact on Truck Movement	15
Improves Interaction between Modes of Travel:	15
<i>Increases Access to the Port</i>	5
<i>Improves Freight Movement by Rail</i>	5
<i>Increases Access to Airports</i>	5
Increased Opportunity:	30
<i>Provides New or Increased Access</i>	20
<i>Supports Plans for Future Growth</i>	10
ECONOMIC VITALITY TOTAL	100
PROJECT VIABILITY	
Funding	50
<i>Percentage of Funding Committed</i>	50
Process/Project Readiness	50
<i>Prior Commitment (is project in LRTTP)</i>	10
<i>Percentage of Project Design Complete</i>	10
<i>Environmental Documents Complete</i>	15
<i>Environmental Decisions Obtained</i>	5
<i>ROW Obtained and Utilities Coordinated</i>	5
<i>Additional Environmental Permits Obtained</i>	5
PROJECT VIABILITY TOTAL	100

“Bridge and Tunnel” Weighting Factors	
Criteria and Subcriteria	Weighting
PROJECT UTILITY	
Congestion Level:	30
% Reduction in Existing and Future V/C Ratios	10
Existing V/C Ratio	10
Impact to Nearby Roadways	10
Infrastructure Condition (Bridge Sufficiency, Tunnel Condition,	20
How Old is the Tunnel in the Horizon Year (Tunnels Only)	6.5
Age of last major repair in the Horizon Year (Tunnels Only)	6.75
Cost for Necessary Repairs (Tunnels Only)	6.75
System Continuity and Connectivity	10
Safety and Security:	10
Critical Crash Ratio	4.5
Improvements to Incident Management or Evacuation Routes	3
Failure Impact (Impact of Detour to Alternate Crossing)	2.5
Cost Effectiveness (Cost/VMT)	15
Land Use/Future Development Compatibility	10
Modal Enhancements:	5
Enhances Other Categories	1.5
Improves Vehicular Access	2
Provides Continuous Maritime Crossing	1.5
PROJECT UTILITY TOTAL	100
ECONOMIC VITALITY	
Total Reduction in Travel Time	30
Labor Market Access:	20
Increases Travel Time Reliability	10
Increases Access for Major Employment Centers	10
Addresses the Needs of Basic Sector Industries:	30
Increases Access to Tourist Destinations	10
Increases Access for Defense Installations	6
Increases Access for Defense Installations – STRAHNET	4
Increases Access to Port Facilities	10
Increases Opportunity:	20
Provides New or Increased Access	10
Supports Plans for Future Growth	10
ECONOMIC VITALITY TOTAL	100
PROJECT VIABILITY	
Funding	50
Percentage of Funding Committed	50
Process/Project Readiness	50
Prior Commitment (Is project in L RTP)	10
Percentage of Project Design Complete	10
Environmental Documents Complete	15
Environmental Decisions Obtained	5
ROW Obtained and Utilities Coordinated	5
Additional Environmental Permits Obtained	5
PROJECT VIABILITY TOTAL	100

“Transit” Weighting Factors	
Criteria and Subcriteria	Weighting
PROJECT UTILITY	
Existing Usage/Ridership, Coverage Area/Population	20
System Continuity and Connectivity:	20
<i>Regional Significance</i>	9
<i>Improves access to employment and population centers</i>	11
User Benefit (Annual Travel Time Savings per Rider)	15
Land Use/Future Development Compatibility	15
Air Quality/Emissions Reduction	10
Cost Effectiveness (Annualized Costs/Annual Riders)	15
Enhances Other Categories	5
PROJECT UTILITY TOTAL	100
ECONOMIC VITALITY	
Labor Market Access:	45
<i>Increases Access for Major Employment Centers</i>	20
<i>Increases Travel Time Reliability</i>	10
<i>Increases Frequency of Service</i>	10
<i>Provides Access to Institutions of Higher Education</i>	5
Addresses the Needs of Basic Sector Industries:	20
<i>Provides or Improves Access for Defense Installations</i>	10
<i>Increases Access to Tourist Destinations</i>	10
Increases Opportunity:	20
<i>Provides New Access to the Network</i>	5
<i>Supported by Plans for Increased Density and Economic Activity</i>	15
Economic Distress Factors:	15
<i>Provides Access to Areas with High Unemployment</i>	5
<i>Provides Access to Low Income Areas</i>	10
ECONOMIC VITALITY TOTAL	100
PROJECT VIABILITY	
Funding	50
<i>Percentage of Funding Committed</i>	50
Process/Project Readiness	50
<i>Prior Commitment (is project in L RTP)</i>	10
<i>Percentage of Project Design Complete</i>	10
<i>Environmental Documents Complete</i>	15
<i>Environmental Decisions Obtained</i>	5
<i>ROW Obtained and Utilities Coordinated</i>	5
<i>Additional Environmental Permits Obtained</i>	5
PROJECT VIABILITY TOTAL	100

Highway Project Utility Data Notes

Appendix C2: Glossary of Evaluation Criterion

Project Summary Input Data	Source	Calculation Method	Treatment of Project	Definitions
Project Length	HRTPO	Summation of Segment Lengths from CMP or Google Earth		Length of Project Corridor
Existing Lanes	HRTPO / CMP			
Proposed Lanes	Locality			
Parallel Facility	HRTPO			Representative Existing Roadway segment needing relief
2034 VMT	HRTPO	Project Length * Future ADT		Vehicle Miles Traveled along project in 2034
Existing V/C	HRTPO	Existing ADT / Existing Daily Capacity		Existing Level of Service Ratio
Forecast V/C	HRTPO	Future ADT / Future Daily Capacity		Future Level of Service Ratio
Existing Capacity	HRTPO / CMP			Maximum existing volume before roadway service fails
Future Capacity	HRTPO / CMP			Maximum future volume before roadway service fails
Existing ADT	HRTPO / CMP	Weighted average ADT by distance		Existing two-way volume
Future ADT	HRTPO	Weighted average ADT by distance		Forecast two-way volume
Total Crashes MVMT Past 3 Years	HRTPO / CMP	(Total Project Corridor Crashes/Total Project Corridor VMT) * 1×10^6		Total Crashes per Million Vehicle Miles Traveled (MVMT)
Jurisdiction Average Crash Rate	HRTPO / CMP	(Total Jurisdiction Crashes/Total Jurisdiction VMT) * 1×10^6	Separate calculations for interstate and non-interstate roadways.	Average Jurisdiction Crashes per Million Vehicle Miles Traveled (MVMT)
Statewide Roadway System Classification	HRTPO			VDOT Roadway System Classification (For Funding)
Estimated Cost of the Project	VDOT / HRTPO / Localities			Estimated Total Cost of Project in YOE Dollars

Cost Effectiveness Data	Source	Calculation Method	Treatment of Project	Definitions
Total Cost (\$) / VMT	HRTPO	Estimated Cost / 2034 VMT		Cost per forecast vehicle mile traveled

Highway Project Utility Data Notes

Congestion Level Data	Source	Calculation Method	Treatment of Project	Definitions
% Reduction in Existing and Future V/C Ratios	HRTPO	(Existing V/C - Forecast V/C) / Existing V/C		Reduction in congestion as a result of the project
Existing V/C Ratio	HRTPO	Existing V/C		Existing Level of Service Ratio
Impact to Nearby Roadway	HRTPO	Future ADT - Existing ADT		Volume attracted from other roadways to project upon construction

System Continuity and Connectivity Data	Source	Calculation Method	Treatment of Project	Definitions
Degree of Regional Impact	HRTPO	<ul style="list-style-type: none"> • Future ADT >50k = Regional • Future ADT <50k = Local • Crosses 2 jurisdictions & Future ADT <50k = Multi-jurisdictional 		Degree project impacts regional transportation system

Land Use Compatibility Data	Source	Calculation Method	Treatment of Project	Definitions
Compatible with Existing Land Use Patterns and Future Plans/Development?	HRTPO	Review of Local Comprehensive Plans		Project consistency to Local Comprehensive Plan

Safety and Security Data	Source	Calculation Method	Treatment of Project	Definitions
Critical Crash Ratio	HRTPO	Total Crashes MVMT/Jurisdiction Average Crash Rate		Frequency ratio of project corridor crashes to jurisdiction crashes
Improvement to Incident Management or Evacuation Routes	VDOT / Locality / HRTPO			Project improves incident management or evacuation routes

Highway Project Utility Data Notes

Modal Enhancements Data	Source	Calculation Method	Treatment of Project	Definitions
Vehicular Access to Port/Military/Major Employment or Population Centers	HRTPO			Access to major regional traffic generators
Additional Dedicated modal facilities with project	Locality			Additional dedicated multimodal facility (HOV, bike lane, sidewalk, multiuse trail)

Highway Interchange Project Utility Data Notes

Project Summary Input Data	Source	Calculation Method	Treatment of Project	Definitions
Project Length	HRTPO	Summation of Segment Lengths from CMP or Google Earth		Length of Project Corridor
Existing Lanes	HRTPO / CMP			
Proposed Lanes	Locality			
Parallel Facility	HRTPO			Representative Existing Roadway segment needing relief
2034 VMT	HRTPO	Project Length * Future ADT	VMT calculated 1/2 mile from interstate approaches; 1/4 mile on non-interstate approaches	Vehicle Miles Traveled along project in 2034
Total Crashes MVMT Past 3 Years	HRTPO / CMP	(Total Project Corridor Crashes/Total Project Corridor VMT) * 1x10 ⁶		Total Crashes per Million Vehicle Miles Traveled (MVMT)
Jurisdiction Average Crash Rate	HRTPO / CMP	(Total Jurisdiction Crashes/Total Jurisdiction VMT) * 1x10 ⁶	Separate calculations for interstate and non-interstate roadways	Average Jurisdiction Crashes per Million Vehicle Miles Traveled (MVMT)
Statewide Roadway System Classification	HRTPO			VDOT Roadway System Classification (For Funding)
Estimated Cost of the Project	VDOT / Localities / HRTPO			Estimated Total Cost of Project in YOE Dollars

Land Use Compatibility Data	Source	Calculation Method	Treatment of Project	Definitions
Compatible with Existing Land Use Patterns and Future Plans/Development?	HRTPO	Review of Local Comprehensive Plans		Project consistency to Local Comprehensive Plan

Cost Effectiveness Data	Source	Calculation Method	Treatment of Project	Definitions
Total Cost (\$) / VMT	HRTPO	Estimated Cost / 2034 VMT		Cost per forecast vehicle mile traveled

Highway Interchange Project Utility Data Notes

System Continuity and Connectivity Data	Source	Calculation Method	Treatment of Project	Definitions
Degree of Regional Impact	HRTPO	<ul style="list-style-type: none"> • Future ADT >50k = Regional • Future ADT <50k = Local • Crosses 2 jurisdictions & Future ADT <50k = Multi-jurisdictional 		Degree project impacts regional transportation system

Congestion Level Data	Source	Calculation Method	Treatment of Project	Definitions
Queuing Interstate Approaches	HRTPO / CMP			Number of interstate approaches with queues
Queuing Arterial Approaches	HRTPO / CMP			Number of arterial approaches with queues
Queue Improvements Interstate Approaches	HRTPO / CMP			Number of interstate approaches with queue improvements
Queue Improvements Arterial Approaches	HRTPO / CMP			Number of arterial approaches with queue improvements
Number of Movements added or improved	HRTPO / CMP			Number of movements added or improved to interchange

Safety and Security Data	Source	Calculation Method	Treatment of Project	Definitions
Critical Crash Ratio	HRTPO	Total Crashes MVMT/Jurisdiction Average Crash Rate		Frequency ratio of project corridor crashes to jurisdiction crashes
Improvement to Incident Management or Evacuation Routes	VDOT / Locality / HRTPO			Project improves incident management or evacuation routes

Highway Interchange Project Utility Data Notes

Modal Enhancements Data	Source	Calculation Method	Treatment of Project	Definitions
Vehicular Access to Port/Military/Major Employment or Population Centers	HRTPO			Access to major regional traffic generators
Additional Dedicated modal facilities with project	Locality			Additional dedicated multimodal facility (HOV, bike lane, sidewalk, multiuse trail)

Bridge and Tunnel Project Utility Data Notes

Project Summary Input Data	Source	Calculation Method	Treatment of Project	Definitions
Project Length	HRTPO	Summation of Segment Lengths from CMP or Google Earth		Project Corridor Length
Detour Length	HRTPO / CMP			Shortest detour from Point A of project corridor to Point B
Existing Lanes	HRTPO / CMP			
Proposed Lanes	Locality			
Parallel Facility	HRTPO			Representative Existing Roadway segment needing relief
Existing Detour Route VMT	HRTPO / CMP	Detour Route Existing VMT (Length *Existing ADT)		Existing vehicle miles traveled along project detour route
2034 VMT	HRTPO	Project Length * Future ADT		Vehicle Miles Traveled along project in 2034
Existing V/C	HRTPO	Existing ADT / Existing Daily Capacity		Existing Level of Service Ratio
Forecast V/C	HRTPO	Future ADT / Future Daily Capacity		Future Level of Service Ratio
Existing Capacity	HRTPO / CMP			Maximum existing volume before roadway service fails
Future Capacity	HRTPO / CMP			Maximum future volume before roadway service fails
Existing ADT	HRTPO / CMP	Weighted average ADT by distance		Existing two-way volume
Future ADT	HRTPO	Weighted average ADT by distance		Forecast two-way volume
Total Crashes MVMT Past 3 Years	HRTPO / CMP	(Total Project Corridor Crashes/Total Project Corridor VMT) * 1x10 ⁶		Total Crashes per Million Vehicle Miles Traveled (MVMT)
Jurisdiction Average Crash Rate	HRTPO / CMP	(Total Jurisdiction Crashes/Total Jurisdiction VMT) * 1x10 ⁶	Separate calculations for interstate and non-interstate roadways	Average Jurisdiction Crashes per Million Vehicle Miles Traveled (MVMT)
Statewide Roadway System Classification	HRTPO			VDOT Roadway System Classification (For Funding)
Estimated Cost of the Project	VDOT / Localities / HRTPO			Estimated Total Cost of Project in YOE Dollars

Bridge and Tunnel Project Utility Data Notes

Congestion Level Data	Source	Calculation Method	Treatment of Project	Definitions
% Reduction in Existing and Future V/C Ratios	HRTPO	$(\text{Existing V/C} - \text{Forecast V/C}) / \text{Existing V/C}$		Reduction in congestion as a result of the project
Existing V/C Ratio	HRTPO	Existing V/C		Existing Level of Service Ratio
Impact to Nearby Roadway	HRTPO	Future ADT - Existing ADT		Volume attracted from other roadways to project upon construction

Infrastructure Condition Data	Source	Calculation Method	Treatment of Project	Definitions
Bridge Sufficiency Rating	HRTPO / CMP			Structural Bridge rating from 0-100
Tunnel Age in Horizon Year	HRTPO	Horizon Year - Opening Date of Tunnel		
Age since last major tunnel repair	HRTPO	Horizon Year - Date of last major tunnel repair		Years since last major (>\$5 million) repair
Cost for Necessary Repairs	VDOT			Costs for repairs / upgrades to maintain existing capacity

System Continuity and Connectivity Data	Source	Calculation Method	Treatment of Project	Definitions
Degree of Regional Impact	HRTPO	<ul style="list-style-type: none"> • Future ADT >50k = Regional • Future ADT <50k = Local • Crosses 2 jurisdictions & Future ADT <50k = Multi-jurisdictional 		Degree project impacts regional transportation system

Land Use Compatibility Data	Source	Calculation Method	Treatment of Project	Definitions
Compatible with Existing Land Use Patterns and Future Plans/Development?	HRTPO	Review of Local Comprehensive Plans		Project consistency to Local Comprehensive Plan

Bridge and Tunnel Project Utility Data Notes

Safety and Security Data	Source	Calculation Method	Treatment of Project	Definitions
Critical Crash Ratio	HRTPO	Total Crashes MVMT/Jurisdiction Average Crash Rate		Frequency ratio of project corridor crashes to jurisdiction crashes
Improvement to Incident Management or Evacuation Routes	VDOT / Locality / HRTPO			Project improves incident management or evacuation routes
Diversion Impact Due to Failure	HRTPO	Existing Detour Route VMT + (Future ADT * Detour Length)		VMT impacted due to facility failure

Cost Effectiveness Data	Source	Calculation Method	Treatment of Project	Definitions
Total Cost (\$) / VMT	HRTPO	Estimated Cost / 2034 VMT		Cost per forecast vehicle mile traveled

Modal Enhancements Data	Source	Calculation Method	Treatment of Project	Definitions
Vehicular Access to Port/Military/Major Employment or Population Centers	HRTPO			Access to major regional traffic generators
Additional Dedicated modal facilities with project	Locality			Additional dedicated multimodal facility (HOV, bike lane, sidewalk, multiuse trail)
Unimpeded Commercial Maritime/Rail Traffic	HRTPO			Project allows grade separated rail traffic or unimpeded commercial maritime traffic flow

Transit Project Utility Data Notes

Project Summary Input Data	Source	Calculation Method	Treatment of Project	Definitions
Project Length	HRT			
Estimated Annual Ridership	HRT			
Estimated Capital Cost of the Project	HRT	Annualized		
Estimated Operating Cost of the Project	HRT	Annualized		

Existing Usage & Prospective Ridership Data	Source	Calculation Method	Treatment of Project	Definitions
Usage/Ridership	HRT	Annual ridership/days in operating year (293)		Daily ridership

System Continuity and Connectivity Data	Source	Calculation Method	Treatment of Project	Definitions
Degree of Regional Impact	HRTPO			Degree project impacts regional transportation system
Vehicular Access to Port/Military/Major Employment or Population Centers	HRTPO			Access to major regional traffic generators

Cost Effectiveness Data	Source	Calculation Method	Treatment of Project	Definitions
Total Cost (\$) / Rider	HRTPO	(Estimated Capital Cost + Estimated Operating Cost)/ Annual Ridership		Project capital and operating cost per rider

Transit Project Utility Data Notes

Land Use Compatibility Data	Source	Calculation Method	Treatment of Project	Definitions
Compatible with Existing Land Use Patterns and Future Plans/Development?	HRTPO	Review of Local Comprehensive Plans		Project consistency to Local Comprehensive Plan

User Benefit Data	Source	Calculation Method	Treatment of Project	Definitions
Annual Travel Time Savings per Rider	HRT			Annual time (hour) saved per rider as a result of the project
Vehicular Access to Port/Military/Major Employment or Population Centers	HRTPO			Access to major regional traffic generators

Modal Enhancements Data	Source	Calculation Method	Treatment of Project	Definitions
Additional Dedicated modal facilities with project	HRT			Additional dedicated multimodal facility (HOV, bike lane, sidewalk, multiuse trail)

Air Quality Data	Source	Calculation Method	Treatment of Project	Definitions
Annual Emission Reduction	HRT			Annual emission tonnage reduced due to the project

Intermodal Project Utility Data Notes

Project Summary Input Data	Source	Calculation Method	Treatment of Project	Definitions
Project Length	HRTPO			
2034 VMT	HRTPO	Project Length * Future ADT		Vehicle Miles Traveled along project in 2034
Estimated Cost of the Project	VDOT / Localities / HRTPO			Estimated Total Cost of Project in YOE Dollars

Cost Effectiveness Data	Source	Calculation Method	Treatment of Project	Definitions
Total Cost (\$) / VMT	HRTPO	Estimated Cost / 2034 VMT		Cost per forecast vehicle mile traveled

Modal Enhancements Data	Source	Calculation Method	Treatment of Project	Definitions
Multimodal Access	HRTPO			Additional modes of transportation accessed as a result of the project

Rail/Vehicular Access Data	Source	Calculation Method	Treatment of Project	Definitions
Vehicular Access to Port/Military/Major Employment or Population Centers	HRTPO			Access to major regional traffic generators

Intermodal Movements Data	Source	Calculation Method	Treatment of Project	Definitions
Degree of Conflict Intermodal Movements	HRTPO			Level of intermodal movement conflict improvement from the project

Project Viability Data Notes

Project Viability Data	Source	Calculation Method	Treatment of Project	Definitions
Percentage of Funding Committed	Locality / VDOT			Percentage of funding committed towards the project.
LRTP Inclusion	HRTPO	Review of 2030 LRTP		Is the project in the currently adopted LRTP?
Percent Project Design Complete	Locality / VDOT			Percentage of design work completed towards construction.
Environmental Documents Complete	Locality / VDOT			Has the project completed the National Environmental Policy Act process?
Environmental Decisions Obtained	Locality / VDOT			Has the project received a Record of Decision or equivalent?
ROW Obtained/Utilities Coordinated	Locality / VDOT			Has Right of Way been obtained/utilities coordinated for the project?
Additional Environmental Permits	Locality / VDOT			Has the project received the necessary environmental documents towards construction (Coast Guard, wetlands, etc)?

Highways, Highway Interchanges, and Bridges & Tunnel Economic Vitality Data Notes

Economic Vitality Data	Source	Calculation Method	Treatment of Project	Definitions
Total Reduction in Travel Time	HRTPO	Difference Regional Total Travel Time between base and project implementation		Reduction of regional travel time as a result of the project
Travel Time Reliability	HRTPO / CMP	Change in V/C between Existing and Future, Safety Ranking (Crashes per MVMT), volume, number of uncongested diversion routes		Reliability of traffic flow as a result of the project
Increased Access to High Density Employment	HRTPO	Difference Regional Total Travel Time between base and project implementation		Reduction of regional travel time to high density employment areas as a result of the project
Reduction travel time to military bases	HRTPO	Difference Regional Total Travel Time between base and project implementation		Reduction of regional travel time to military bases as a result of the project
Is the project part of STRAHNET?	HRTPO			Is the project included in the Strategic Highway Network?
Reduction travel time to port facilities	HRTPO	Difference Regional Total Travel Time between base and project implementation		Reduction of regional travel time to port facilities as a result of the project
Reduction travel time to tourism areas	HRTPO	Difference Regional Total Travel Time between base and project implementation		Reduction of regional travel time to tourism areas as a result of the project
Provision of new or increased access opportunities	HRTPO		New projects = New Opportunity Existing Facility = Increased Opportunity	Project providing access opportunity to the regional transportation network
Support Plans for Future Growth	HRTPO	Review of Local Comprehensive Plans		Project consistency to Local Comprehensive Plan

Transit Economic Vitality Data Notes

Economic Vitality Data	Source	Calculation Method	Treatment of Project	Definitions
Increased Access for Major Employment Centers	HRTPO	Sum of employment within half mile Euclidean distance of transit line	FTA Planning Guidelines	Project access to Major Employment Centers
Travel Time Reliability	HRTPO			Reliability of traffic flow as a result of the project
Frequency of Service	HRTPO			Project providing increased frequency of transit services
Access to Higher Education Institutions	HRTPO	Notation of higher education institutions within half mile Euclidean distance of transit line		Project access to higher education institutions
Improve Defense Access	HRTPO	Notation of defense facilities Euclidean distance of transit line	<0.25 miles, 0.25-0.5 miles, >0.5 miles	Project access to Defense facilities
Improve Tourism Access	HRTPO	Notation of tourism employment within Euclidean distance of transit line	<0.25 miles, 0.25-0.5 miles, >0.5 miles	Project access to tourism areas
New Network Access	HRTPO		New facility = yes	Does the project provide new access to the transportation network
Supports Increased Density and Economic Activity	HRTPO	Review of Local Comprehensive Plans		Project consistency to Local Comprehensive Plan
Access to High Unemployment areas	HRTPO	Notation of high unemployment areas within Euclidean distance of transit line	High Unemployment = 2 standard deviations above mean	Project provides access to areas of high unemployment
Access to Low Income Areas	HRTPO	Notation of Low Income Areas within Euclidean distance of transit line	Low Income Areas = median income below poverty level	Project provides access to areas of low income

Intermodal Economic Vitality Data Notes

Economic Vitality Data	Source	Calculation Method	Treatment of Project	Definitions
Total Reduction in Travel Time	HRTPO	Difference Regional Total Travel Time between base and project implementation		Reduction of regional travel time as a result of the project
Travel Time Reliability	HRTPO / CMP	Change in V/C between Existing and Future, Safety Ranking (Crashes per MVMT), volume, number of uncongested diversion routes		Reliability of traffic flow as a result of the project
Increased Access to High Density Employment	HRTPO	Difference Regional Total Travel Time between base and project implementation		Reduction of regional travel time to high density employment areas as a result of the project
Impact Truck Movements	HRTPO/CMP			Level of impact project improves truck movement
Increase Access to Airports	HRTPO			Project provides improved access to airport facilities
Increase Access to port facilities	HRTPO			Project provides improved access to port facilities
Improves Flow of Freight Rail	HRTPO			Project improves flow of freight rail traffic
Provision of new or increased access opportunities	HRTPO		New projects = New Opportunity Existing Facility = Increased Opportunity	Project providing access opportunity to the regional transportation network
Support Plans for Future Growth	HRTPO	Review of Local Comprehensive Plans		Project consistency to Local Comprehensive Plan

Appendix D: Glossary of Acronyms and Abbreviations

ADT	Average Daily Traffic
ATI	Air Terminal Interchange
Ave	Avenue
Blvd	Boulevard
B/T	Bridge-Tunnel
CH (CHE)	City of Chesapeake
CL	City/County Line
CMP	Congestion Management Plan
Dr	Drive
DRPT	Virginia Department of Rail and Public Transportation
E	East
EB	Eastbound
EIS	Environmental Impact Statement
E-W	East-West
Expy	Expressway
FONSI	Finding of No Significant Impact
Ft	Fort
FY	Fiscal Year
FRA	Federal Railroad Administration
GW	George Washington [Memorial Highway]
HM	City of Hampton
HOV	High Occupancy Vehicle Lane
HRBT	Hampton Roads Bridge-Tunnel
HRT	Hampton Roads Transit
HRTPO	Hampton Roads Transportation Planning Organization
Hwy	Highway
I-(#)	Interstate-(Number)
Int	Intersection
Int'l	International
k	Thousand
KHA	Kimley Horn and Associates
Ln	Lane
LRT	Light Rail Transit

L RTP	Long-Range Transportation Plan
MLK	Martin Luther King Freeway
MMMBT	Monitor Merrimac Memorial Bridge Tunnel
Mt	Mount
Mph	Miles per hour
Multi	Multi-jurisdictional
MVMT	Million Vehicle Miles Traveled
NEPA	National Environmental Policy Act
NIT	Norfolk International Terminal
NN	City of Newport News
NOR	City of Norfolk
NS	Norfolk Southern Corporation
Pkwy	Parkway
POQ	City of Poquoson
POR	City of Portsmouth
PPTA	Public-Private Transportation Act of 1995
Rd	Road
ROD	Record of Decision
ROW	Right of Way
Rte	Route
St	Street
STRAHNET	Strategic Highway Network
SU (SUF)	City of Suffolk
SYIP	Virginia Department of Transportation Six Year Improvement Program
TAZ	Traffic Analysis Zone
TDM	Travel Demand Management
Tnpk	Turnpike
Tr	Trail
VA	Commonwealth of Virginia [Virginia]
VB	City of Virginia Beach
V/C	Volume over Capacity
VDOT	Virginia Department of Transportation
VMT	Vehicle Miles Traveled
WB	Westbound
YOE	Year of Expenditure