

May 19, 2021

**Memorandum #2021-81**

**TO: Regional Connectors Study (RCS) Working Group**

**BY: Camelia Ravanbakht, RCS Project Coordinator**

**RE: Regional Connectors Study Working Group Meeting – May 25, 2021**

Attached is the agenda for the **Regional Connectors Study Working Group** meeting scheduled for **Tuesday, May 25, 2021 at 11:00 a.m.**

Pursuant to the declared state of emergency in the Commonwealth of Virginia in response to the COVID-19 pandemic and to protect the public health and safety of the working group members, staff, and the general public, the Regional Connectors Study Working Group meeting will be held electronically.

Members of the public are invited to address the RCS Working Group. Due to the COVID-19 crisis, interested persons may submit comments in advance of the meeting by email to [kmiller@hrtpo.org](mailto:kmiller@hrtpo.org) or phone (757) 366-4370. Each oral comment is limited to three minutes. All comments received 48 hours before the meeting will be provided to the RCS Working Group Members and included in the official record.

CR/kl

Attachments

## **Regional Connectors Study (RCS) Working Group**

### **RCS WG Voting Members:**

Troy Eisenberger (CH)  
Jason Mitchell (HA)  
Bryan Stilley (NN)  
Brian Fowler (NO)

James Wright (PO)  
Jason Souders (SU)  
Ric Lowman (VB)

### **RCS WG Nonvoting Members:**

Jason Flowers (Army Corps)  
George Janek (Army Corps)  
Robert Pruhs (Army Corps)  
Ivan Rucker (FHWA)  
Kevin Page (HRTAC)  
Tim Dolan (US Coast Guard)

Gene Leonard (US Coast Guard)  
Michael King (US Navy)  
Pamela Phillips (VDOT)  
Jennifer Salyers (VDOT)  
Kit Chope (VPA)  
Barbara Nelson (VPA)

### **RCS WG Other:**

Pat Jones (CH)  
Lynne Keenan (HA)  
Amy Inman (NO)  
Anne Doyle (NO)  
Robert Brown (NO)  
Deborah Mangiaracina (NO)  
Evandro Santos (NO)  
Angela Rico (NN)

Carl Jackson (PO)  
Cole Fisher (VB)  
Rick Dwyer (HRMFFA)  
Lori Sharp (PRRBIZ)  
COL Patrick Kinsman (US Army)  
Steve Jones (US Navy)  
Mark Shea (VB)  
Eric Stringfield (VDOT)

### **Staff:**

Bob Crum (HRTPO)  
Pavithra Parthasarathi (HRTPO)  
Rob Case (HRTPO)  
Greg Grootendorst (HRPDC)  
Kendall Miller (HRTPO)  
Keith Nichols (HRTPO)  
Dale Stith (HRTPO)  
Keith Cannady (HRPDC)

### **Project Coordinator:**

Camelia Ravanbakht

### **Project Consultants:**

Craig Eddy  
Lorna Parkins



## **Agenda**

### **Regional Connectors Study**

### **Working Group Meeting**

**Tuesday May 25, 2021**

**11:00 AM**

Pursuant to the declared state of emergency in the Commonwealth of Virginia in response to the COVID-19 pandemic and to protect the public health and safety of the working group members, staff, and the public, the **Regional Connectors Study (RCS) Working Group** meeting will be held electronically. This electronic meeting is required to complete essential business on behalf of the region.

**1. Call to Order, Declaration re: Purpose of Meeting, and Roll Call**

**2. Welcome and Introductions**

**3. Public Comment Period**

Members of the public are invited to address the RCS Working Group. Due to the COVID-19 crisis, interested persons may submit comments in advance of the meeting by email to [kmiller@hrtpo.org](mailto:kmiller@hrtpo.org) or phone (757) 366-4370. Each oral comment is limited to three minutes. All comments received 48 hours before the meeting will be provided to the RCS Working Group members and included in the official record.

**4. Minutes (Action Requested)**

Summary Minutes from April 8, 2021 Working Group Meeting

Attachment 4

**Recommended Action:** For Approval

## **5. Regional Connectors Study: (Action Requested)**

### **Phase 3 - Task 2 - Development of Preliminary Alternatives - Craig Eddy, MBI – RCS Project Manager**

At the April 8, 2021 Working Group Meeting, the Consultant Team presented the latest modeling results from 2045 Baseline, Alternatives 2, 3, 6 and 7. The presentation included traffic volumes, capacity utilizations, and travel times for various runs. The Team also reviewed key assumptions used for various model networks.

Group discussion took place regarding the assumptions for the HR Express Lanes (HRELN) toll rates, HRTPO Board approved 2045 list of projects, Bowers-Hill (B-H) Study recommended concept plans, and various design options. Following an extended group discussion, the WG members agreed to move all four alternatives (2, 3, 6, and 7) to the next step of the modeling process. In addition, they agreed to run an additional Alternative 6 without improvements to VA 164 (known as Alternative 8).

Furthermore, the WG members directed the consultant team to run each of the five preliminary alternatives under two design options for MMMBT: 6 General Purpose Lanes (GP)+ 2 Managed Lanes (ML) and 4GP + 4 ML. The modeling runs will therefore include 10 Alternatives with the E+C Network (October 2020 version) while ensuring consistency with the B-H Study recommendations and HRTAC approved Initial Tolling Policy for HRELN.

Mr. Craig Eddy (MBI), Project Manager, and the Consultant Team will provide a briefing on this item.

Attachment 5A – Graphics of Alternatives 2, 3, 6, 7 and 8

Attachment 5B – Preliminary results from the 2045 Baseline, Alternatives 2, 3, 6, 7, and 8 under two design options (6+2 and 4+4) for MMMBT.  
(The modeling results will be distributed in advance and prior to the meeting)

**Recommended Action:** Recommend Preliminary Alternatives for the Steering (Policy) Committee's Consideration/Approval.

## **6. For Your Information**

- A) RCS Diary: April 2021 Update – Attachment 6A
- B) Revised Schedule for Phase 3 - Attachment 6B

## **7. Meetings/Events**

### **A. Scheduled Working Group Meetings for 2021:**

- June 10, 2021 – 1:30 PM
- July 8, 2021 -1:30 PM
- August 12, 2021 – 1:30 PM
- September 9, 2021 – 1:30 PM
- October 14, 2021 – 1:30 PM
- November 10, 2021
- December 9, 2021

### **B. Joint Steering (Policy) Committee and Working Group Meeting – Date TBD in June/July Timeframe**

## **8. Other Items of Interest**

## **9. Adjournment**

**Regional Connectors Study  
Working Group Meeting Minutes  
April 8, 2021, 1:30 pm**

See “Call to Order” for COVID-19 notice.

The following voting members attended the web meeting (alphabetically by city):

Troy Eisenberger (Chesapeake)  
Lynne Keenan (Hampton)  
Brian Stilley (Newport News)  
Brian Fowler (Norfolk)  
Carl Jackson (Portsmouth)  
Ric Lowman (VB)- left early; replaced by Mark Shea (VB)

The following voting members were absent (alphabetically by city):

Jason Souders (Suffolk)

The following others attended the web meeting (alphabetically by last name):

Rob Case (HRTPO)	Pavithra Parthasarathi (HRTPO)
Anthony Donald (Michael Baker Intl.)	Pamela Phillips (VDOT)
Rick Dwyer (HRMFFA)	Robert Pruhs (US Army COE)
Craig Eddy (Michael Baker Intl.)	Camelia Ravanbakht (RCS Coordinator)
George Janek (US Army COE)	Angela Rico (Newport News)
Steve Jones (US Navy)	Evandro Santos (Norfolk)
Michael King (US Navy)	Dale Stith (HRTPO)
Claudette Lajoie (Solstice Environmental)	Eric Stringfield (VDOT)
Gene Leonard (US Coast Guard)	Bill Thomas (Michael Baker Intl.)
Barbara Nelson (POV)	
Keith Nichols (HRTPO)	
Kevin Page (HRTAC)	

## **1. Call to Order**

Chair Bryan Stilley (Newport News) called the meeting to order at 1:30pm. Pavithra Parthasarathi (HRTPO) read this COVID-19 notice:

“Pursuant to the declared state of emergency in the Commonwealth of Virginia in response to the COVID-19 pandemic and to protect the public health and safety of Regional Connectors Study Working Group members, staff, and the general public, today’s meeting is being held electronically via Webex. This electronic meeting is required to complete essential business on behalf of the region.”

Ms. Parthasarathi also read a statement concerning the agenda, the meeting recording, public comment, and housekeeping rules.

## **2. Welcome and Introductions**

Camelia Ravanbakht (RCS Coordinator) called the roll.

## **3. Public Comment Period**

There were no public comments.

## **4. Minutes**

The Working Group approved the minutes of the February 11, 2021 Working Group meeting.

## **5. RCS: Phase 3, Task 2- Development of Preliminary Alternatives**

Craig Eddy (MBI) led a discussion of preliminary alternatives. First, he asked Bill Thomas (MBI) to present slides discussing 2045 modeling results (volumes, travel times, etc.) for four alternative project alignments:

Alt. 2: I-664, VA 164

Alt. 3: I-664, VA 164, I-664 and I- 564 Connectors (the East-West Connector)

Alt. 6: I-664, VA 164, I-664 Connector, I-564 Connector, and CIMT Connector

Alt. 7: Alt. 6 modified with a more southerly alignment for I-664 Connector

Kevin Page (HRTAC) suggested that toll rates approved by HRTAC be used in the modeling, and Mr. Eddy agreed.

Brian Fowler (Norfolk) questioned the tolls on the East-West Connector. Mr. Eddy said that tolls were added to the I-664 and I-564 Connectors due to that route competing with the Midtown Tunnel (the operator of which has an agreement with the state), as shown on slide 9.

Mr. Stilley facilitated the selection of up to 10 alternatives. Several speakers questioned the validity of Alt. 7. Mr. Eddy said that the I-664 Connector portion of Alt. 7 would not be built until the end of the usage of Craney Island for dredge spoil, forecasted for 2050.

Concerning the constructability of Alt. 7, Robert Pruhs (Army COE) indicated that:

- Craney Island cells are filled with saturated marine clays
- Craney Island berm height will change

The group conducted a long discussion of the appropriateness of running an alternative that excludes the VA 164 improvement, given the HRTPO Board's recent approval of a fiscally-constrained 2045 LRTP project list that includes a VA 164 improvement. Mr. Fowler said that the RCS will be input for the 2050 LRTP.

Mr. Stilley asked whether the group wanted to change the current baseline network (a version of HRTPO's Existing plus Committed network). There was no consensus to make a change.

Mr. Fowler moved that the following set of 10 alternatives be carried forward: five (5) alignments (Alt's 2, 3, 6, 7, 6modified[without VA 164 improvements]) and two (2) I-664 HOT design (2 or 4 lanes). Carl Jackson (Portsmouth) seconded. The working group voted to carry them forward.

## **6. For Your Information**

The following information was attached to the agenda:

- A) RCS Diary of Key Decision Points
- B) Revised Schedule for Phase 3

## **7. Meetings/Events**

- A. Scheduled Working Group Virtual Meetings:
  - May 13, 2021- 1:30pm
  - June 10, 2021- 1:30pm
  - July 8, 2021- 1:30pm
  - August 12, 2021- 1:30pm
  - September 9, 2021- 1:30pm
  - October 14, 2021- 1:30pm
- B. Joint Steering (Policy) Committee and Working Group Meeting:
  - Tuesday May 25, 2021 – 11am to 1pm

## **8. Other Items of Interest**

No other items were discussed.

## **9. Adjournment**

The meeting was adjourned approximately at 4:15 pm.



# ATTACHMENT 5A - ALTERNATIVES 2,3,6,7,8



2



3



6



7



8

# Regional Connectors Study

## Summary of Key Decision Points

Prepared By: Camelia Ravanbakht, PhD  
RCS Project Coordinator  
November 13, 2020

Revised: December 2020, January 2021, February 2021, April 2021.

**Abstract:**

This document is a diary of key decision points approved by the RCS Steering (Policy) Committee and Working Group from 2017 to present, in chronological order.

The purpose of this document is to provide a quick reference for members of the Regional Connectors Study and the public. The information used in this document is based on excerpts from meeting minutes prepared by Dr. Rob Case of HRTPO.

This is a living document and will be updated with future key action items per approval from the Committee.

## **2017**

### **Steering (Policy) Committee meeting on 10/05/2017**

#### **Item#5: Draft Guidance for Scope of Work**

Mayor Sessoms (VB) moved the endorsement and recommendation of HRTPO Board approval of the Guidance for Scope of Work; Mayor Rowe (Portsmouth) seconded; Motion passed unanimously.

## **2018**

### **Working Group meeting on 05/11/2018:**

#### **Item#5: Contract Negotiations with Selected Consultant:**

Mr. Crum (HRPDC/HRTPO) gave an overview of the consultant selection process in which Michael Baker was chosen. Craig Eddy (Michael Baker) gave an overview, with slides, of a phased approach and a scope for Phase 1. After much discussion by Working Group members, HTRPO staff, and HRTAC staff, it was decided that the consultant would do the following: • Monthly meetings of the Working Group, to be canceled as appropriate considering project progress • Convene a group meeting of stakeholders (Working Group and Policy Group) for Task 1 (Initiate Engagement Program) • Coordinate with VDOT HR District surveys to avoid duplication. • Establish goals & objectives during Phase 1 • Prepare a scope for Phase 2 during Phase 1 • Send details of the proposed survey to Kendall Miller (HRTPO) • Prepare a new baseline of existing conditions.

Mr. Crum asked the group if it concurred with him asking the HRTPO Board for authorization to enter contract with Michael Baker for Phase 1. A motion made by Brian Stilley (Newport News) and seconded by John Yorks (Hampton)—to move ahead with Phase 1—passed unanimously.

### **Working Group meeting on 06/04/18:**

#### **Item#5: Revised Phase 1 Scope:**

Craig Eddy (MBI) presented the current Phase 1 scope, revised based on earlier comments of the working group. Bob Crum (HRTPO) asked that the purpose of Phase 1— “the establishment of goals and objectives [and] the development of a draft scope for Phase 2”—be included in the scope of Phase 1. Craig said that he would add those items to Task 5. Bob asked if the group was comfortable with him signing a contract for Craig to proceed. The group concurred.

## **2019**

### **Joint Steering (Policy) Committee and Working Group meeting on 02/13/2019:**

#### **Item#5: RCS and Relationship with 2045 Long-Range Transportation Plan (LRTP):**

Mr. Crum (HRPDC/HRTPO) stated that to-date, the timelines of the RCS and the 2045 LRTP have been synchronized; however, concerns have grown that more time is needed to conduct the RCS, and it has been suggested to pursue a second option. The options for discussion are as follows:

- Option 1: RCS Concurrent with the 2045 LRTP Schedule
- Option 2: RCS Separate Path from the 2045 LRTP Schedule

Mayor Rowe (Portsmouth) expressed support for Option 2 and stated that the RCS should be decoupled from the LRTP since the LRTP is a fiscally constrained document. He noted that in the 2030 LRTP, adopted by the HRTPO Board in March 2007, no State highway construction funds would be available by 2018; therefore, the projects in the 2030 plan were either pared down or tolled. He indicated that the LRTP was flawed in concept and should reflect the region's vision without the restrictions of fiscal constraint.

#### **Motion:**

Mayor Rowe (Portsmouth) moved to decouple the timelines of the RCS and the 2045 LRTP; seconded by Mayor Price (Newport News). The Motion Unanimously Carried.

#### **Item# 6: RCS Draft Scope of Services for Phase 2:**

#### **Motion:**

Mayor Rowe (Portsmouth) moved to refer the Phase 2 Scope of Work technical comments to the Working Group for review and to recommend HRTPO Board approval of the \$1 million Phase 2 abbreviated scope of work; seconded by Mayor West (Chesapeake). The Motion carried.

### **Steering (Policy) Committee Meeting on 04/30/2019:**

#### **Item#3: Committee Organizational Structure:**

Mr. Crum (HRPDC/HRTPO) presented the idea of the committee nominating a voting member as chair. Mayor Price (Newport News) was chosen as Chair, and he appointed Mayor Rowe (Portsmouth) as Vice Chair.

#### **Item#7: Phase 2 Supplemental Scope of Work, Cost and Budget:**

The committee approved the Phase 2 Supplemental Scope of Work, Cost and Budget, forwarding it to the HRTPO Board for approval at its May 16, 2019.

### **Steering (Policy) Committee meeting on 07/09/2019:**

#### **Item#5: Phase 2 Supplement Budget Omission:**

Craig Eddy (MBI) presented slides concerning this matter. The committee approved the correction.

**Item#7: Scenario Planning and Greater Growth Assumptions:**

The consultant will run the models with 16% employment growth, and then present the results to the Working Group for it to decide whether or not that produces sufficient variation in the congestion of the existing + committed network between the three Greater Growth scenarios. Should upward revisions be deemed necessary by the Working Group, the consultant will run the models with employment growth rates up to 21% until sufficient variation between the scenarios is determined. The Committee approved the Scenario Narratives, Goals, Objectives, and Performance Measures.

**Steering (Policy) Committee on 11/05/2019:**

**Item#6. Draft Phase 3 Scope of Work:**

Craig Eddy (MBI) presented the draft Phase 3 scope, schedule, and budget using slides. The Committee approved the scope, schedule, and budget as presented.

## **2020**

**Working Group Electronic Meeting 06/12/2020**

For the Preliminary Alternatives discussion, Craig Eddy (MBI) provided a background of the project scope, vision, goals, and objectives. His presentation included maps of the segments from the HRCS SEIS that were specified to be part of the RCS effort, as well as additional candidate segments received through stakeholder interviews. The group discussed the potential segments and alternatives to review and analyze as part of the study. Jason Flowers (USACE) read a statement regarding the Corps' federally mandated position to maintain and protect navigable waterways, channels, and access. After much discussion, there was concurrence among the members of the Working Group that the following candidate segments (shown on map provided at meeting) not be forwarded for analysis:

- o Segment 1: New bridge over James River, includes improvements on Rt 10 to US 17
- o Segment 4: Ferry service, Hampton to Norfolk
- o Segment 5: New bridge tunnel from NIT to Hampton

The Working Group also discussed at length the potential future need and scope of the VA-164 Connector and whether it should remain an RCS segment for consideration. For now, VA-164 will remain a potential segment since it is one of the mandated segments to analyze. Additional discussions with all impacted stakeholders will continue at future meetings.

**Working Group Electronic Meeting on 07/09/ 2020:**

Motion to move the study forward and accept the Travel Demand Model adjustments and calibrations were unanimously passed.

**Working Group Electronic Meeting on 08/13/2020:**

Concerning Phase 2, Lorna Parkins (MBI), Vlad Gavrilovic (EPR), Bill Thomas (MBI) presented inputs and outputs of travel demand model runs for various growth scenarios. Craig Eddy (MBI) asked the working group to confirm that the Greater Growth forecasts provide adequate differentiation in results.

Working Group members concurred that the differentiation between the 3 greater growth scenarios is sufficient and directed the consultant team to move the study forward. Congestion related performance measures will be presented at the August 27<sup>th</sup> meeting.

**Working Group Electronic Meeting on 08/27/2020:**

Bill Thomas (MBI) used slides to provide a modeling and congestion (by scenario) update. Results showed a decrease in VMT, VHT from 2017 to 2045 Base. Members expressed concerns with a decrease. Bill Thomas indicated that he intends to perform more checking of the modeling results.

Working Group directed the consultant team to improve model findings, coordinate with staff and report back in late summer/early fall.

**Working Group Electronic Meeting on 10/08/2020:**

**Item #5. RCS: Modeling Update on Congestion Measures**

Bill Thomas (MBI) indicated that he made model fixes to correct earlier counter-intuitive results and substandard differences (in screenline volumes) between counts and model. He presented volume data showing a better relationship between counts and the model. Then he presented measures (vehicle-miles traveled, delay, speed, etc.) comparing the three 2045 Greater Growth scenarios (Water, Urban, and Suburban). Bryan Stilley (Newport News) asked whether the group was satisfied with the fixes. The group made no objections. Mr. Stilley indicated that this satisfaction recommends to the Steering Committee approval of Phase 2.

**Item #6. Mandated and Other Potential Segments:**

Craig Eddy (MBI) presented slides showing the five segments from the Hampton Roads Crossing Study (HRCS) Supplemental Environmental Impact Statement (SEIS).

**Motion:** Brian Fowler (Norfolk) made a motion that the RCS move forward studying alternatives comprised of the five SEIS segments and modifications of the five. Ric Lowman (Va. Beach) seconded the motion. The Working Group approved the motion (4 to 1 from those voting members present at the time of the motion).

**Joint Steering (Policy) Committee and Working Group Meeting on 10/27/2020:**

**Item #5: RCS Phase 2 Status Report:**

**Motion:** The joint body approved Phase 2 completion, including Greater Growth scenario planning differentiation and travel demand modeling performance measures. The motion was



moved by Mayor Rowe (Portsmouth) and seconded by Mayor Dyer (Virginia Beach). Prior to the vote, at the request of Mayor Rowe (Portsmouth), Cathy Vick (VPA) and Barbara Nelson (VPA) verbalized the Port's perspective, including expected growth of the Port. The motion passed unanimously by individual voice vote.

**Item #6: RCS Mandated SEIS Segments and Other Potential Segments:**

**Motion:** Mayor Rowe (Portsmouth) moved that the Mandated Segments be carried forward for "feasibility". Camelia Ravanbakht (RCS Coordinator) mentioned that the segments will be evaluated for permitability. Brian Fowler (Norfolk) indicated that the next step would be for the segments to be modified, as necessary. Martin Thomas (Norfolk) asked that the motion mirrors the motion of the Working Group at its recent meeting. Bob Crum (HRTPO/HRPDC) listed the 5 Mandated segments—I-664 Connector, VA 164 Connector, I-564 Connector, I-664, VA 164—then he reiterated the motion: This joint committee directs the RCS to move forward with studying the feasibility of alternatives comprised of the 5 Mandated Segments and modifications thereof. The motion passed unanimously by individual voice vote.

**Working Group Electronic Meeting on 12/10/2020:**

**Item#5: Regional Connectors Study: Phase 3 - Task 2 - Development of Preliminary Alternatives**

The Consultant Team provided the group with a detailed presentation of two travel demand model (TDM) runs: 1) one Unconstrained 2045 Baseline with the Existing + Committed (E+C) network and 2) one Unconstrained 2045 Baseline with all five mandated segments including: I-664, I-664 Connector, I-564 Connector, VA 164, and VA 164 Connector. Results from these two unconstrained 2045 Baseline model runs were compared with 2017 traffic volumes at key locations. Following some group discussions, Working Group members directed the Consultant Team to prepare for the January 14, 2021 meeting, five new 2045 Baseline model runs with a Constrained E+C network and the following Unconstrained segments:

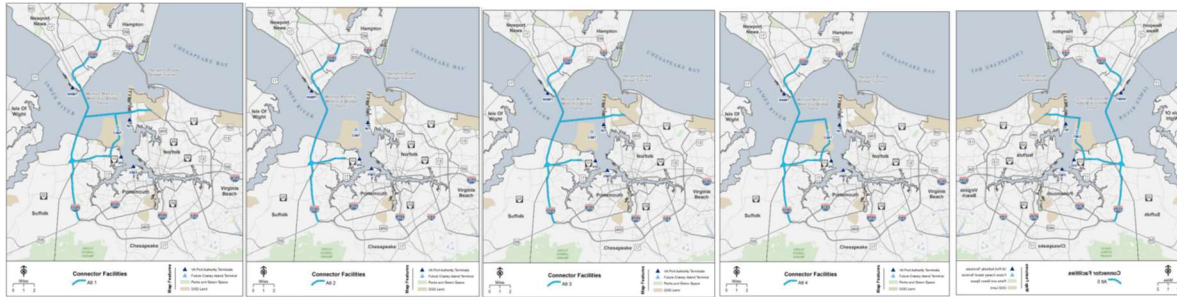
- All five Mandated Segments (I-664, I-664 Connector, I-564 Connector, VA 164, VA 164 Connector)
- I-664 and VA 164
- I-664, VA 164, I-664 Connector, I-564 Connector
- I-664, VA 164, I-664 Connector, VA 164 Connector
- I-664, VA 164, VA 164 Connector, I-564 Connector



## 2021

### Working Group Electronic Meeting 01/14/2021

#### Item#5: Regional Connectors Study: Development of Preliminary Alternatives



The Consultant Team presented the results from travel demand model runs for five Alternatives (see above graphics). Traffic volumes were tabulated for 2017, 2045 Base, and each of the five 2045 alternative runs. Following extensive discussions, Working Group Chair asked the members to decide which one of these alternatives should be moved forward to the next step for further modeling runs under Constrained E+C network as well as Constrained mandated segments.

**Motion:** Troy Eisenberger (Chesapeake) made a motion to move forward to the next step with Alternatives 2, 3, and 5. The motion was seconded by Ric Lowman (Virginia Beach) and passed 4 to 1 by those voting members present at the time of the motion.

### Working Group Electronic Meeting 02/11/2021

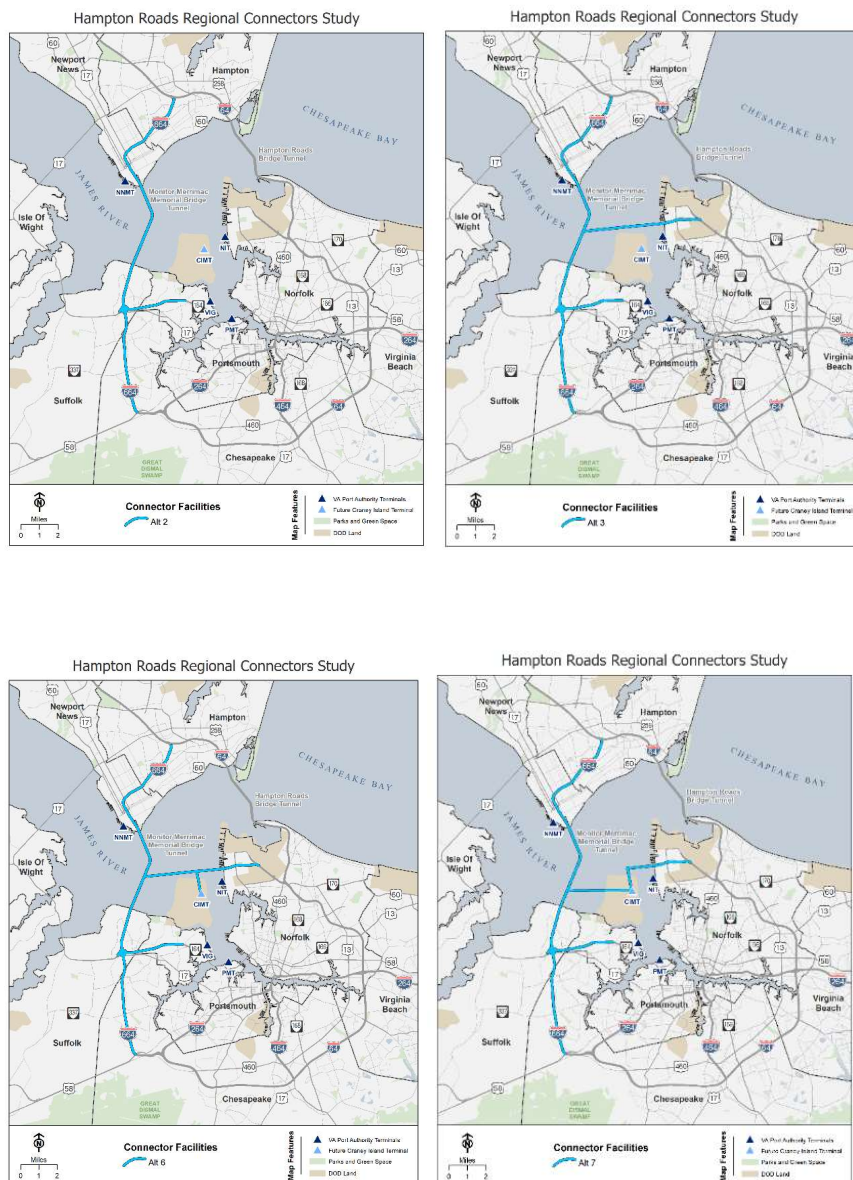
#### Item#5: Regional Connectors Study: Development of Preliminary Alternatives

The Consultant Team presented the traffic volume results from travel demand model runs for 2045 Baseline, Alternatives 2, 3, and 5. The presentation also included summaries of two meetings separately conducted on January 29 with ACOE and the Navy and on February 5 with the Port of Virginia staff. Discussions focused on Segment 164 Connector regarding issues and constraints (listed below) expressed by ACOE, Navy and the City of Portsmouth:

- Segments must not interfere with operations, maintenance, construction, or capacity of Craney Island
- Current projected lifespan of Craney Island is 2050 based on current technology
- Segments must be a minimum of 1800 feet from proposed Navy Fuel Depot expansion for safety and security reasons and may require walls to further safeguard from potential security threats
- City of Portsmouth Landfill expansion

**Motion:** Carl Jackson (Portsmouth) made a motion to delete Alternative 5 and add two new Alternatives 6 and 7. The motion was seconded by Brian Fowler (Norfolk) and passed unanimously.

The modeling results for Alternatives 2, 3, 6, and 7 will be presented at the March 11 Working Group meeting.



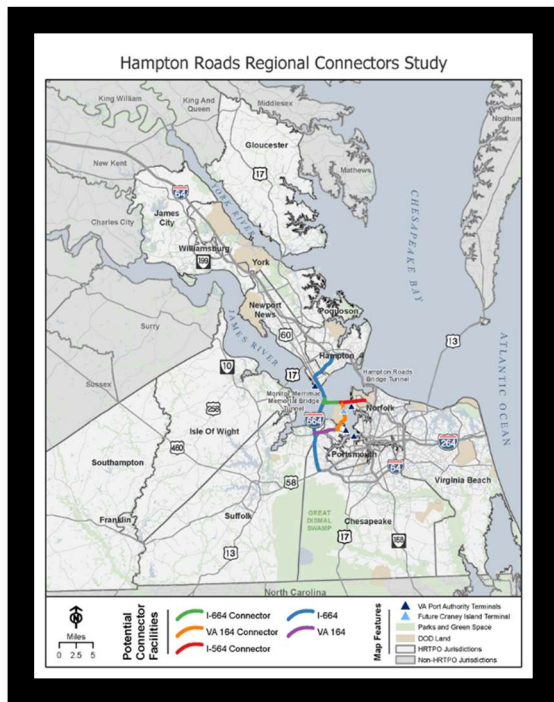
[Working Group Electronic Meeting 03/11/2021 - Cancelled](#)

[Working Group Electronic Meeting 04/08/2021](#)

**Item#5: Regional Connectors Study: Development of Preliminary Alternatives**

- The Consultant Team presented the modeling results from 2045 Baseline and Alternatives 2, 3, 6 and 7. The presentation included traffic volumes, capacity utilizations, and travel times for various runs. The Team also reviewed key model assumptions used for various model networks.
- Group discussion took place regarding the assumptions for HRELN toll rates, HRTPO Board approved 2045 list of projects, Bowers Hill Study recommended concept plans, and various design options.
- The WG members agreed to move all four alternatives (2, 3, 6, and 7) to the next step of the modeling process. In addition, they agreed to run Alternative 6 under two versions – with and without improvements to VA 164. Furthermore, they agreed to run each of the five preliminary alternatives under two design options for MMMBT: 6 GP+ 2 Managed Lanes and 4GP + 4 Managed Lanes.
- The next modeling runs will therefore include 10 Alternatives with the E+C Network (October 2020 version) while ensuring consistency with the B-H Study recommended concept plans and HRTAC approved Initial Tolling Policy for HRELN (\$0.06/mile or \$0.25 per gantry). This is consistent with the scope of work.

# APPENDIX A – STUDY AREA



## Appendix B: Funding

### Description Budget/Cost

Phase 1	\$359,497
Phase 1 (Supplement)	\$3,784
Phase 2 (Interim)	\$779,199
Phase 2 (Supplement)	\$709,637
Phase 2 (Supplement Omission)	\$96,746
Phase 3	\$4,062,710
Subtotal amount (Consultant)	\$6,011,573
Contingency	\$80,638
Total Amount (Consultant)	\$6,092,211
RCS Project Coordination	\$322,000
HRTPO staff expenses	\$535,756
<b>Grand Total</b>	<b>\$6,949,967</b>

Funded by HRTAC, Administered by HRTPO



REVISED - Regional Connectors Study - Phase 3 Schedule (April 19, 2021)

Task No.	Task	2021												2022												2023											
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY							
TASK 1	EXECUTE ENGAGEMENT PLAN																																				
1.1	Task Management																																				
1.2	Engagement Plan Review																																				
1.3a	Study Mailing List and Comment Database																																				
1.3b	Scenario Planning Virtual Meeting																																				
1.3c	Community Briefings and Presentations																																				
1.3d	Brochures, Factsheets, and Handouts																																				
1.3e	Public Meetings																																				
1.3f	Regional Connectivity Symposium																																				
1.3g	Community Events and Outreach																																				
1.3h	Social Media Engagement																																				
1.3i	Engagement Report																																				
1.4	Website Upgrades and Maintenance																																				
TASK 2	DEVELOPMENT OF PRELIMINARY ALTERNATIVES																																				
2.1a	Summarize Background Information																																				
2.1b	Conduct Unconstrained Travel Demand Model Analysis																																				
2.1c	Preliminary Alternatives Identification																																				
2.2	Develop/Refine Geometry of Preliminary Alternatives																																				
2.3	Hydraulics and Hydrology																																				
2.4	Structures																																				
2.5	Utilities and Railroad Crossings																																				
2.6	Planning Cost Estimates																																				
TASK 3	DETERMINATION OF CANDIDATE ALTERNATIVES																																				
3.1a	Conduct Congestion Relief Assessments																																				
3.1b	Performance Evaluation																																				
3.2	Conduct Permitability Assessments																																				
3.3	Conduct Constructability Assessments																																				
3.4	Identify Candidate Alternatives																																				
TASK 4	CONDUCT SCENARIO PLANNING																																				
4.8a	Confirmation/Network Coding of Candidate RCS projects for testing																																				
	Travel Demand Modeling for Baseline and 3 Greater Growth Scenarios (each Candidate Project)																																				
	Evaluate Performance of Candidate Projects under Baseline and 3 Greater Growth Scenarios																																				
	Evaluate Traffic Operating Conditions																																				
	4.9a	Scenario Results Workshops																																			
4.9b	Recommendation Documentation																																				
TASK 5	PREPARE FOR AND ATTEND MEETINGS (WORKING GROUP AND STEERING COMMITTEE)																																				
5.1	Working Group Meetings																																				
5.2	Steering Committee Meetings																																				
TASK 6	MANAGE THE PROJECT																																				
6.1	Weekly Coordination with Study Leadership																																				
6.2	Schedule and Budget Oversight																																				
6.3	Quality Assurance of Deliverables																																				
TASK 7	PREPARE DOCUMENTATION																																				
7.1	Draft Study Report																																				
7.2	Final Study Report																																				
<div><div><div></div><div>Continuous Task</div></div><div><div></div><div>Task Schedule</div></div><div><div></div><div>Key Decision Point</div></div><div><div></div><div>Steering Committee Meetings</div></div><div><div></div><div>Working Group Coordination Meeting</div></div><div><div></div><div>Public Meeting</div></div></div>																																					