December 5, 2023

Memorandum #2023-170

TO: Regional Connectors Study Steering (Policy) Committee and Working Group

BY: Camelia Ravanbakht, RCS Project Coordinator

RE: RCS Steering (Policy) Committee and Working Group Joint Meeting – December 12, 2023

A joint meeting of the Regional Connectors Study (RCS) Steering (Policy) Committee and Working Group has been scheduled for Tuesday, December 12, 2023, beginning at 9:00 AM. The agenda and related materials are attached.

This meeting will be held virtually. Participants can use the Microsoft Teams information provided below to join the meeting. As the HRTPO Board will consider acceptance of the RCS Phase 3 deliverables and study recommendations at the HRTPO meeting in January, a quorum is essential. Please make every effort to participate.

Microsoft Teams meeting
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Attachments

RCS Steering (Policy) Committee and Working Group Members

Voting Members:

Steering (Policy) Group
Rick West (CH)
Donnie Tuck (HA)
Phillip Jones (NN)
Martin Thomas (NO)
Shannon Glover (PO)
Mike Duman (SU)
Robert Dyer (VB)

Working Group
Troy Eisenberger (CH)
Jason Mitchell (HA)
Bryan Stilley (NN)
Deborah Mangiaracina (NO)
James Wright (PO)
Jason Souders (SU)
Ric Lowman (VB)

Nonvoting Members:
Ivan Rucker (FHWA)
Rick Dwyer (HRMFFA)
Kevin Page (HRTAC)
Lesley Dobbins-Noble (USACE)
Col. Brian Hallberg (USACE)
Keith Lockwood (USACE)
Robert Pruhs (USACE)
Justin Summers (USACE)
Wayne Barnes (USCG)
Zack Hoekwater (USCG)
Michael King (USN)
Chris Hall (VDOT)
Sandra Kochersperger (VDOT)
Stephen Edwards (VPA)
Barbara Nelson (VPA)

Staff:
Bob Crum (HRTPO)
Pavithra Parthasarathi (HRTPO)
Rob Case (HRTPO)
Keith Nichols (HRTPO)
Dale Stith (HRTPO)
Kyle Gilmer (HRTPO)
Greg Grootendorst (HRPDC)

Project Coordinator:
Camelia Ravanbakht

Project Consultants:
Lorna Parkins
Paul Prideaux

Agenda
Regional Connectors Study
Joint Steering (Policy) Committee and Working Group Electronic Meeting

Tuesday, December 12, 2023
9:00 AM

1. **Call to Order**

2. **Welcome and Introductions**

3. **Public Comment Period** (Limit 3 minutes per individual)

4. **Minutes** (**Action Requested**)

   Summary Minutes from September 15, 2023, Joint Steering (Policy) Committee and Working Group Meeting

   Attachment 4 – Summary Minutes of September 15, 2023 Meeting

   Motion: Approve Summary Minutes of September 15, 2023 Meeting

   Recommended Action: For Approval

5. **Regional Connectors Study Phase 3 – Step 4: Final Documentation and Recommendations (Actions Requested)**
   Lorna Parkins (MBI) and Paul Prideaux (MBI), RCS Project Co-Managers

   The Regional Connectors Study (RCS), funded by Hampton Roads Transportation Accountability Commission (HRTAC) and initiated by Hampton Roads Transportation Planning Organization (HRTPO) in 2018, provides a regional long-term vision that examines transportation options that connect the Peninsula and Southside across the Hampton Roads Harbor while enhancing economic vitality and improving the quality of life in the region. As such, the RCS represents a "Time Capsule" where we can preserve and memorialize all the benefits, concerns, and issues of the study's five mandated segments: I-664 (College Drive to I-64), Route 164, 164 Connector, I-564 Connector, and I-664 Connector. This Time Capsule could be used as a reference document in the future when regional stakeholders are ready to revisit/advance the study recommendations.

At the last Joint Steering (Policy) Committee and Working Group Meeting of September 15, 2023, Ms. Lorna Parkins (MBI), RCS Project Co-Manager, presented a summary of previous study phases, overall project accomplishments, and a brief overview of the RCS end products. After the presentation, Mr. Crum (HRTPO Executive Director) acknowledged that Mayor Shannon Glover of Portsmouth expressed some concerns but was unable to attend the meeting in person, and in his place, city staff read a statement expressing these concerns. Therefore, Committee Members agreed to postpone approval of the RCS final documents to a later date to provide the HRTPO staff and Consultant Team a chance to discuss the issues with Portsmouth officials and staff.

The HRTPO staff and Consultant Team conducted a working meeting with Portsmouth officials on October 4, 2023, to discuss the concerns that have been addressed to date and resolve any additional issues regarding the proposed widening of Route 164 and the draft technical report. The meeting was very productive, and all the city staff issues related to the study were discussed. In addition, the meeting participants agreed for the study team to request and document a position statement from all the localities and regional stakeholders involved in this study regarding their perspectives on benefits, issues, and concerns for each of the five study segments.

The position statements have been received and incorporated verbatim as a separate Chapter in the attached Final Regional Connectors Study Summary Report. This report summarizes the process and key findings of all three RCS study phases, including updates and key issues of each segment, a summary of the public engagement, and study tiering/recommendations. In addition, the Consultant Team has updated the Phase 3 Technical Guide with all the comments received.

Ms. Parkins (MBI) and Mr. Prideaux (MBI) will brief the Joint Committee on this item.

Attachment 5.1 – Regional Connectors Study Summary Report
Attachment 5.2 – Phase 3 Technical Guide (please use the link provided below to download a copy of the report)

https://connectorstudy.org/documents/regional-connectors-study-phase-3-technical-guide-final-12-04-2023/

Motions:

- Approve the RCS Final Summary Report and Phase 3 Technical Document
- Recommend Acceptance of the RCS for consideration by the HRTPO Board at its January 18, 2024, Meeting

Recommended Action: For Approval

6. For Your Information

RCS Diary of Key Decision Points: 2017 to Present

The attached diary includes a summary of key decision points from 2017 to the present time. The purpose of this document is to provide a quick reference for members and the public. This is a living document and is updated with approved key action Items.

Attachment 6 – RCS Diary December 2023 Update

7. Other Items of Interest

8. Adjournment

Regional Connectors Study
Joint Steering (Policy) Committee & Working Group Meeting Minutes
September 15, 2023, 12:30 PM

Steering (Policy) Committee

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

Donnie Tuck (HA)
Phillip Jones (NN)
Martin Thomas (NO)
Mike Duman (SU)
Robert Dyer, Chair (VB)

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

Rick West (CH)
Shannon Glover (PO)

Working Group

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

Troy Eisenberger (CH)
Lisa Simpson (NN)
Dorian Allen (NO)
James Wright (PO)
Jason Souders (SU)
Ric Lowman (VB)

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

Jason Mitchell (HA)

Others
* indicates virtual attendance

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

Rob Cofield (HRPDC/HRTPO)
Robert A. Crum, Jr. (HRPDC/HRTPO)
Mitzi Crystal (VDOT)
Leslie Dobbins-Noble (USACE)
Rick Dwyer (HRMFFA)
Angela Effah-Amponsah (VDOT)
Kyle Gilmer (HRTPO)
*Zach Harris (Michael Baker Intl.)
*Brandon Irvine (Michael Baker Intl.)
George Janek (USACE)
Steve Jones (US Navy)
*Michael King (US Navy)
Matt Klepeisz (HRPDC/HRTPO)
Claudette Lajoie (Solstice Environmental)
Robert Lewis (SU)
Quan McLaurin (HRPDC/HRTPO)
Karen McPherson (McPherson Consulting)
Barbara Nelson (VPA)
Keith Nichols (HRTPO)
Todd Nichols (HRMFFA)
Lorna Parkins (Michael Baker Intl.)
Paul Prideaux (Michael Baker Intl.)
Camelia Ravanbakht (RCS Project Coordinator)
Angela Rico (NN)
Dale Stith (HRTPO)
Joe Strange (Michael Baker Intl.)
Brian Swets (PO)
*Bill Thomas (Michael Baker Intl.)

1. Call to Order

Steering committee Chair Mayor Robert Dyer (Virginia Beach) called the meeting to order at 12:30 p.m.

2. Welcome and Introductions

Chair Dyer welcomed the group and called for introductions.

3. Public Comment Period

There were no public comments.

4. Minutes

The June 16, 2023, minutes were approved with Mayor Mike Duman (Suffolk) making the motion and Mayor Donnie Tuck (Hampton) seconding the motion.

5 and 6. Phase 3 – Public Engagement Plan Recap (item 5) and Final Documentation and Recommendations (item 6)

Dr. Camelia Ravanbakht, RCS Project Coordinator, introduced agenda items 5 and 6, stating that they would be covered together. Ms. Lorna Parkins (MBI), RCS Project Co-Manager, presented slides summarizing previous study phases, overall project accomplishments, tiering recommendations and their relationship with the regional Long-Range Transportation Plan, summary of stress testing on the Tier I recommendations, and summary of input and common themes from public engagement on the tiering recommendations. Ms. Parkins also provided a brief overview of the RCS end products.

After the presentation, Mr. Bob Crum, HRTPO/HRPDC Executive Director, acknowledged that Mayor Shannon Glover (Portsmouth) expressed some concerns but was unable to attend the meeting in person and in his place, city staff would read in a statement expressing these concerns. Mr. James Wright, Portsmouth Interim Deputy City Manager/City Engineer, made the following statement:

> *"The City of Portsmouth appreciates the opportunity to participate in the Regional Connectors Study as part of the Steering Committee and Working Group. The energy and efforts put forth in this study will set the goals and priorities for the future of transportation in the region and for the citizens of Portsmouth. As such, we are disappointed with the quality of the responses provided over the course of the study to the concerns expressed by the City of Portsmouth as they relate to the impacts to its citizens associated with the VA-164 Widening and VA-164 Connector projects. The City of Portsmouth has significant reservations about the information provided and what appears to be a disconnect in how the study represents the potential impacts of these projects on our residents. We look forward to meeting with the TPO Chairman and the consultant to discuss our concerns and these issues prior to finalizing the draft report for this study."*

Mr. Crum thanked Mr. Wright for the comments and stated that a working meeting with the TPO, HRTAC, Baker team, and Portsmouth staff would be arranged soon. This meeting would provide an opportunity for the Baker team to address how concerns have been addressed in the study thus far and city staff would have another opportunity to voice concerns about issues they still feel need to be addressed. Feedback from the meeting would then be used to make revisions as necessary. Subsequently, TPO staff could then call a virtual meeting of the Joint RCS Steering (Policy) Committee and Working Group to consider recommended actions, followed by consideration of said actions at the November TPO Board meeting.

Chair Dyer agreed with the next steps, stating that he wants to help remove any barriers to success, adding that localities should be in alignment and agreement on these regional connectors.

Mayor Tuck asked some questions pertaining to previous feedback provided by Portsmouth staff and Mayor Glover at earlier meetings, asking for clarification on the city's stance on these projects. Mr. Wright stated that city staff want to more fully understand potential impacts to citizens of Portsmouth.

Mayor Tuck moved to defer the action item until after the working meeting with Portsmouth staff. Mr. Wright seconded the motion. The motion carried.

Mr. Crum conveyed appreciation to the group for considering Portsmouth's concerns and request. He reiterated that the working meeting will be scheduled quickly and that the subsequent documentation, including the concerns that have been addressed to date in the study, is a great opportunity to memorialize issues and concerns for future efforts. Mr. Crum also highlighted the progress that has been achieved with the study, including learning more about the alignments and landing on the Monitor-Merrimac Memorial Bridge-Tunnel improvements as a next step. Mr. Crum also stated that modifications to the RCS recommendations or end products would be shared with the Port for their feedback prior to reconvening the Joint RCS Steering (Policy) Committee and Working Group.

7. For Your Information

The RCS Diary of Key Decision Points was attached to the agenda.

8. Other Items of Interest

No items were presented.

9. Adjournment

Chair Dyer adjourned the meeting at 1:03 p.m.

A recording of the meeting is available on the HRTPO website.

REGIONAL CONNECTORS STUDY

HRTPO Regional Connectors Study

SUMMARY REPORT

Draft: December 2023

HAMPTON ROADS TPO

Michael Baker INTERNATIONAL

Attachment 5.1

REGIONAL CONNECTORS STUDY

SUMMARY REPORT
PART 1: SUMMARY OF ANALYSIS

HAMPTON ROADS TPO

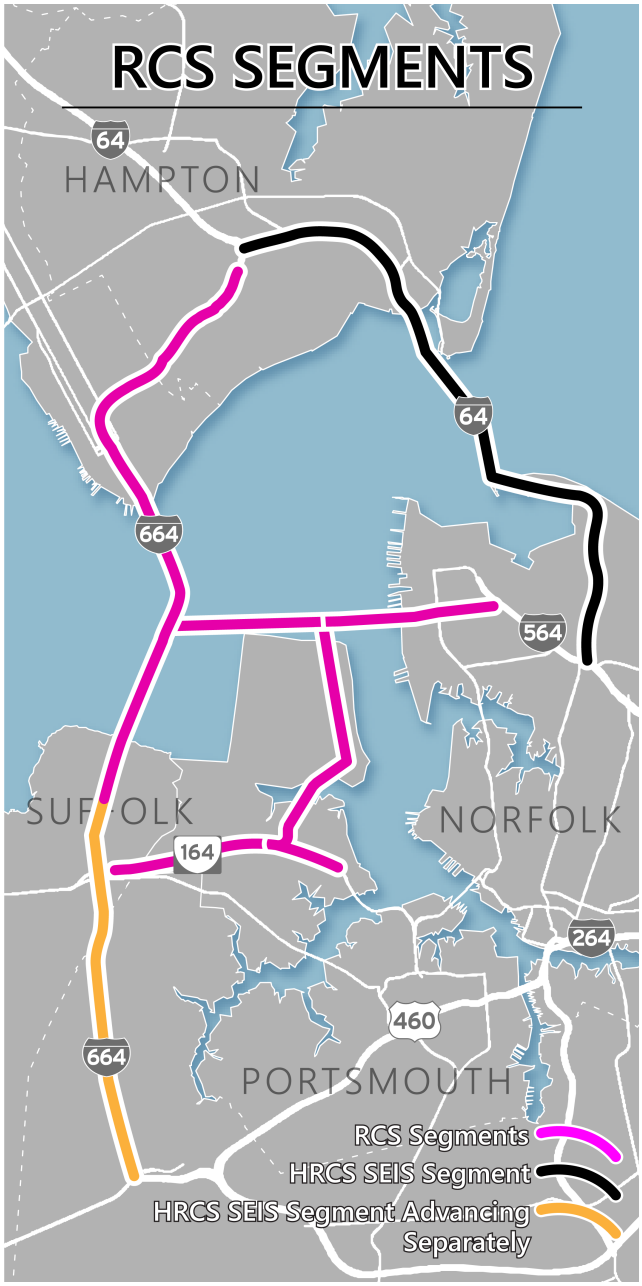
Michael Baker INTERNATIONAL

Attachment 5.1

INTRODUCTION

In 2016, the Federal Highway Administration (FHWA) and the Commonwealth Transportation Board (CTB) approved the Hampton Roads Crossing Study Draft Supplemental Environmental Impact Statement (HRCS SEIS). The HRCS SEIS recommended improvements to I-64 between I-664 in the City of Hampton and I-564 in the City of Norfolk, widening the interstate to six lanes including the Hampton Roads Bridge Tunnel (HRBT). Following the completion of the HRCS SEIS, the HRTPO Board signed a Memorandum of Understanding (MOU) with the Virginia Department of Transportation (VDOT), the Hampton Roads Transportation Accountability Commission (HRTAC), and other partners to study regional connectivity options not selected from the HRCS SEIS. This MOU established the Regional Connectors Study (RCS), which examined cross-harbor and related improvements to connect the cities of Chesapeake,, Hampton, Newport News, Norfolk, Portsmouth, Suffolk, and Virginia Beach. See Figure 1 for HRCS SEIS and RCS Segments.

Figure 1. Segments from the 2016 HRCS SEIS and RCS



The RCS focused on connectivity in the Hampton Roads region through the lenses of congestion relief, economic vitality, resiliency, accessibility, and quality of life. The RCS offers recommendations for an uncertain future through the use of scenario planning. Ultimately, the RCS recommends prioritizing the widening I-664 and VA 164 to address increased future travel demand in the Hampton Roads Region. These "Tier I" recommendations are the most cost-effective and most reasonable and ready to implement among the five highway segments studied in the RCS.

The Regional Connectors Study acknowledges that the Elizabeth River Crossing agreement has had a detrimental impact on Portsmouth and the goal is not to repeat this. At this time there are no plans to implement tolls on VA 164 widening. The HRTPO will work with regional, state, and other stakeholders to ensure that funding is in place to avoid tolls.

REGIONAL BENEFITS

The recommendations of the RCS are intended to provide major benefits to the study area cities, which include Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, Suffolk, and Virginia Beach. The RCS recommendations would also provide benefit beyond the immediate study area to include all of the Hampton Roads Region, commuters, through-travelers, tourists, and the freight network that transports goods in and out of the region.

Through exploratory scenario planning, the RCS analyzed multiple potential futures for the region. These scenarios looked at the impacts that sea-level rise, economic and military growth, and population growth would have on the RCS 2045 baseline network, which includes projects with full funding commitment at the time of analysis. The RCS recommendations could greatly reduce the added congestion that economic prosperity could create. These segments could support the growth of study area cities by alleviating forecasted traffic impacts. This would be to the benefit of the study area cities, the Hampton Roads Region, the Commonwealth of Virginia, and the Eastern Seaboard supply chain.

Regional congestion relief is a means of prioritizing potential harbor crossing investments. While some data regarding the traffic volumes, congestion, and speeds on various locations within the region are provided on a segment basis within the analysis, the performance of individual segments is not the focus. Importantly, a given facility may draw traffic from other slower-speed roads when its capacity and/or reliability improves, which makes the regional performance measures more pertinent to the Regional Connectors Study. If and when any segments advance to further project development, the individual project's purpose and need will be defined and detailed solutions will be examined relative to that purpose and need.

Figure 2. Tunnel Boring Machine for the Hampton Roads Bridge Tunnel

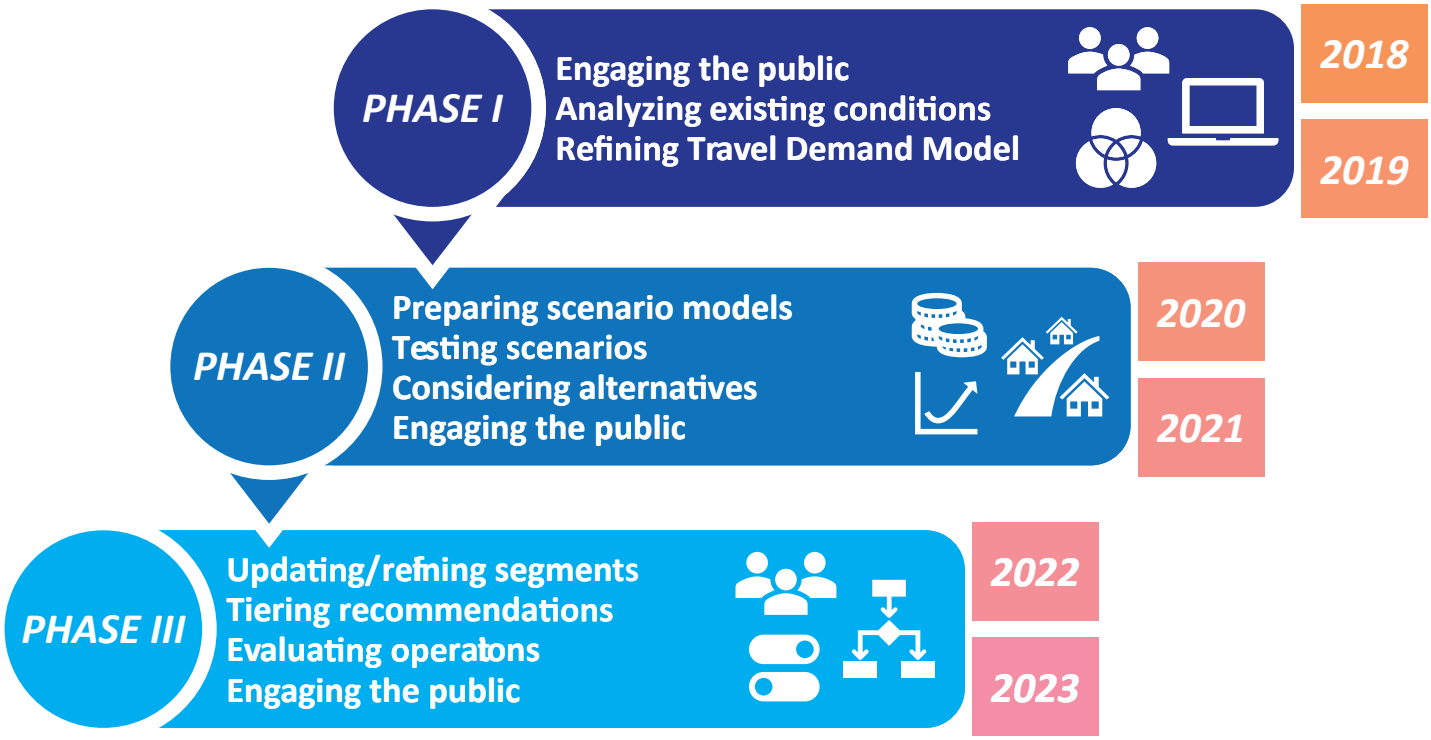
PROJECT HISTORY

Phase I: The project began with a scientific survey – receiving over 1,600 responses – and 32 stakeholder interviews. Phase I saw the completion of an existing conditions update, which was used to refine the Travel Demand Model.

Phase II: Phase II focused on scenario planning. The project team held over 12 in-person meetings and seven webinars on the Greater Growth scenario assumptions and model development. After completing the scenario analysis, this phase culminated with an online engagement process made up of a survey and webinar.

Phase III: The project team initiated Phase III by updating and refining the design concepts of the study segments. Based on qualitative analysis of project readiness, constructibility, and ease of permitting, as well as quantitative analysis of project costs and congestion and economic benefits, the team distributed recommendations into two tiers. The team further refined the segments and their evaluation based on new information and stakeholder input. Finally, the draft tiering recommendations were "stress tested" with scenario and detailed operations analyses. This phase included a round of public engagement in early 2023, a regional symposium, and a final round of public engagement in summer 2023.

Figure 3. Project History by Phase



GREATER GROWTH SCENARIOS

The RCS used exploratory scenario planning to shape its recommendations. Scenario planning is a means of planning for an uncertain future. This was useful for the RCS in considering disrupters that cause uncertainty – including changes in technology, values of residents, and growth of the global economy. RCS has three "Greater Growth" scenarios – Greater Growth on the Water, Greater Growth in Urban Centers, and Greater Suburban/ Greenfield Growth. Each of these scenarios differs in where development will concentrate and what impacts those locations will have on transportation in the region. In addition to serving as a means of stress-testing the RCS tiering recommendations, the Greater Growth Scenarios were also used by HRTPO in the development of the 2045 Long Range Transportation Plan (LRTP).

Figure 4. The Three Greater Growth Scenarios

SEGMENTS

The project team identified five segments for the analysis. These segments are both improvements to exiting highways and proposed connectors over the harbor. The segments are described below and depicted in Figure 5. Further details of the segments including toll assumptions can be found in Part 2: RCS Segments starting on Page 15.

Segment 1a (I-664 Widening north of College Drive): This segment of I-664 would include four new southbound travel lanes through a new tunnel west of the existing tunnel. All four lanes in the existing tunnels would be converted to northbound lanes. Approximately five miles of roadway would be widened by two-lanes in each direction for express lanes (high-occupancy/toll lanes).

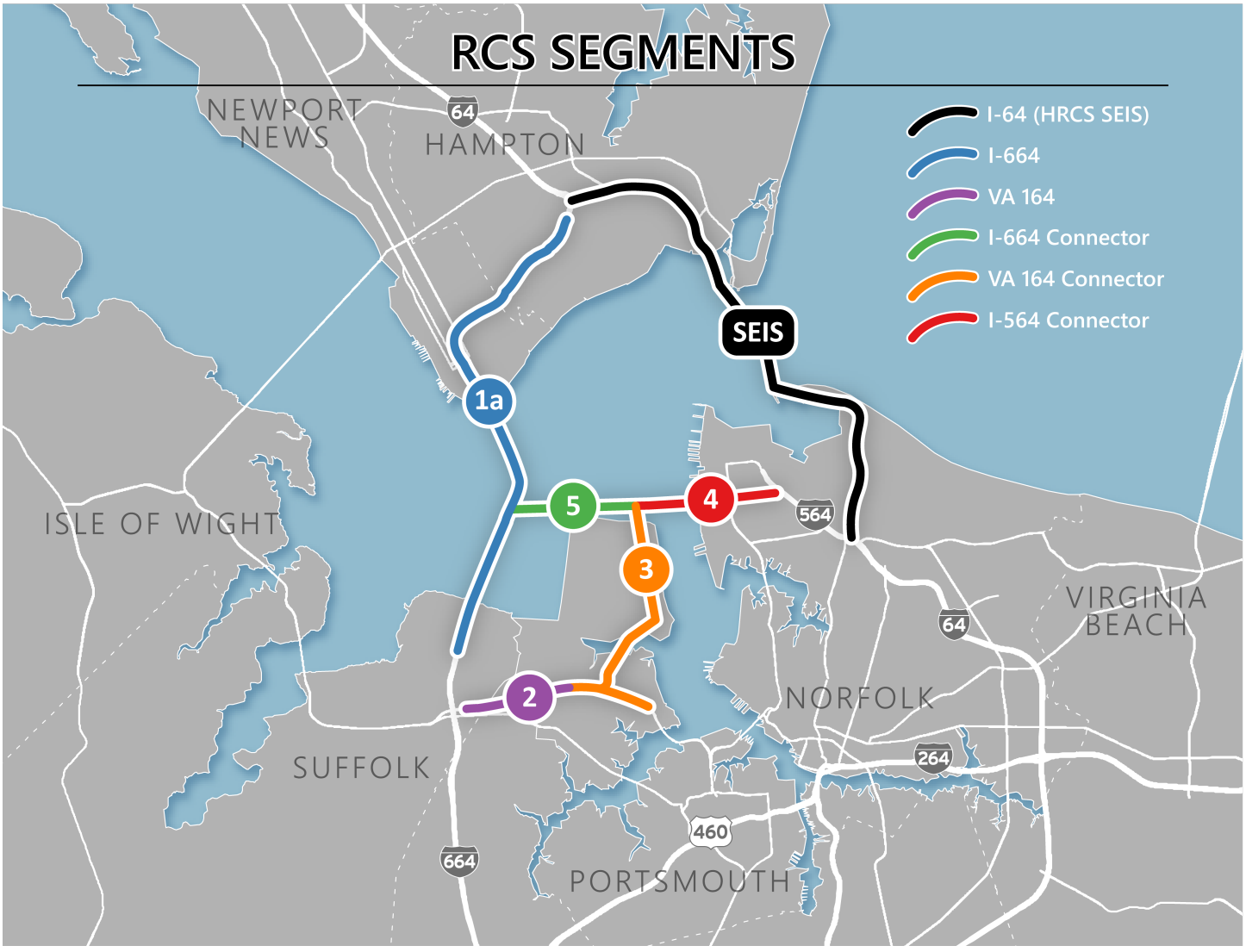
Segment 2 (VA 164 Widening): This segment of VA 164 would be widened to six lanes: three lanes in each direction. The widening would use existing right-of-way to the extent possible.

Segment 3 (VA 164 Connector): This segment would be a new four-lane highway with two lanes in each direction. This segment begins from a new interchange at VA 164 west of Cedar Lane and would cross Craney Island, connecting to the planned Craney Island Terminal port facility. The VA 164 Connector would connect to a new interchange with the I-564 Connector (Segment 4) and/or I-664 Connector (Segment 5) over the water.

Segment 4 (I-564 Connector): This segment would be a new four-lane highway with two lanes in each direction. The segment would extend I-564 using a tunnel and bridge and connect to a new mid-harbor island at the VA 164 Connector (Segment 3) and/or I-664 Connector (Segment 5).

Segment 5 (I-664 Connector): This segment would be a new four-lane highway with two lanes in each direction. The segment would connect to I-664 via a new mid-harbor island and would extend to the I-564 Connector (Segment 4) and/or VA 164 Connector (Segment 3).

Figure 5. RCS Segments



QUALITATIVE EVALUATION

The project team completed a qualitative evaluation of the five segments described in the Segments Section. This evaluation examined permitting issues, readiness, and constructibility. The qualitative approach to identify potential permitting issues included an evaluation of:

- the segment's potential effects on the natural and socioeconomic environment
- the segment's potential to negatively affect low-income and minority (Environmental Justice) populations

The qualitative approach to identify potential readiness issues included:

- the segment's current status in regional plans and project development
- the segment's likelihood to be reliably scheduled for implementation
- the segment's current and potential eligibility for local, regional, state, and federal funding sources

The qualitative approach to identify potential constructibility issues included the items below. These issues informed the cost estimates for each segment and are therefore reflected in the quantitative analysis ratings.

- Complexity of design and construction such as bridges and tunnels
- Constraints to project advancement such as government/agency concerns
- Costs related to right-of-way acquisition, environmental mitigation, and project timing

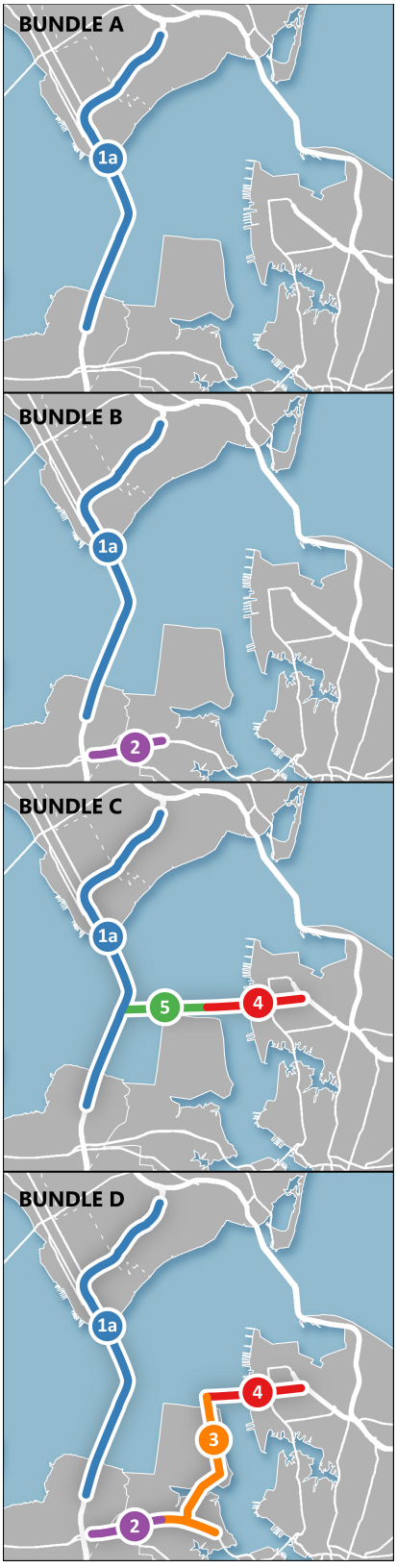
QUANTITATIVE EVALUATION

The quantitative analysis began with estimating the cost of each segment in light of the updated alignments (See Part 2 of this summary document) and the issues identified in the qualitative evaluation of constructibility. The segments were then grouped into four bundles for further analysis (see Figure 6):

- Bundle A: Segment 1a
- Bundle B: Segments 1a and 2
- Bundle C: Segments 1a, 4, and 5
- Bundle D: Segments 1a, 2, 3, and 4

Bundling allowed the testing of alternative networks to evaluate congestion relief and economic benefits, enabling the project team to determine the cost-effectiveness of the bundles. The quantitative evaluation showed the benefits of Segment 1a compare favorably to the segment's high cost. The relative benefits

Figure 6. Bundled Segments



of Segment 2 are much lower, but they are also cost-effective because of that segment's relatively low cost. When combined as Bundle B, these two segments showed a widespread reduction in time spent in congestion. As shown in Figure 7, the qualitative and quantitative ratings of Segments 1 and 2 are similar, while the ratings of Segments 3, 4, and 5 are markedly lower. Therefore, Segments 1a and 2 are grouped as the Tier I recommendations and the remaining segments are recommended for Tier II.

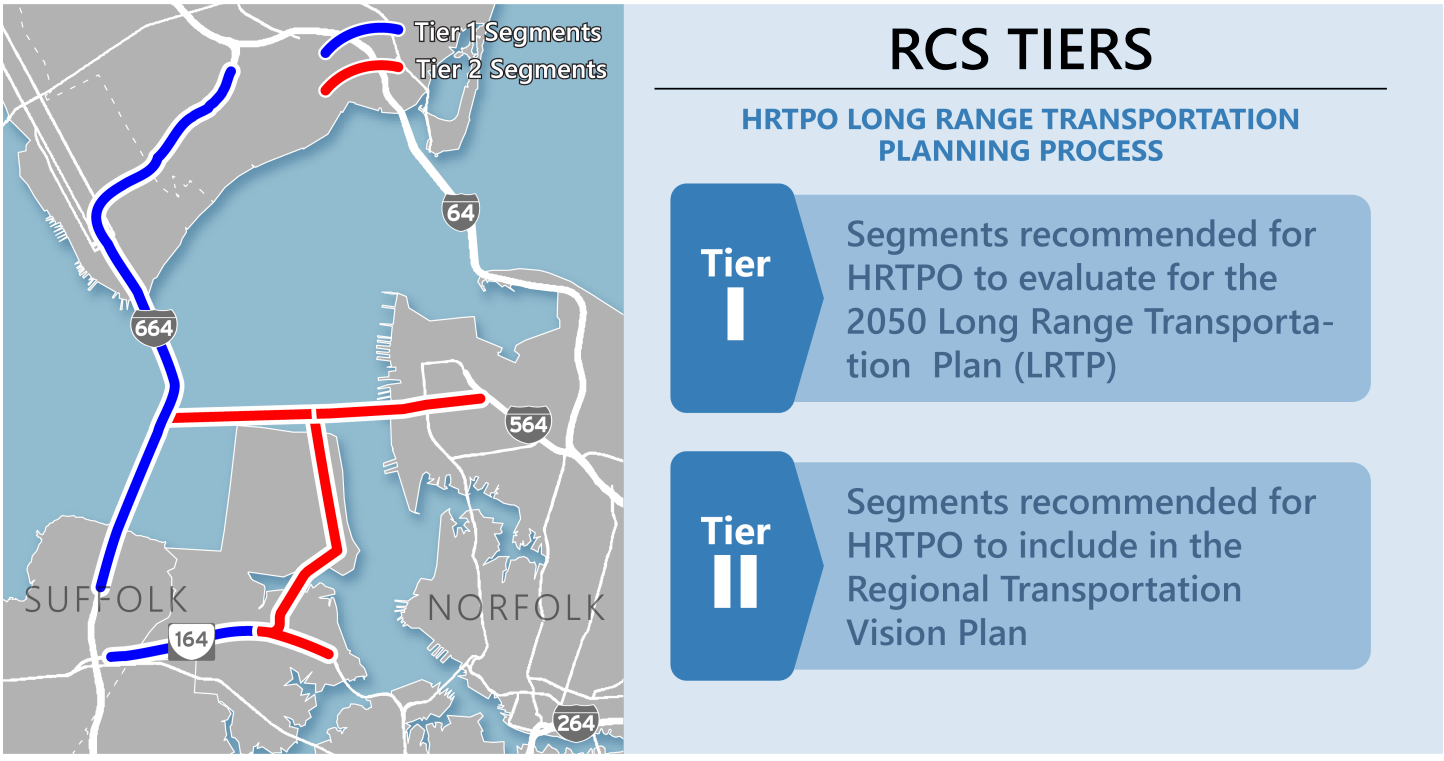
Figure 7. Summary of Quantitative and Qualitative Analysis

	1a	2	3	4	5
Qualitative					
relative ease of permitting	Medium	High	Low	Low	Low
relative readiness	High	Medium	Low	Low	Low
Quantitative					
regional benefits relative to costs	High	High	Low	Low	Low

INITIAL RECOMMENDATIONS

Based on the qualitative and quantitative evaluations, the project team divided the RCS segments into two tiers (see Figure 8). Tier I recommendations involve the existing highway network and include the I-664 widening north of College Drive (Segment 1a) and the VA 164 widening (Segment 2). Tier II recommendations consist of new highway connectors including the VA 164 connector (Segment 3), the I-564 Connector (Segment 4), and the I-664 Connector (Segment 5). Tier I and Tier II recommendations are considered differently in HRTPO's long range transportation planning activities, as summarized in Figure 8.

Figure 8. RCS Segment Tiers



STRESS TEST: CONGESTION BENEFITS

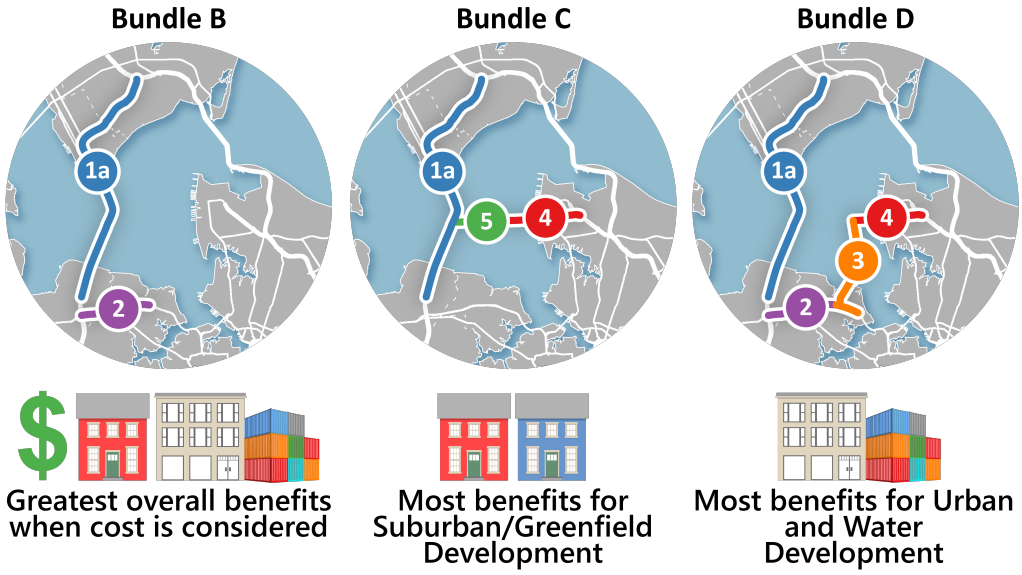
Bundles B, C, and D were coded into HRTPO's travel demand model and run through the three Greater Growth Scenarios as part of the stress test. All of the Greater Growth Scenarios project an increase in regional congestion if no actions are taken to accommodate this growth. The Greater Growth in Urban Centers scenario had a minor increase in congestion and the Greater Growth on the Water and Greater Suburban/ Greenfield Growth scenarios had substantial increases in congestion. The congestion analysis introduced the RCS recommendations as solutions to the scenario's anticipated congestion increases. The analysis found that Bundle B produces the most incremental reduction in regional delay across all scenarios, while Bundle D provides the greatest total reduction in delay for all scenarios except for Greater Suburban/Greenfield Growth where Bundle C outperforms it. Among the scenarios, Bundle C and Bundle D provide the most additional benefit beyond Bundle B's congestion reduction in the Greater Growth on the Water scenario.

STRESS TEST: ECONOMIC BENEFITS

Congestion relief benefits directly generate economic benefits for residents and businesses in the region. The economic benefits follow the congestion benefits. Bundle B provides the most incremental increase in economic value. Bundle D provides the greatest total economic value except in the Greater Suburban/ Greenfield Growth scenario where Bundle C provides the greatest economic impact.

While Bundles C and D provide more total benefit, they underperform Bundle B when the benefits are indexed to the costs. Bundle B provides the most economic benefit in relation to the costs across all scenarios. Bundles C and D perform best in the Greater Growth on the Water scenario, where they add new connections to the region's James River and Elizabeth River waterfront. However, Bundle B is still more cost effective in that scenario.

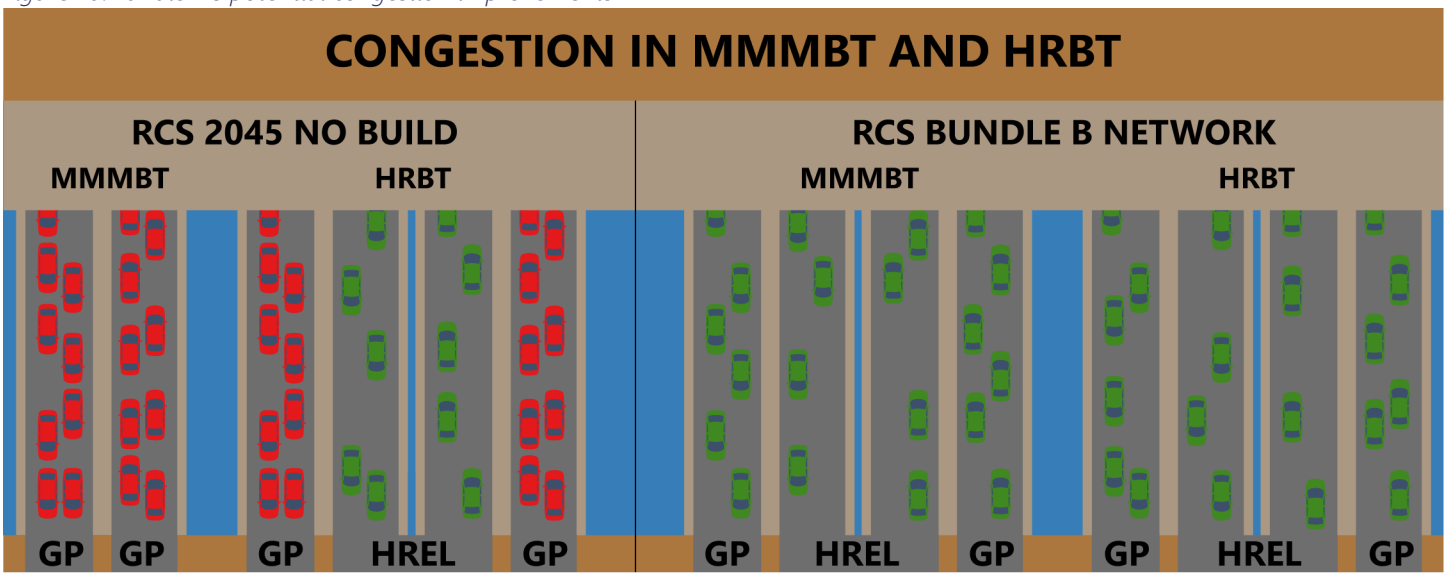
Figure 9. Results of the Congestion and Economic Stress Tests



STRESS TEST: OPERATIONS ANALYSIS

Bundle B went through an additional operations analysis that more closely examines highway and interchange performance, including the regional express lane network. The 2045 Baseline Scenario Bundle B Network will improve traffic operations on the Bundle B segments, reducing congestion via additional travel lanes along I-664 and VA 164, and completing the regional express lane network on I-664. These improvements will help balance traffic volumes between the two harbor crossings by providing increased capacity through the Monitor-Merrimac Memorial Bridge-Tunnel (MMMBT). With these improvements, the Hampton Roads Bridge Tunnel (HRBT) and MMMBT are both expected to operate at acceptable levels of service, operating at or near free-flow speeds in the year 2045 (see Figure 10). The Greater Growth Scenarios show minimal impacts on traffic operations, with less than a 5% degradation on Bundle B roadways. In the No Build condition, both harbor crossings would have congestion in the general purpose lanes. While there may be some degradation on the Bundle B facilities, it is not anticipated that this would cause excessive delays and queues. For all of the scenarios, the HRBT and the MMMBT facilities would have sufficient capacity to handle 2045 traffic demand.

Figure 10. Bundle B's potential congestion improvements



GP= GENERAL PURPOSE
HREL = HAMPTON ROADS EXPRESS LANES

PUBLIC AND STAKEHOLDER ENGAGEMENT

The engagement team coordinated with government officials and staff, technical experts, interest and advocacy groups, and citizens as part of the public engagement process (see Figure 11 for summary). Two groups guided the planning process – the Working Group and the Steering Committee. The Working group was comprised of technical staff from the study area cities as well as local and federal representatives from the U.S. Navy, U.S. Coast Guard, Virginia Port Authority, FHWA, U.S. Army Corps of Engineers, VDOT, and HRTAC. The Steering Committee was comprised of officials, both from HRTAC and the cities that were part of the study. The Working Group and Steering Committee met several times through the duration of the project.

In January 2019, the engagement team conducted 34 stakeholder interviews. The stakeholders provided insights on the relationship between transportation, economic vitality, and quality of life in the region. They discussed trends, emerging issues, and what a successful plan should include. They also offered tactics on how to best engage constituents and other organizations. At the close of Phase II in early 2021, the RCS team held virtual engagement to gather feedback on the Greater Growth scenarios. This engagement included a survey and online open house.

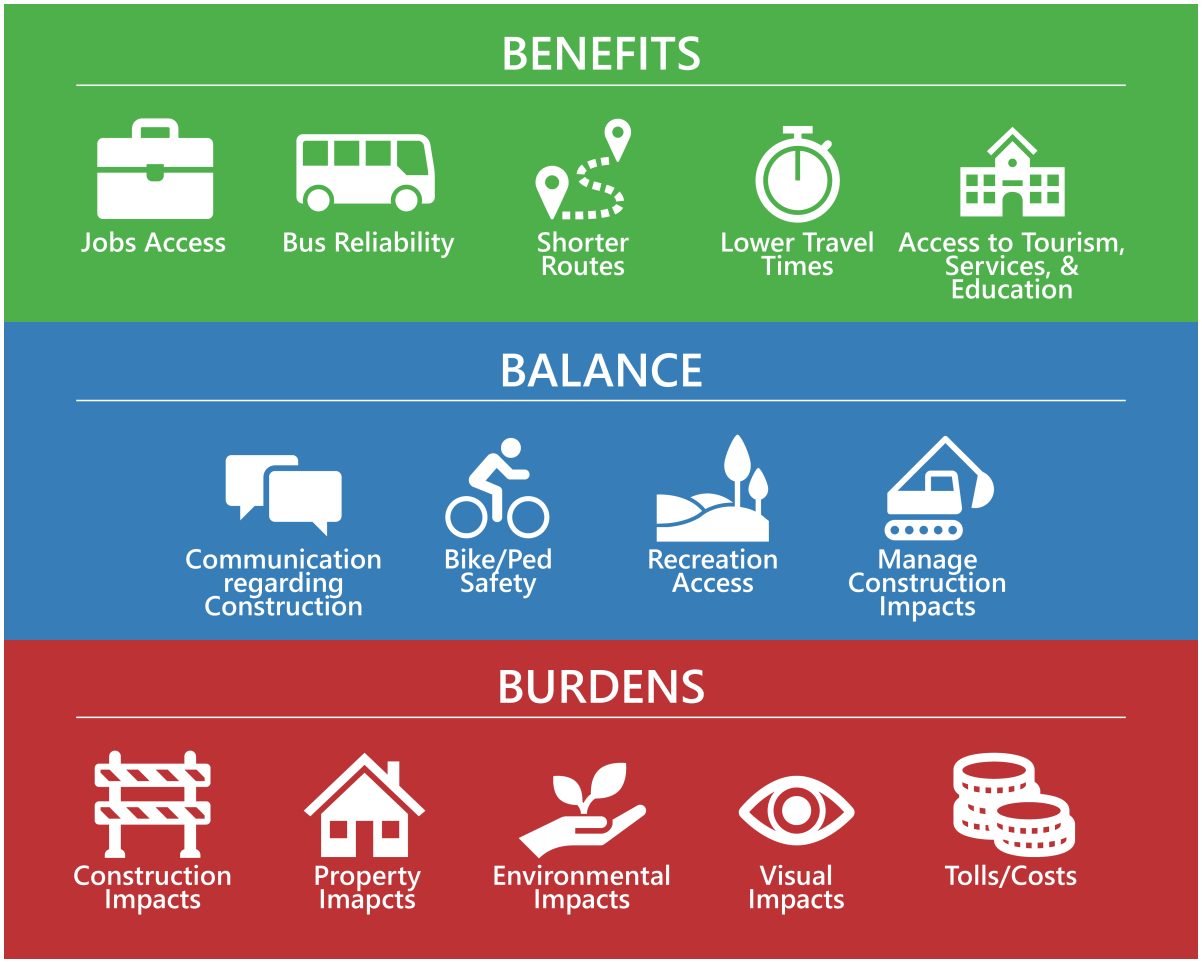
During the second part of the stress test in Phase III, the initial tiering recommendations were taken to the public in January-February of 2023 through engagement that included three pop-ups, four open house meetings, and an online open house. In these meetings, the analysis of permitting issues, readiness, segment costs, and regional benefits were presented along with details of each segment alignment and assumptions. The public offered comments on each segment including potential benefits, potential impacts (burdens), and suggestions for balancing the two (see Figure 12).

A regional symposium was held at HRTPO on May 25, 2023. The symposium hosted a wide range of groups representing underserved populations in the region and included 18 participants representing the NAACP, regional universities, civil rights and environmental justice specialists from state agencies, and agencies serving people with disabilities, unhoused people, low income people, and Black, Indigenous, and People of Color (BIPOC) people. The symposium was workshop-style, offering the opportunity for participants to work in small groups to address questions about benefits and burdens. The participants worked to develop strategies to improve outcomes for underserved communities.

Figure 11. Engagement Summary

After stress testing the Tier I and Tier II recommendations, the final public meetings were held between July 18 and August 3, 2023. This included three pop-ups prior to four open house meetings. Following the in-person engagement, HRTPO held a virtual open house through the end of August. The meetings offered the public a chance to review and discuss the recommendations with HRTPO and the project team.

Figure 12. Publicly-Identified Benefits, Burdens, and How to Balance the Two



MOVING FORWARD

The Tier I segments, widening of I-664 and VA 164, provide the most benefit in relation to cost. The Tier II recommendations, VA-164 Connector, I-564 Connector, and I-664 Connector, show additional benefits in the Greater Growth scenarios and therefore may merit additional consideration in the future, particularly if the region grows faster and in the patterns depicted in the two higher-congestion scenarios. After the conclusion of this study, HRTPO will evaluate Tier I recommendations for inclusion in the 2050 fiscally constrained Long Range Transportation Plan (LRTP) and consider the inclusion of Tier II recommendations in the Regional Transportation Vision Plan.

REGIONAL CONNECTORS STUDY

SUMMARY REPORT
PART 2: RCS SEGMENTS

HAMPTON ROADS TPO

Michael Baker INTERNATIONAL

Attachment 5.1

SEGMENT 1A

Improvements

Add four new southbound travel lanes through a new tunnel west of the existing tunnel and change the existing tunnel to four northbound lanes. Approximately 5 miles of roadway widened two-lanes in each direction for express lanes (high-occupancy/toll lanes).

Updates

The SEIS I-664 alignment was revised to accommodate the Hampton Roads Sanitation District (HRSD) pump station and pipeline facility in the southern portion of Newport News. This included shifting the southbound tunnel and approach roadway parallel to the existing interstate and tunnel to avoid impacting the new facility location. The shift in alignment also necessitated a full reconstruction of the interchange with Terminal Avenue to ensure north and south ingress\egress similar to what is provided in the existing condition.

Assumptions

The new facilities would be configured as the southbound express and general purpose lanes, and the existing facilities would be configured as the northbound express and general purpose lanes. The tunnel for this segment is anticipated to be a bored tunnel rather than an immersed tunnel, as assumed in the SEIS.

Key Considerations

As noted above, the HRSD facility included an exchange of property that caused a shift in the alignment of I-664 widening at the southern tip of the peninsula. This is a dynamic area, and there is no preserved right-of-way for the I-664 widening at the time of this study. When this segment moves forward for project development, coordination with the area landowners will be necessary to determine if an alignment remains feasible. If a realignment of the segment is necessary, that could have the potential to substantially increase project costs. The proximity of the Terminal Avenue interchange adjacent to the Dominion Terminal property and rail lines could require additional measures to avoid impacts. Further, the final location of the HRSD pipeline will need to be considered in construction planning and costing of this segment as it advances in design and implementation.

SEGMENT 2

Improvements

Widen VA-164 to six lanes, three lanes in each direction. Use existing right-of-way to the extend possible for widening VA-164.

Updates

The western limits of SEIS VA-164 have been shortened due to the expansion of the VA-164 and I-664 interchange improvements included within the Bowers Hill Interchange Study and EIS. This study now includes the replacement of the College Drive bridge over VA-164; this was therefore removed from the RCS.

Assumptions

The widening of the remaining portion of VA-164 was reviewed considering many different factors. While the baseline scenario from the SEIS was evaluated, the study team devised a "worst-case" scenario to show the possible outside impacts to the adjacent properties. These worst-case limits show small impacts to several of the adjacent properties as documented in the Qualitative Analysis of Permitting Issues. However, these impacts that were included in the RCS Analysis likely could be avoided through design waivers or exceptions allowing for smaller inside shoulders as well as the opportunity to widen more to the inside within the Commonwealth Railway leased area. The study team also evaluated potential placement the noise walls on retaining walls which could further reduce impacts to adjacent properties.

Key Considerations

The Regional Connectors Study acknowledges that the Elizabeth River Crossing agreement has had a detrimental impact on Portsmouth and the goal is not to repeat this. t this time there are no plans to implement tolls on VA 164 widening. The HRTPO will work with regional, state, and other stakeholders to ensure that funding is in place to avoid tolls. The scope of this study does not include analysis of drainage and stormwater management within the corridors. The location of these stormwater facilities may have impacts to adjacent properties if they cannot be contained in the right of way. The City of Portsmouth has also noted that the extent of increase to impervious surfaces could pass a threshold that would exceed the City's existing MS4 permit. In turn, this could precipitate other actions and considerations for stormwater management at a citywide level.

SEGMENT 3

Improvements

Construct a new four-lane highway, two lanes in each direction, from a new interchange at VA-164 west of Cedar Lane across Portsmouth Landfill and Craney Island and connecting to the planned Craney Island Terminal port facility. The new highway will connect to a new interchange with I-564 Connector and/or I-664 Connector over the water.

Updates

The VA-164 Connector alignment was shifted west to meet the Navy's security force protection setbacks from the expansion area of the Navy fuel depot. Vertical walls were also added to a section of the alignment near the Craney Island US Naval Supply Center as a visual security setback of the fuel line in the area. As noted under Segment 4, the northern terminus was shifted west to the updated location of the connection point of Segments 3, 4 and 5.

Assumptions

The RCS included the HRCS SEIS toll assumptions of $1.00 per car and $3.00 per truck on this segment. The study assumes the VA-164 Connector will not be constructed over the Portsmouth Landfill until it is completed. Portsmouth provided documentation of the current estimated lifespan of both the western and eastern portions of the landfill (see the City of Portsmouth Position Statement in Part 3 of this document). However, technological advances may extend the usefulness of the landfill and extend the lifespan further into the future. Both the landfill and Craney Island timing uncertainty and structural considerations (see below) drive the high uncertainty, high cost, and low readiness score of this segment.

Key Considerations

The study team ran a vertical alignment to confirm the constructibility of structures to span both the Portsmouth Landfill and Craney Island Dredged Material Management Area (CIDMMA). In recent discussions, United States Army Corps of Engineers (USACE) has indicated technological advances could extend both the height of the CIDMMA and the time frame for completing it. The feasibility of the alignment is impacted by lifespan of both the landfill and Craney Island's usefulness. The alignment cannot proceed until both are completed. Also, raising the structures to a greater height than assumed would substantially increase the cost of the project.

SEGMENT 4

Improvements

Construct a new four-lane highway, two lanes in each direction, from I-564 using a tunnel and bridge to a new mid-harbor island connection at the VA-164 Connector and/or I-664 Connector.

Updates

The vertical alignment of Segment 4 was lowered in response to the Navy's concern of I-564 Connector being above and with line of sight to Gate 6 (opened since the SEIS). The revised alignment goes over Hampton Blvd and then begins the downwards descent into the tunnel under the interchange with I-564 at Gate 6 and NIT. The lowering of the profile adjacent to Gate 6 and NIT changes the Single Point Urban Interchange to be connected only on the east side of the interchange. Also, the assumption regarding a bored tunnel (see below) resulted in a westward shift of the mid-harbor island where Segments 3, 4 and 5 would intersect.

Assumptions

The RCS included the HRCS SEIS toll assumptions of $1.00 per car and $3.00 per truck on this segment. I-564 Connector is designed based on the assumption of the I-564 Intermodal Connector project's ultimate design. While there may be an interim design of the connector that include a signal on I-564, the study does not take into account any updates necessary to bring the interim design to the final design. The tunnel for this segment is anticipated to be a bored tunnel rather than an immersed tunnel, as assumed in the SEIS. Also, the cost assumptions include a high contingency in part to acknowledge that some security issues raised by the U.S. Navy would need to be addressed at the time of project engineering.

Key Considerations

The U.S. Navy raised security concerns that were not fully addressed by the adjustments to the Hampton Boulevard and tunnel approach, such as a need to determine if the distance between submarine piers and the Segment 4 bridges and tunnel would meet security requirements. This and other security considerations are best addressed at the time of project advancement so that the future status of Naval Station Norfolk facilities and application of new technologies and/or design solutions can be evaluated together.

SEGMENT 5

Improvements

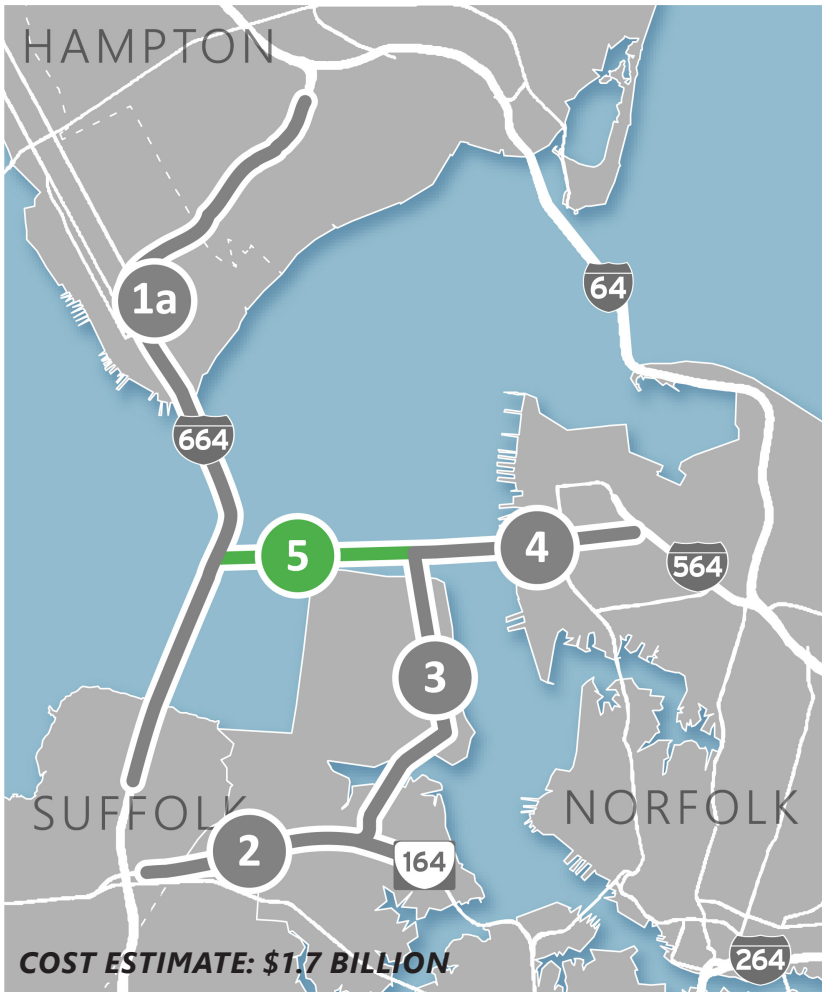
Construct a new four-lane highway, two lanes in each direction, from I-664 to a new mid-harbor island connection to I-564 Connector and/or VA-164 Connector.

Updates

As noted under Segment 4, the northern terminus was shifted west to the updated location of the connection point of Segments 3, 4 and 5. This change shortened Segment 5.

Assumptions

The RCS included the HRCS SEIS toll assumptions of $1.00 per car and $3.00 per truck on this segment. The Segment 5 concept includes a connection directly between the I-664 Connector and the I-664 general purpose lanes. It does not include a direct connection to the express lanes.



Key Considerations

When and if the I-664 Connector begins the next stage of development, a value engineering analysis will need to be conducted to determine the preferred configuration of access between the connector and I-664. For example, one decision could be to only connect Segment 5 to the general-purpose lanes of I-664 which means that connector traffic would not have access to the express lanes until some point elsewhere along I-664 by way of a slip-ramp, for example. This lower-cost proposal would involve the construction of four ramps to complete this over-water connection. Alternatively, a more complex connection would include dedicated ramps to and from both the I-664 general purpose lanes and the express lanes, which would necessitate a total of eight ramps over the water. The cost to connect directly to the express lanes is estimated to increase the Segment 5 cost by $290 million.

REGIONAL CONNECTORS STUDY

SUMMARY REPORT
PART 3: POSITION STATEMENTS

HAMPTON ROADS TPO

Michael Baker INTERNATIONAL

Attachment 5.1

CITY OF CHESAPEAKE

OFFICE OF THE MAYOR
306 CEDAR ROAD
CHESAPEAKE, VA 23322

PHONE 1-757-382-6153
FAX 1-757-382-6678
PHONE MAIL 1-757-382-6974

The City of Chesapeake has been continually involved as active members of the Working Group and Steering Committee for the Regional Connectors Study (RCS). The City of Chesapeake supports the inclusion of the I-664 and VA 164 segments in Tier I and thus recommended for inclusion in the fiscally constrained 2050 Long Range Transportation Plan. The advancement of segment 1b (through the Bowers Hill EIS, and included in the Base Scenario for RCS), and the inclusion of segment 1a as part of the RCS effort, provides an excellent benefit to the region, specifically Chesapeake with the improvements to cross harbor travel at the Monitor-Merrimac Bridge Tunnel.Segments 1a and 2 have been shown to have the highest benefit to the region, as demonstrated through the RCS effort and the City endorses them for Tier 1.The City recognizes that Segments 3, 4, and 5 do provide benefit to the region, and supports them included in Tier 2 for future consideration.

Mayor Rick West

Richard W. West

November 22, 2023

Ms. Camelia Ravanbakht
RCS Project Coordinator
Hampton Roads Transportation Planning Organization (HRTPO)
723 Woodlake Drive
Chesapeake, Virginia 23320

Re: Regional Connector Study (RCS) Position Statement

Dear Ms. Ravanbakht:

The City of Hampton is providing this position statement in support of the Hampton Roads Transportation Accountability Commission (HRTAC) funded Regional Connector Study (RCS) study findings. As this is a significant regional transportation matter, the City of Hampton continues to support the study's purpose of examining transportation options to connect the Peninsula and Southside across the Hampton Roads Harbor, documenting all the benefits, concerns, and issues of the study's five mandated segments: 1-664 (Bowers Hill - College Drive), Route 164, 164 Connector, 1-564 Connector, and 1-664 Connector. The city fully supports those projects that will provide the highest benefit to the region given the costs of construction. Throughout the development of this study, there has been exceptional locality and public involvement.

The City of Hampton is indirectly impacted by the determinations and endorses the findings of the final report and fully supports future regional funding commitments based on the prioritization recommended therein. Of the five mandated segments evaluated, The City understands and endorses the need for the 1-664 and Monitor Merrimack Bridge Tunnel (MMBBT) expansion to be the next implemented segment as it is the next step to enhancing economic vitality and improving the quality of life in the Hampton Roads Region. It is the City's understanding that the Bowers Hill widening has been included as an existing condition in the study and would expect its construction to precede the expansion of the MMBT. We also concur that Route 164 widening has a high value to movements across the Southside, and should be advanced when feasible. Considering the substantial challenges identified in the study, we understand it will likely preclude the 164 and 564 connectors implementation in the foreseeable future.

Thank you for upholding the integrity of this study's process and key findings to identify the critical next steps to enhancing connectivity for the Hampton Roads region in an effort to pave the way for a more sustainable and connected future.

Please contact Sandon Rogers – Sandon.rogers@hampton.gov if you need any additional information or have any questions.

Sincerely,

Jason Mitchell

Jason Mitchell
Public Works Director

Cc: Mr. Robert Crum, HRTPO Executive Director
Pavithra Parthasarathi, Deputy Executive Director, HRTPO

newport news BUILT ON BREAKTHROUGHS

Office of the
City Manager

November 16, 2023

Ms. Camelia Ravanbakht
RCS Project Coordinator
Hampton Roads Transportation Planning Organization (HRTPO)
723 Woodlake Drive
Chesapeake, Virginia 23320

Re: Regional Connector Study (RCS) Position Statement

Dear Ms. Ravanbakht:

The City of Newport News is providing this position statement in support of the Hampton Roads Transportation Accountability Commission (HRTAC) funded Regional Connector Study (RCS) study findings. The RCS study's purpose was to examine transportation options to connect the Peninsula and Southside across the Hampton Roads Harbor, documenting all the benefits, concerns, and issues of the study's five mandated segments: I-664 (Bowers Hill - College Drive), Route 164, 164 Connector, I-564 Connector, and I-664 Connector. The final report should be used as a reference document in the future when regional stakeholders are ready to advance the study recommendations. The study also had locality and public involvement throughout the development of the study.

The City of Newport News is directly impacted by the determinations and endorses the findings of the final report and fully supports future regional funding commitments based on the prioritization recommended therein. Of the five mandated segments evaluated, The City understands and endorses the need for the I-664 and Monitor Merrimack Bridge Tunnel (MMBBT) expansion to be the next implemented segment as it is the next step to enhancing economic vitality and improving the quality of life in the Hampton Roads Region. It is the City's understanding that the Bowers Hill widening has been included as an existing condition in the study and would expect its construction to precede the expansion of the MMBT. We also concur that Route 164 widening has a high value to movements across the Southside, and should be contemplated when feasible. We also understand that the 164 and 564 connectors have substantial challenges identified in the study that will likely preclude implementation in the foreseeable future.

Thank you for upholding the integrity of this study's process and key findings to identify the critical next steps to enhancing connectivity for the Hampton Roads region in an effort to pave the way for a more sustainable and connected future.

Please contact Angela Rico at (757) 926-8113 or Bryan Stilley at (757) 926-8699 if you need any additional information or have any questions.

Sincerely,

Alan K. Archer
Acting City Manager

AKA:CMG:me

cc: Mr. Robert Crum, HRTPO Executive Director
Pavithra Parthasarathi, Deputy Executive Director, HRTPO
Lorna Parkins, MBI Project Co-Manager
Paul Prideau, MBI Project Co-Manager
Craig Galant, Director of Engineering
Bryan Stilley, Assistant Director of Engineering
Lisa Simpson, Chief of Transportation
Angela Rico, Transportation Supervising Engineer
Kathie Angle, Chief of Civil Design

THE CITY OF NORFOLK
TRANSPORTATION

November 29, 2023

Camelia Ravanbakht, PhD
Hampton Roads Transportation Planning Organization
723 Woodlake Dr.
Chesapeake, VA 23320

Dear Ms. Ravanbakht, PhD,

The purpose of this letter is to provide perspective on the benefits, issues, and concerns regarding the five mandated segments of the Hampton Roads Transportation Planning Organization (HRTPO) Regional Connector Study (RCS) on behalf of the City of Norfolk:

1. I-664 Widening

Improvements maximizes the efficiency of the current transportation system and reduces the demand for travel along all other over water routes entering and exiting the South Hampton Roads area. Several elements of the existing I-64 and HRBT facilities are geometrically deficient. Deficient components include inadequate shoulder width and substandard vertical tunnel clearance, both of which cause congestion and safety problems. Project has the potential for congestion mitigation along I-64/HRBT in the City of Norfolk by providing a viable alternative route with expanded capacity for travel in and out of South Hampton Roads. Construction and environmental impacts have minimal implications for the City of Norfolk.

2. VA 164 Widening

Widening VA 164 has direct impacts on various main arterial and freeways impacting the City of Norfolk. This project provides access to the Downtown Tunnel, which has been designated HRTPO CMP 2022 Congested Corridor - Freeway #4. This segment has been shown to have severe congestion during AM and PM travel hours. One of the potential congestion mitigation strategies for this corridor is to increase public transit capacity to reduce traffic volume. Widening VA 164 will increase transit service across the Elizabeth River (i.e. outcome of the Regional Transit Backbone). VA 164 also has direct access to the Midtown Tunnel via Route 58 and has the potential to facilitate lower travel times and increase bus reliability along the corridor through increased roadway capacity. Other congestion mitigation strategies such as shoulder/lane control, changeable message signs, and vehicle detection devices should be considered.

3. VA 164 Connector

Congestion mitigation impacts for this project are not as competitive for the City of Norfolk as other proposed segments in the region. However, along with the completion of Segments 4 and

5, the connector will provide great economic benefit in the form of increased access to I-564, Naval Station Norfolk, shorter travel times for motorist travelling on I-664 to Norfolk and increased regional bus reliability. Environmental and construction impacts are minimal from the Norfolk perspective.

4. I-564 Connector

The City of Norfolk supports this project as it has direct intermodal and land use implications to I-564, with improved access to the Naval Station Norfolk (NSN) and Norfolk International Terminal (NIT). Additionally, this project has recreational and multimodal implications as it provides increased access to the Elizabeth River Trail. Additional multimodal access and recreational features associated with ERT need to be considered in the planning phases. Additionally, according to the technical report during the "design and construction phases, equipment height and clearance to accommodate the Navy's operational needs in Norfolk and the loss of operational use at the Lineage Logistics at Talon Marine Terminals, NIT Pier 3 are factors to be considered with continued evaluation." The City of Norfolk is very concerned regarding these impacts and will need to have a better understanding of the economic and logistical impacts of this project, i.e, economic feasibility analyses, cost estimations, and full-scale analyses of military operational needs and losses. Robust communication between project developers and the Navy is imperative to build awareness on specific needs, resources, timelines, and perspectives.

5. I-664 Connector

City of Norfolk supports this project as it has direct implications on the potential I-564 connector segment. Segments 3,4,5 have great implications for the congestion experienced on I-64 and the HRBT. According to the technical report, there will be very little construction impacts or impacts on adjacent projects.

Respectfully,

John Stevenson
Director

CITY OF PORTSMOUTH REGIONAL CONNECTORS STUDY COMMENTS FOR FINAL DOCUMENT, November 17, 2023

The City of Portsmouth is one of the most fiscally stressed localities in the Commonwealth. Forty-one percent (41%) of the city is tax-exempt, the highest percentage in Virginia, with a significant portion of this property belonging to federal or state entities, including the Norfolk Naval Shipyard, Naval Medical Center Portsmouth, Virginia International Gateway, Portsmouth Marine Terminal, Craney Island Fuel Terminal, Portsmouth Coasts Guard Base, and the United States Coast Guard Fifth District Command. Portsmouth also has one of the highest poverty rates in the region at 17.1%.

The City of Portsmouth is committed to working with its partners to solve transportation issues that impact the region. The Regional Connectors Study (RCS) explores options to better connect the Peninsula and the Southside, and improve the economic vitality, resiliency, accessibility, and quality of life in the region. The study examines crossings and supporting roadways to encourage regional growth and congestion relief at known trouble spots. However, we must find solutions that will not adversely affect our citizens and our community. Regional transportation projects such as the Downtown Tunnel-Midtown Tunnel-MLK Freeway Extension have not always yielded favorable results in our City. Portsmouth remains the single most vulnerable city in the region with respect to the tolls.

Two projects in this study, the VA-164 Widening and the VA-164 Connector, raise significant concerns about how they would impact Portsmouth citizens. The VA-164 Widening project is identified as Tier 1 Segment, and the VA-164 Connector is identified as a Tier 2 Segment. The Tier 1 segments provide the most regional congestion and economic benefits relative to cost in all scenarios. The Tier 1 segments operate effectively to reduce harbor crossing congestion in all the regional scenarios. The Tier 2 segments have greater congestion and economic benefits when more regional growth is modeled, underscoring their potential value in the long term.

The following issues have yet to be adequately addressed or stated within the study:

Current transportation laws and policies (HRTAC and VDOT) are written such that current day congestion is used to evaluate projects for funding. The VA-164 Widening and VA-164 Connector projects do not meet the standard for congestion funding based on current traffic volumes. The economic benefit for Portsmouth residents is not adequately discussed within the quantitative or qualitative analysis for the VA-164 Widening project. Each project should clearly state how it meets the objectives of the study and how it aligns with the criteria specified by 2-tier system.

These projects must undergo a robust and transparent NEPA evaluation for environmental justice considerations to prevent adverse impacts that can be associated with large transportation projects. Executive Order 12898, issued in 1994, established the responsibility of each Federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations ...." An accompanying Presidential Memorandum directed that human health, economic, and social effects, including effects on minority communities and low-income communities, be included in the analysis of environmental effects pursuant to NEPA. CEQ issued guidance (1997) for agencies on addressing environmental justice (EJ) in the NEPA process.

The Portsmouth City Council has recently expressed great concern regarding the environmental justice impacts of historic transportation projects on Portsmouth residents and communities, particularly the Sugar Hill neighborhood located near the Portsmouth Marine Terminal. The impact of the currently proposed projects on neighborhoods adjacent to VA-164 such as Ebony Heights, Edgewood Park, Siesta Gardens, and Merrifields must be fully vetted, and before any project proceeds it must be eminently clear that these neighborhoods and their residents will not be treated unjustly.

The limits of disturbance for these projects appear to align with the existing VA-164 right of way, and various design exceptions will be required to facilitate this. The study assumes that these waivers will be granted. Without these waivers from multiple federal agencies, there will be significant impacts to properties along the project corridor. The study alludes to several partial property acquisitions associated with the VA-164 Widening (14 parcels) and the VA-164 Connector (29 parcels) projects. However, the exact location of these parcels is not clearly specified. Proposed residual parcels created by partial acquisitions that are not suitable for their intended/proposed use have the real potential to become full acquisitions given certain conditions. There also is no discussion of potential permanent and temporary construction easements which would create additional burden for residents in the project corridor. The location and extent of real property impacts for Portsmouth residents need to be clearly defined.

Current stormwater regulations will likely require significant structural stormwater management facilities (SWMF) to address additional runoff and pollutant loads from the increase in impervious area associated with these projects. The proposed project layouts do not show the location or indicate that there is any room within the existing right of way for these facilities. Therefore, it is likely that additional property acquisitions would be necessary to accommodate the required

SWMF. VA-164 has created a dam affect that adversely impacts the natural drainage patterns for several neighborhoods, including Ebony Heights, Edgewood Park, and Siesta Gardens. This has exacerbated flooding and created challenging environmental conditions like wetlands and mosquito habitats. The VA-164 Widening project will drain to the City of Portsmouth MS4, and coordination is required to ensure that our drainage system is not further compromised. The VA-164 Widening project should provide an opportunity to address these issues to provide relief to Portsmouth citizens in the affected neighborhoods.

The RCS study barely mentions that the City of Portsmouth owns a Construction/Demolition/Debris Landfill on Craney Island even through the proposed VA-164 Connector runs through the middle of the facility. Our Mayor and city staff have expressed concerns about the impacts to our landfill since the Hampton Roads Crossing Study prior to the current RCS. The landfill is a vital asset to the city as it handles our routine bulk refuse collection, facilitates savings through disposal on city construction contracts, and provides relief to citizens during citywide cleanup efforts associated with damage and debris from severe storms. The impacts to the City landfill have not been taken into consideration in this study. Consideration for any road project impacting the landfill should occur after the landfill has reached the end of its useful life (see attached landfill capacity report).

Furthermore, the City has valued partners in the US Coast Guard, US Army Corps of Engineers, and US Navy Fuel Depo, who have facilities within the proposed limits of disturbance. These facilities are vital to national security and military readiness. There are operational, national security, and safety concerns that must be addressed with the proposed roadway alignment. The City of Portsmouth supports our partners and their concerns.

The VIG Interchange eliminated an access point to the West Norfolk Neighborhood. When trains block the main entrance to the neighborhood off of West Norfolk Road, emergency vehicles can only access the neighborhood by heading eastbound on VA-164 via the VIG Interchange, and then crossing under VA-164 to Wyatt Drive. Improvements associated with the VA-164 Widening project should evaluate these neighborhood access concerns created by prior project on VA-164.

There are approximately 1.9 million people in the greater Hampton Road Metropolitan Area and 95,000 in the city of Portsmouth. The public outreach for this study reached less than 1% of the regional and local populations. A more robust public engagement campaign is required as potential projects from the RCS move forward so that residents and governing bodies are provided adequate information so that they can offer informed comments on how these projects might impact them and their future.

From the HRCS, we know that the VA-164 Connector is intended to be a multi-modal project with a rail a component. The RCS should mention the rail phase of the project and highlight the potential rail corridor so that the impacts from this project can be discussed as a whole. Moreover, it is likely that there will be a desire to connect the two port properties with a dray road at some point. Any impacts from this facility should also be discussed.

The proposed Cedar Lane Interchange should be re-evaluated by examining all of the components of the VA-164 Connector and VA-164 Widening projects, including rail and stormwater management facilities. The evaluation impacts associated with the proposed new interchange should include access to the Coast Guard Base, the two adjacent interchanges, stormwater management, and adjacent properties.

August 24, 2023

Mr. Amos Taylor
Waste Management Administrator
City of Portsmouth
801 Crawford Street
Portsmouth, VA 23704

RE: Craney Island CDD Landfill
Capacity Report
LaBella Project No. 2223563

Dear Amos:

At the request of the City of Portsmouth, LaBella Associates, D.P.C., P.C. (LaBella) utilized annual waste reports and volumes developed from aerial mapping to evaluate the remaining life in the Craney Island CDD Landfill. The estimated life was determined, utilizing a compaction rate of 1,140 lbs/cy and an average annual intake rate of 13,070 tons/year, as provided by the City of Portsmouth, for the period between May 2013 and July 2023.

As of July 21, 2023, the disposal capacity (waste and cover soil) and site life results are presented below:

<u>West Area:</u>	
Net tonnage of remaining disposal capacity:	789,254 tons
Net volume of remaining disposal capacity:	1,384,657 CY
Anticipated Operational life (years):	60.4 years(1)
<u>East Area:</u>	
Net tonnage of remaining disposal capacity:	955,703 tons
Net volume of remaining disposal capacity:	1,676,672 CY
Anticipated operational life (years):	73.1 years(1)
<u>Total Permitted:</u>	
Net tonnage of remaining disposal capacity:	1,744,957 tons
Net volume of remaining disposal capacity:	3,061,328 CY
Anticipated operational life (years):	133.5 years(1)

(1) Any change to the compaction rate or the annual intake rate will change the anticipated life.

The overall disposal capacity of the facility is 4,457,100 CY. Between July 22, 2022 and July 21, 2023, 23,498 CY of airspace was consumed, leaving a net disposal

capacity of 3,061,328 CY. Therefore, as of July 21, 2023, the facility is estimated to be 31.3% filled.

$$\frac{(4{,}457{,}100\ CY - 3{,}061{,}328\ \ CY)}{4{,}457{,}100\ CY} = 31.3\%$$

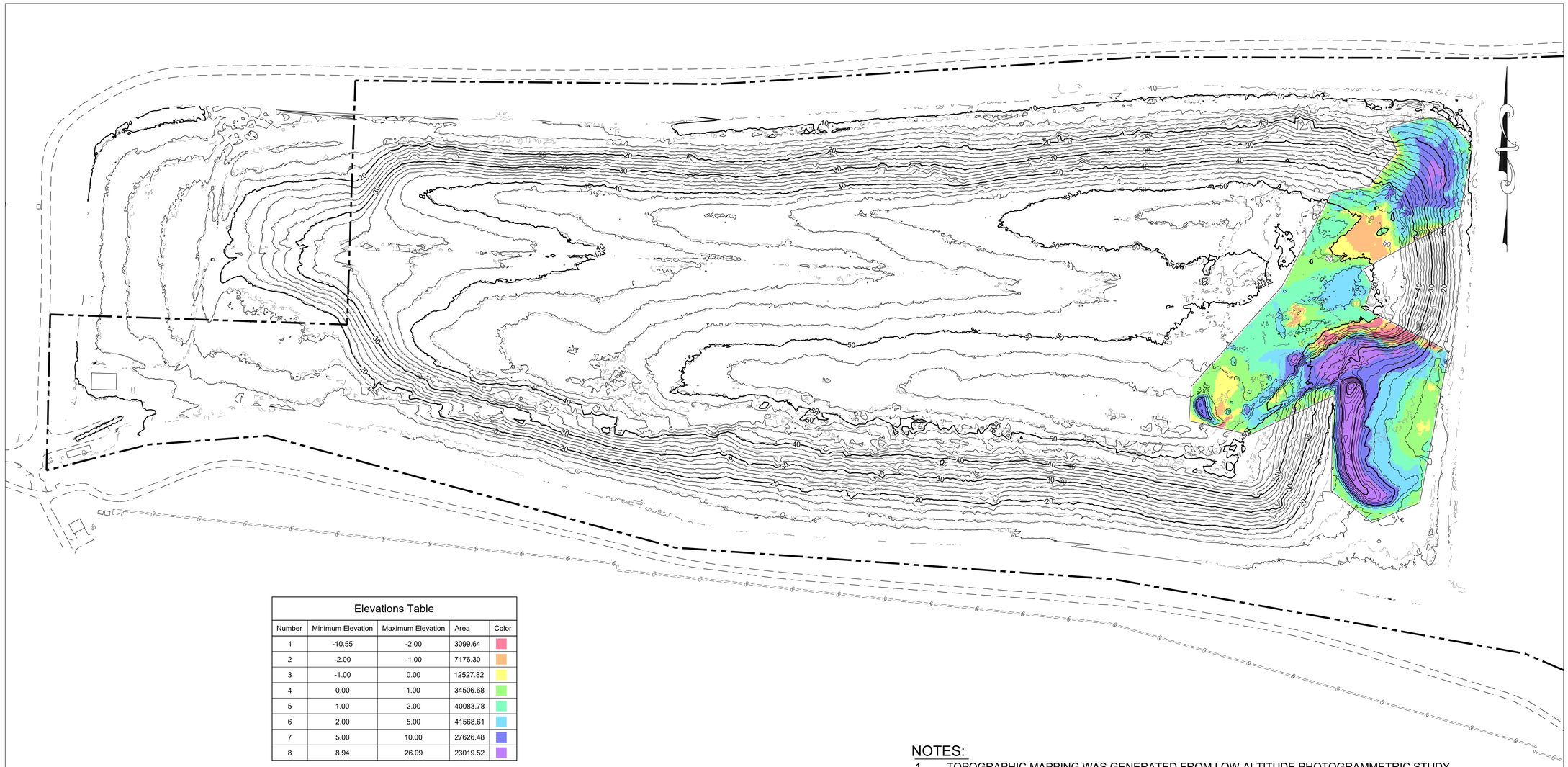
Thank you for this opportunity to serve you. We trust that you will find this information helpful. If you have any questions or need additional information, please do not hesitate to call me at (804) 355-4520.

Respectfully submitted,

LaBella Associates

Darrell Thornock, P.E.
Technical Engineer

Attachments:
Drawing 1, Volume Consumed 2022-2023
Airspace Utilization Rate Calculation
Remaining Life Calculations



Elevations Table				
Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-10.55	-2.00	3099.64	
2	-2.00	-1.00	7176.30	
3	-1.00	0.00	12527.82	
4	0.00	1.00	34506.68	
5	1.00	2.00	40083.78	
6	2.00	5.00	41568.61	
7	5.00	10.00	27626.48	
8	8.94	26.09	23019.52	

Volume
Base Surface 2022_07-22_Portsmouth (1)
Comparison Surface 2023_07-21_LabellaDrone (1)
Cut volume (unadjusted) 959.16 Cu. Yd.
Fill volume (unadjusted) 24457.26 Cu. Yd.
Net volume (unadjusted) 23498.10 Cu. Yd.<Fill>

CITY OF PORTSMOUTH				
CRANEY ISLAND CDD LANDFILL				
REMAINING VOLUME				
PERIOD	VOLUME CONSUMED WEST AREA (CY)	TOTAL VOLUME REMAINING WEST AREA (CY)	VOLUME CONSUMED EAST AREA (CY)	TOTAL VOLUME REMAINING EAST AREA (CY)
2013 - 2017	92,801	1,745,000	0	1,830,035
2017 - 2018	26,949	1,718,051	0	1,830,035
2018 - 2019	20,622	1,697,429	0	1,830,035
2019 - 2020	35,836	1,661,593	0	1,830,035
2020 - 2021	10,222	1,651,371	0	1,830,035
2021 - 2022	24,634	1,626,737	0	1,830,035
2022 - 2023	23,498	1,603,239	0	1,830,035

VOLUMES SHOWN REPRESENT GROSS AIRSPACE

NOTES:

1. TOPOGRAPHIC MAPPING WAS GENERATED FROM LOW-ALTITUDE PHOTOGRAMMETRIC STUDY METHODS CONDUCTED BY LABELLA ASSOCIATES, D.P.C., P.C. 1604 OWNBY LANE, RICHMOND VA, 23220 (804) 355-4520, ON 7/22/2022 & 7/21/2023, IN GENERAL CONFORMANCE WITH INDUSTRY BEST PRACTICES. THE COLLECTION OF THREE-DIMENSIONAL DATA AND DEVELOPMENT OF MAPPING INFORMATION IS COMPLETED IN A MANNER THAT MEETS OR EXCEEDS THE PRECISION OF TRADITIONAL FIELD SURVEY METHODS, BUT IS NOT INTENDED TO REPRESENT OR SUBSTITUTE FOR MAPPING PREPARED BY A PROFESSIONAL LICENSED SURVEYOR. ALL TOPOGRAPHIC INFORMATION SHOULD BE VERIFIED BY METHODS ENDORSED BY THE NATIONAL COUNCIL OF EXAMINERS FOR ENGINEERING AND SURVEYING.
2. ELEVATION BANDING ON THIS DRAWING SHOWS THE VOLUME CONSUMED FROM JULY 22, 2022 - JULY 21, 2023.
3. POSITIVE DEPTHS REPRESENT FILL PLACED BETWEEN JULY 2022 AND JULY 2023.
4. NEGATIVE DEPTHS REPRESENT SETTLEMENT AND / OR REMOVAL OF STOCKPILES BETWEEN JULY 2022 AND JULY 2023.
5. ANY DETERMINATION OF TOPOGRAPHY OR CONTOURS, OR ANY DEPICTION OF PHYSICAL IMPROVEMENTS, PROPERTY LINES OR BOUNDARIES IS FOR GENERAL INFORMATION ONLY AND SHALL NOT BE USED FOR THE DESIGN, MODIFICATION, OR CONSTRUCTION OF IMPROVEMENTS TO REAL PROPERTY OR FOR FLOOD PLAIN DETERMINATION.

GRAPHIC SCALE
0 50 100 200
(FEET)

LaBella
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1604 Ownby Lane
Richmond, VA 23220
804-355-4520
labellapc.com

NOT FOR CONSTRUCTION

City of Portsmouth

Craney Island Landfill
Portsmouth, Virginia

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2212559
DRAWN BY: DAS
REVIEWED BY:
ISSUED FOR: CITY OF PORTSMOUTH
DATE: 8/1/2023
DRAWING NAME:

VOLUME CONSUMED 2022 VS 2023

DRAWING NUMBER:

1

LaBella
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Job:	Craney Island CDD Landfill
Job Number:	2223563
Calculated By:	MAH Date: 8/11/2023
Checked By:	DT Date: 8/15/2023
Subject:	Airspace Utilization Rate

Determine the airspace utilization rate for the Craney Island CDD Landfill.

Given:

The volume of airspace consumed between May 3, 2013 and the July 21, 2023.

Find:

The airspace utilization rate using the following variables.

Tonnage received between mapping events (from City of Portsmouth) (2022 - 2023)	=	8,296
Tonnage received between mapping events (from City of Portsmouth) (2021 - 2022)	=	9,894
Tonnage received between mapping events (from City of Portsmouth) (2020 - 2021)	=	9,124
Tonnage received between mapping events (from City of Portsmouth) (2019 - 2020)	=	20,690
Tonnage received between mapping events (from City of Portsmouth) (2018 - 2019)	=	10,111
Tonnage received between mapping events (from City of Portsmouth) (2017 - 2018)	=	13,618
Tonnage received between mapping events (from City of Portsmouth) (2013 - 2017)	=	61,940
Total Tonnage (tons) (May 3, 2013 - July 21, 2023)	=	133,673

Volume used between mapping events (from AutoCAD)(yd3) (2022 - 2023)	=	23,498
Volume used between mapping events (from AutoCAD)(yd^3) (2021 - 2022)	=	24,634
Volume used between mapping events (from AutoCAD)(yd^3) (2020 - 2021)	=	10,222
Volume used between mapping events (from AutoCAD)(yd^3) (2019 - 2020)	=	35,836
Volume used between mapping events (from AutoCAD)(yd^3) (2018 - 2019)	=	20,622
Volume used between mapping events (from AutoCAD)(yd^3) (2017 - 2018)	=	26,949
Volume used between mapping events (from AutoCAD)(yd^3) (2013 - 2017)	=	92,801
Total Volume Consumed (yd^3)(May 3, 2013 - July 21, 2023)	=	234,562

Calculated in-place density* in lbs/yd^3	=	**1,140**

* = Includes waste and weekly cover.

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Job:	Craney Island CDD Landfill		
Job Number:	2223563		
Calculated By:	MAH	Date:	8/11/2023
Checked By:	DT	Date:	8/11/2023
Subject:	Remaining capacity and life estimate		

Determine the estimated remaining capacity and life of the Craney Island CDD Landfill.

Given:

The volume of remaining airspace of the West Area utilizing the July 21, 2023 mapping event and the annual tonnage reports

Date of aerial mapping 7/21/2023

Find:

The remaining life using the following variables.

V_a	=	volume of remaining gross airspace	=	1,603,239	yd^3
L_a	=	total area of the landfill	=	38.71	acres
L_d	=	depth of cap system	=	2.5	feet
I_a	=	area of intermediate cover	=	38.71	acres
I_d	=	depth of intermediate cover	=	1.0	foot
Rw	=	Annual waste acceptance rate	=	13,070	tons/year*

Volume of airspace consumed by cap system ($V_1 = L_a \times L_d$)	=	156,130	yd^3
Volume of airspace consumed by intermediate cover ($V_i = I_a \times I_d$)	=	62,452	yd^3
Volume of airspace available for waste disposal ($V_{as} = V_a - V_1 - V_i - V_{dc}$)	=	1,384,657	yd^3

Determine Closure Date using Average Compaction Density (2013 - 2023)

Using C_r	=	1,140	lbs/cy**
Mass of waste able to fit into landfill ($M_a = V_{as} \times C_r$)	=	789,254	tons
Remaining life of disposal unit (M_a/R_w)	=	60.39	years***
Estimated closure date	=	**11/24/2083**	

*Average annual tonnage received from May 2013 to July 2023

** From approximated tonnages May 3, 2013 to July 21, 2023

*** Assuming the average annual intake rate will remain at 13,070 tons/year

LaBella
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Job: Craney Island CDD Landfill
Job Number: 2223563
Calculated By: MAH Date: 8/11/2023
Checked By: DT Date: 8/11/2023
Subject: Remaining capacity and life estimate

Determine the estimated remaining capacity and life of the Craney Island CDD Landfill.

Given:

The volume of remaining airspace of the East Area based on the July 21, 2023 mapping event and the annual tonnage reports

Date of aerial mapping 7/21/2023

Find:

The remaining life using the following variables.

V_a	=	volume of remaining gross airspace	=	1,830,035	yd^3
L_a	=	total area of the landfill	=	27.16	acres
L_d	=	depth of cap system	=	2.5	feet
I_a	=	area of intermediate cover	=	27.16	acres
I_d	=	depth of intermediate cover	=	1.0	foot
Rw	=	Annual waste acceptance rate	=	13,070	tons/year*

Volume of airspace consumed by cap system ($V_1 = L_a \times L_d$)	=	109,545	yd^3
Volume of airspace consumed by intermediate cover ($V_i = I_a \times I_d$)	=	43,818	yd^3
Volume of airspace available for waste disposal ($V_{as} = V_a - V_1 - V_i - V_{dc}$)	=	1,676,672	yd^3

Determine Closure Date using Average Compaction Density (2013 - 2023)

Using C_r	=	1,140	lbs/cy**
Mass of waste able to fit into landfill ($M_a = V_{as} \times C_r$)	=	955,703	tons
Remaining life of disposal unit (M_a/R_w)	=	73.12	years***
Estimated closure date	=	**12/20/2156**	

*Average annual tonnage received from May 2013 to July 2023
** From approximated tonnages May 3, 2013 to July 21, 2023
*** Assuming the average annual intake rate will remain at 13,070 tons/year

City of Suffolk

From: Jason Souders
Sent: Monday, November 27, 2023 4:44 PM
To: Camelia Ravanbakht
Cc: Robert E. Lewis; Mike Duman
Subject: RE: REMINDER: Position Statements due November 17, 2023

Good afternoon Camelia,

Suffolk's position is that we have participated in the process of developing the RCS since the beginning and have had ample opportunity to voice concerns, vet issues and weigh benefits of the various study segments through the many phases of development. We are prepared to meet and vote on Phase 3 deliverables and study recommendations, as we were on September 15 at the Joint Steering (Policy) Committee and Working Group meeting.

Suffolk will rely on the RCS to identify benefits and issues associated with each of the five study segments. We believe that as long as each study segment is not studied in a vacuum, but instead, considers the need for improvements to adjacent facilities (i.e. additional lane capacity, interchange improvements, etc.), none of the study segments present potential benefits or issues that would be exclusive to Suffolk. Benefits and issues as a product of any segment or combination of segments included in this particular study are likely to be measured on a regional basis rather than impact the City of Suffolk exclusively.

Please let me know if you have any questions.

Thank you,

Jason Souders, AICP
Traffic Engineering Division Manager
(757) 514-7649
(757) XXX-XXXX Cell (Redacted)

PUBLIC WORKS
Director's Office

Director's Office
DEPARTMENT OF PUBLIC WORKS

Oceana Center One, Suite 201
484 Viking Drive | Virginia Beach, VA 23452

November 9, 2023

Camelia Ravanbakht
RCS Project Coordinator
Hampton Roads Transportation Planning Organization
723 Woodlake Drive
Chesapeake, VA 23320

Re: City of Virginia Beach RCS Position Statement

As a member of the Hampton Roads region, the City of Virginia Beach has been involved as active members of the Working Group and Steering Committee for the Regional Connectors Study (RCS). While none of the Mandated Segments included in the RCS are in the City of Virginia Beach, we are very invested in the RCS process because of our interest in improving transportation facilities on a regional basis to grow the economy of the region.

The City of Virginia Beach supports the results of the RCS work to date, including the inclusion of the I-664 and VA 164 segments in Tier I and thus recommended for inclusion in the fiscally constrained 2050 Long Range Transportation Plan. We believe that these segments, identified as Segments 1a, 1b and 2 on the attached RCS Mandated Segments figure, will provide the highest benefit to the region given the costs of construction of these segments. While we recognize that Segments 3, 4 and 5 provide great benefit to the regional transportation system, we agree with the RCS findings that the costs of these segments currently do not provide enough additional benefit to warrant inclusion in the fiscally constrained 2050 Long Range Transportation Plan. The City of Virginia Beach would however like to go on the record to say that a "third crossing" is an essential regional transportation improvement that will need to be considered again in the future.

Sincerely,

LJ Hansen, P.E.
Director of Public Works

Cc: Lorna Parkins – MBI Project Co-Manager
Paul Prideau – MBI Project Co-Manager

THE PORT OF VIRGINIA®

VIRGINIA PORT AUTHORITY
600 WORLD TRADE CENTER, NORFOLK, VA 23510
(757) 683-8000

November 16, 2023

Mr. Robert Crum
Executive Director, HRTPO
723 Woodlake Drive
Chesapeake, VA 23320

RE: Regional Connectors Study Position Statement

Dear Mr. Crum,

The Port of Virginia would like to reiterate its appreciation for the effort led by the Hampton Roads Transportation Planning Organization (HRTPO) to bring regional stakeholders together to investigate connectivity between the Peninsula and Southside through the Regional Connectors Study (RCS). As an active stakeholder in the RCS, we are focused on prioritizing the next round of regional projects which create economic opportunity, as well as advancing solutions or planning efforts that need to be considered in order to advance the RCS Tier 2 projects. The following position statement is offered by The Port of Virginia to inform future efforts to advance the RCS recommendations.

During the development of the RCS, several stakeholders shared challenges, including those relating to the Craney Island Dredge Management Area, the VA-164 Connector segment, and the I-564 corridor alignment. To complement those perspectives, it is important to note that the I-564 corridor is a key gateway for The Port of Virginia, and since the inception of the I-564 Intermodal Connector in the late-1990's, the port has partnered with regional partners, FHWA, VDOT, U.S. Navy, and City of Norfolk to advance the I-564 corridor investments to address the needs of all stakeholders. As a designated Port of National Defense, The Port of Virginia understands the importance of security requirements of the U.S. Navy and we recognize that security requirements change over time based on unforeseen events or conditions. Based on the uncertainty of when the I-564 cross-harbor segment will move forward to construction, we believe that security requirements at the time of design and construction may be accommodated with hardened infrastructure or technology advances.

Since 2020, The Port of Virginia has experienced record growth during a time of global supply chain disruptions during and following the global pandemic. In addition to supporting critical supply chain needs for the Hampton Roads region, the Commonwealth, and the nation, the port-related growth in logistics and distribution development is occurring in every community in Hampton Roads. The needs of the supply chain and the importance of creating economic opportunity through freight movement, reinforces the importance of planning for freight needs in the regional transportation network.

The port is anticipating continued significant growth, and based on the input and collaboration that has occurred over the last two decades, we have been strategically investing in critical infrastructure to ensure excellence in port operations, foster the expansion of economic opportunity, and lead as a national example of the most modern gateway in the nation. Examples of these investments in proximity to I-564/VA164 Connector include:

- Advancing the $450 million deepening and widening of the Norfolk Harbor in collaboration with the U.S. Army Corps of Engineers to create the deepest East Coast channel providing access to a national strategic port and Naval Station Norfolk;
- Investments of $86 million, including $20 million in federal USDOT Port Infrastructure Development funds, to expand rail capacity of the NIT Central Rail Yard; and
- Advancing a $650 million NIT North Optimization project, with $266 million in funding provided by the Virginia General Assembly.

The Port of Virginia looks forward to the successful completion of the Regional Connectors Study, to continuing to work with the HRTPO to prioritize the region's future transportation system, and to participating as an active regional collaborator.

Sincerely,

Cathie J. Vick
Chief Development and Government Affairs Officer

cc: Camelia Ravanbakht

DEPARTMENT OF THE NAVY
NAVAL STATION NORFOLK
1530 GILBERT STREET SUITE 2000
NORFOLK, VA 23511-2722

1000
Ser N00/501
20 Nov 23

Mr. Robert A. Crum
Executive Director
Hampton Roads Planning District Commission
723 Woodlake Drive
Chesapeake, VA 23320

SUBJECT: NAVSTA NORFOLK POSITION STATEMENT FOR THE REGIONAL CONNECTORS STUDY - PHASE 3 ANALYSIS

Dear Mr. Crum,

Naval Station Norfolk values our relationships and partnerships with Hampton Roads Planning District Commission and the Hampton Roads community. Thank you for the opportunity to provide a position statement for the project record on the Regional Connector Study Phase 3.

Two of the study's current proposed alignment segments: the I-564 Connector and the I-164 Connector of the six mandated segments encroach and/or causes loss of missions and operations based on current data at Naval Station Norfolk (NSN). NSN is home to a significant percentage of the U.S. Fleets including surface ships, submarines, and squadrons of aircraft in addition to the Air Mobility Command. An additional facility impacted by the proposed projects is the Fleet Logistic Center Norfolk Regional Fuel Depot, Defense Fuel Support Point Craney Island. This facility is a significant provider of the Navy's global fuel throughput and also includes support to include the Air Force, Marines and Army operations and missions. These critical multi-billion dollar infrastructures are strategically located and operate in direct support of our national defense. Maintaining and protecting these vital missions and operations is part of the National Defense plan.

The Navy via earlier communications, NSN's letter to you dated June 3, 2022 titled NAVSTA Norfolk Comments for the Regional Connectors Study - Phase Three Qualitative Analysis; the comments and concerns shared in the September 19, 2016 letter from Commander, Navy Region Mid-Atlantic (CNRMA) to Virginia Department of Transportation on the Hampton Roads Crossing Study Supplemental Environmental Impact Statement (SEIS) are still valid, additionally, the 2022 and 2016 letters are attached for the easy of review.

Numerous Naval Station Norfolk supports projects in the local area that support Navy operations and benefit the Navy mission and will continue to work with Hampton Roads Transportation Planning Organization to address transportation issues in the Hampton roads area.

SUBJECT: NAVSTA NORFOLK POSITION STATEMENT FOR THE REGIONAL CONNECTORS STUDY - PHASE 3 ANALYSIS

Please contact my Community Plans and Liaison Officer, Mr. Steve Jones, at (757) 322-2333, or by email at steve.g.jones.civ@us.navy.mil with questions or other concerns relating to this subject.

Sincerely,

J. H. Days
Captain, U.S. Navy
Commanding Officer
Naval Station Norfolk

Enclosures:

- NAVSTA Norfolk June 3, 2022, letter titled NAVSTA Norfolk Comments for the Regional Connectors Study- Phase Three Qualitative Analysis
- September 19, 2016, letter from Navy Region Mid-Atlantic (CNRMA) to Virginia Department of Transportation on the Hampton Roads Crossing Study Supplemental Environmental Impact Statement (SEIS)

Copy to:

Commander, United States Fleet Forces Command
Commander, Navy Installations Command
Commander, Navy Region Mid-Atlantic

DEPARTMENT OF THE NAVY
NAVAL STATION NORFOLK
1530 GILBERT STREET SUITE 2000
NORFOLK, VA 23511-2722

1000
Ser N00/118
3 June 22

Mr. Robert A. Crum
Executive Director
Hampton Roads Planning District Commission
723 Woodlake Drive
Chesapeake, VA 23320

Dear Mr. Crum,

SUBJECT: NAVSTA NORFOLK COMMENTS FOR THE REGIONAL CONNECTORS STUDY - PHASE 3 QUALITATIVE ANALYSIS

Thank you and the Regional Connectors Study Team for the team's efforts and the opportunity for Naval Station Norfolk (NSN) to review the Phase Three Qualitative Analysis. The comments and concerns shared in the September 19, 2016, letter from Commander, Navy Region Mid-Atlantic (CNRMA) to Virginia Department of Transportation on the Hampton Roads Crossing Study Supplemental Environmental Impact Statement (SEIS) are still valid, (the 2016 letter is attached as a courtesy).

The drawings and cross sections of the six mandated segments in the Phase 3 Qualitative Analysis provided the Navy reviewers additional data to review specific to the I-564 Connector and the I-164 Connector which allowed for more detailed comments.

Below are Naval Station Norfolk's comments for Phase 3 Qualitative Analysis for I-564 Connector and I-164 Connector:

1. Following the 2016 letter the Navy completed the investigation for safety distance requirements from public highway to the facilities at Craney Island Fuel Terminal in relation to fueling operations to a public highway, referenced in paragraph (2) of the 2016 letter. A distance of approximately 1,800 feet is required with a physical barrier to prevent visual observation of the fueling operation systems (pump, tanks and fuel lines) from the public highway.

    a. As proposed the I-164 Connector roadway is adjacent to the corner where Midway Road intersects Waterfront Drive. This area of Navy property has been approved and designated for the construction of four additional above ground fuel storage tanks. Site approval for this location to include Environmental approval has already occurred and the design is expected to begin in the near future.

b. Based on the Navy Security Engineering Planning Assessment, the minimum standoff distance from any non-DOD roadway or rail line is approximately 1,800 feet from the Navy Fuel Tanks. In addition, the roadway will need a wall along this stretch to prevent visual observation of the Fuel Facility and operations.

c. The current proposed I-164 Connector crosses further West over Navy property where the above ground main fuel supply lines are located. A wall along the roadway will also be required where this crossing occurs to prevent visual observation of the fueling operation systems.

d. Defense Fuel Support Point (DFSP) Craney Island is a strategic, irreplaceable asset on the East Coast to not only Navy, but also to Air Force, Army, Marine, and Coast Guard. The strategic nature of Craney Island is largely due to 2 facts:

    1) Location. Craney Island is located on the Elizabeth River in Hampton Roads in close proximity to the Navy's largest single concentration of ships worldwide. The location also allows ready access to tankers to transport fuel from Gulf Coast refineries, and transshipment via the Atlantic sea lanes and the Atlantic Intracoastal Water Way.

    2) Colonial Pipeline. Craney Island has resilient and redundant access to the refining capacity of the Gulf Coast via direct connection with the Colonial Pipeline. Secondarily, Craney Island can receive by tanker at the piers. This capability cannot be easily duplicated anywhere else.

Craney Island and the multi-billion dollars worth of fuel infrastructure cannot be moved and must be safeguarded to preserve critical fuel mission support to the warfighters.

2. The proposed I-564 Connector alignment as reflected in the Phase 3 Qualitative Analysis is approximately 300 feet south of the bulkhead at the southern edge of Naval Station Norfolk and existing fueling facility. Based on the Navy Security Engineering Planning Assessment noted above, the minimum standoff distance from any non-DOD roadway is approximately 1,800 feet from the Navy Fuel Tanks and fueling facility. The 1,800 feet safety distance is required between the existing fueling operation system at the southern end of Naval Station Norfolk (near the bulkhead) and a public roadway and the proposed I-564 Connector. A visual and physical barrier would be required to prevent visual observation of the Fuel Facility, Security Entry Control (Gate 6) and naval operations inside the fence.

3. Based on the information available in the Phase 3 Qualitative Analysis for I-564 Connector roadway plans and cross sections and utilizing nominal heights for street lighting, Navy team was able to identify concerns to the approach and departure corridor,

transitional and imaginary surfaces and instrument precision approaches to runway 10 which would negatively impact current missions and operations at Chambers Field.

4. The proposed I-564 Connector is approximately 5,000 feet west by southwest of the end of runway 10 centerline. If cranes of similar heights to those used on the current VDOT Hampton Roads Bridge Tunnel (HRBT) and I-64 widening projects are used for this proposed project flight operations would have restrictions placed on them due to crane height impacting the operational capability of the airfield and its ability to support worldwide operations. These restrictions would be significant and require excessive coordination that would significantly impact and likely result in the loss of mission sets such as the Air Mobility Command cargo mission from Chambers Field. In visual meteorological conditions (VMC) (clear) weather, daily coordination would be required to minimize impacts to flight operations with Chambers Field. In instrument meteorological conditions (IMC) weather or forecasted weather to be IMC, work on the tunnel would need to be immediately halted, the crane lowered and remain lowered until VMC was recovered due to the proximity of the construction area to Chamber's Field runway and precision landing path. This coordination and actions would impart additional risk to aircrew and airfield operations due to this need and result in a day for day extension to construction time for every IMC day. FAA Obstacle Evaluations with a 1A survey level of accuracy would be required in order to minimize impacts to operations. Based on the information available today, the impacts to existing and future missions and operations are not fully known and the Navy reserves the opportunity to continue evaluating for temporary as well as permanent impacts as more information becomes available.

5. As reflected in the Phase 3 Qualitative Analysis drawing and cross section for the I-564 Connector the elevated overpasses over Naval Station Norfolk and in close proximity to the perimeter fence line near Gate 6, causes significant security issues for military personnel, for fuel operations, fuel barges and fuel tanks, ordnance movements, military vessels, piers, as well as other facilities and waterfront operations. The past and current land uses of the area identified for the proposed I-564 Connector are compatible with current missions and operations adjacent to the southern boundary of Naval Station Norfolk.

6. Based on proposed alignment of I-564 Connector and not having the minimum separation distances needed between public roadway and ordnance handling operations at NSN piers 1 through 3, these operations and missions are in jeopardy. Based on the projected traffic counts of the proposed new road, the installation would not qualify for a waiver if the I-564 Connector is built given its proximity to the piers 1 through 3 and the expected traffic loading, resulting in a loss of mission and operational capability of weapon loading/unloading at piers 1 through 3. A contract award of $300M to replace submarine Pier 3 a WWI era pier was awarded in May 2022 and is expected to be completed in the year 2027 to support berthing of Los Angeles class, extended version of the Virginia class and Virginia Payload Module class submarines and allow for greater weapons on-loading as supported by Naval Station Norfolk's current permits. This pier is mission

essential to United States National Security and is projected to be in service for over 50 years.

7. The water area north of the proposed I-564 Connector aligns with northern edge of Norfolk International Terminal's Pier 3, and falls within the military restricted area as established by the Army Corps of Engineers at 33 CFR 334.300. Additionally, permission coordination must be obtained from the Navy for construction personnel or work boats to access and operate inside the military restricted area and must meet Navy security requirements.

8. During the proposed bridge and tunnel construction detailed coordination will be required to avoid impacts to Navy ships and fuel barges transiting to and from Craney Island Fuel Terminal to Naval Station Norfolk.

9. Construction and dredge disposal requires detailed coordination to avoid impacts to OWWO transport from Naval Norfolk to Craney Island Fuel Terminal as well as ships transitioning the channel.

10. The Navy has a fuel line and OWWO pipeline running from Naval Station Norfolk to Craney Island Fuel Terminal and this project appears to be sited on top of them, which might require relocation of pipelines at VDOT expense, due to conflict.

11. The VA-164 Connector over the Navy's Craney Island Fuel Terminal will need to provide measures that restrict vehicle and pedestrian access that meets all Federal security requirements without bisecting the DoD internal connectivity between the north and south areas.

12. Based on the segment drawing and cross section it is unclear how the I-564 Connector Study considered the ongoing VDOT ATI Interchange that is currently at 100% design with expected completion in FY-24. The ATI Interchange and access improvements are located between the existing I-564 and the SPUI at "D" Ave, and is relevant to the interchange spacing in the corridor.

13. Based on the current alignment of I-564 Connector it appears modifications may be required to the recent finalized I-564 Intermodal Connector including:

    a. Bridge crossings over Hampton Boulevard
    b. Navy secured access to/from Commercial Vehicle Inspection Station
    c. Public Connector Ramp to Hampton Boulevard

Naval Station Norfolk is the largest U.S. Naval base in the world, with a combined civil and military population of 125,427 (FY20). It is the top employer in the Hampton Roads region. NSN is home to the U.S. Atlantic Fleet and covers 4,631 acres and includes several activity centers including piers, airfields, fueling operations, administrative campus buildings, warehousing facilities, housing, child care facilities and fitness/recreation facilities. NSN

supports projects in the local area that support Navy operations and benefit the Navy mission and will continue to work with Hampton Roads Transportation Planning Organization to address transportation issues in the Hampton roads area.

Please contact my Community Plans and Liaison Officer, Mr. Steve Jones, at (757) 322-2333, or by email at steve.g.jones.civ@us.navy.mil with questions or other concerns relating to this subject.

Sincerely,

D. S. Dees
Captain, U.S. Navy
Commanding Officer
Naval Station Norfolk

Encl: NRMA letter of 9 Sep 16

Copy to:
Commander, United States Fleet Forces Command
Commander, Navy Installations Command
Commander, Navy Region Mid-Atlantic

DEPARTMENT OF THE NAVY
COMMANDER,
NAVY REGION MID-ATLANTIC
1510 GILBERT STREET
NORFOLK, VA 23511-2737

IN REPLY REFER TO:
11210
N4
September 19, 2016

Virginia Department of Transportation
Attn: Mr. Scott Smizik
1401 East Broad Street
Richmond, VA 23219-2000

Dear Mr. Smizik:

As a cooperating agency in the re-evaluation of the Hampton Roads Crossing Study Supplemental Environmental Impact Statement (SEIS), Commander, Navy Region Mid-Atlantic (CNRMA) appreciates the opportunity to comment on the draft SEIS.

Naval Station Norfolk is the largest Naval Base in the world with an average daytime population of 70,000. One of the specific elements of the SEIS is to improve strategic military connectivity. All alternatives provide additional capacity which will alleviate congestion and improve emergency readiness as it pertains specifically to naval operations and mission readiness. In addition, alternatives B, C and D incorporate a secondary connection that would allow both civilian and active duty commuters to be distributed more evenly across transportation corridors throughout Hampton Roads. Consequently, this would reduce congestion and ultimately improve strategic military connectivity beyond the current roadway system.

Enclosure 1 herein provides additional information regarding potential Navy impacts. Detailed comments regarding various roadway constructs will be submitted in the future once the preferred alternative has been selected. The following comments highlight potential direct impacts to the Navy based on a review of the SEIS:

(1) The proposed alignment of the I-164 Connector identified in Alternatives B, C, and D would negatively impact planned, mission-critical infrastructure at the Craney Island Fuel Depot. Further coordination with the U.S. Navy and U.S. Army Corps of Engineers will be required to identify a mutually agreeable alignment should the preferred alternative include this option. Additionally, the proposed at-grade roadway would bisect the Navy's property. The Navy requires unimpeded access to all of its facilities at Craney Island;

(2) The Navy is in the process of investigating safety distance requirements for military ships refueling at Craney Island in relation to a public highway and will provide that information when available;

(3) Further coordination with the U.S. Navy and U.S. Army Corps of Engineers will be required to consider the alignment of a future tunnel beneath Norfolk Harbor Reach with respect to anticipated federal navigation channel deepening activities and the cumulative impact on maritime operations at Naval Station Norfolk should the preferred alternative include this tunnel/bridge option;

Enclosure 1: Navy Comments, Hampton Roads Crossing Study - SEIS

Topic or Area of Concern (AOC)	Segment 1 (CO) I-664 from US 58 (Bowers Hill) to I-264	Segment 2 (CO) I-664 from VA 164 to US 58 (Bowers Hill)	Segment 3 (BCO) I-664 and VA 164 Interchange	Segment 4 (CO) I-664 from I-664 Connector to VA 164	Segment 5C I-664 from Terminal Avenue Interchange to I-664 Connector	Segment 5D I-664 from Terminal Avenue Interchange to I-664 Connector	Segment 5E Terminal Avenue Interchange	Segment 6D Terminal Avenue Interchange	Segment 7C I-664 from I-64 to and including Terminal Avenue Interchange	Segment 7D I-664 from I-64 to and including Terminal Avenue Interchange	Segment 8 I-64 north of HRBT	Segment 8 I-64 from HRBT to I-664	Segment 10 (BT) I-664 and I-564 Connector	Segment 10C I-664 and I-564 Connector	Segment 11C I-564 Connector including I-564 Interchange	Segment 11D I-464 Connector including I-564 Interchange	Segment 12B I-564 Connector and VA 164 Connector Interchange	Segment 12C I-564 Connector, I-464 Connector and VA 164 Connector Interchange	Segment 12D I-464 Connector, I-464 Connector and VA 164 Connector Interchange	Segment 13 VA 164 Connector	Segment 14 VA 164	Construction and/or Temporary	Recommendations / Additional Comments
Air Operations at Chesapeake Field (Required at Naval Station Norfolk)																							
Low altitude rotary wing training and operations for both take off/landing												No Impact (NI)										✓	For further clarification, mapping elements and other information, please contact the Navy's project POC.
Operational training including streaming of equipment from helicopter through the channel												NI										✓	
Night operations and training												NI										✓	
Marginal weather operations and training												NI										✓	
Potential penetration into flight safety zones												NI										✓	
Air diversion impacts causing traffic over residential areas												NI										✓	
Potential hazards associated with lighting (structures/highway) which could impact pilot acclimation												✓										✓	
Any proposed development, to include temporary structures, involving height must comply with the FAA Obstruction Evaluation criteria												✓										✓	
Vertical penetration of approach/ departure corridor would impact Navy terminal instrument and visual approaches												NI										✓	
Regional Port Operations																							
Dredging requirements for siltation build-up					NI	NI						NI	NI	NI								✓	
Potential impacts to normal water traffic; impacts to channel and shipping lanes					NI	NI						NI	NI	NI								✓	
Harbor traffic and pilotage					NI	NI						NI	NI	NI								✓	
Channel depths for submarines and deep draft ships					✓	✓						✓	✓	✓								✓	
Required minimum sufficient clearance and draft depths					✓	✓						✓	✓	✓								✓	
Alignment of a future tunnel beneath Norfolk Harbor Reach with respect to anticipated federal navigation channel deepening activities and the cumulative impact on Navy maritime operations					NI	NI						NI	✓	✓								✓	
Regional Emergency Management																							
Potential impacts to emergency evacuation or operations (land and water) if the channel or roadway were to be impacted					NI	NI						NI	NI	NI								✓	Roadway improvements that increase capacity and provide new corridors benefit Navy emergency evacuation and operations
Transportation/Traffic Operations																							
Traffic model for I-564 Project under construction demonstration that the Navy requires three general purpose lanes to/from NAVSTA Norfolk Gates 1, 2, and 3A													NI	✓									
Naval Station Norfolk (NAVSTA) Facility AOC																							
Installation Anti-Terrorism Force Protection (ATFP)																							
Installation of a noise barrier near Willoughby housing will need to be evaluated for compliance												NI											
Operation of Gate 10, Gate 4, and Gate 22 facilities may be impacted. Any increase of the approach speed of vehicles, reduced approach zones, or reduced site lines at the gates could reduce the operation capability of the gate below required security standards during construction												NI										✓	Criteria requirements for gates are provided in UFC 4-022-01 Entry Control Facilities / Access Control Points
Proposed interchange west of Hampton Boulevard does not take into consideration the Navy's new Gate 6 currently under construction. Any increase of the approach speed of vehicles, reduced approach zones, or reduced site lines at the gates could reduce the operation capability of the gate below required security standards												NI	✓	✓								✓	Navy is in support of a full movement interchange that provides access to the Navy, NIT, and the public. The Navy requests that VDOT evaluate UPC 99176, I-564 Air Terminal Interchange, which is east of Hampton Boulevard and identified in the 2040 Regional Long Range Transportation Plan.

Attachment 5.1

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 22, 2023

Camelia Ravanbakht
Regional Connectors Study Project Coordinator
Hampton Roads Transportation Planning Organization
723 Woodlake Drive
Chesapeake, VA 23320

Dear Ms. Ravanbakht:

I am replying to your letter, dated October 18, 2023, regarding the Regional Connectors Study, funded by Hampton Roads Transportation Accountability Commission and initiated by Hampton Roads Transportation Planning Organization in 2018. The memorandum requests position statements from all impacted localities and regional stakeholders, including the U.S. Army Corps of Engineers, Norfolk District, regarding their perspective on benefits, issues, and concerns for each of the five study segments.

Regarding impacts to Norfolk District Civil Works projects, the five mandated segments would have varying impacts on the federally authorized Norfolk Harbor and Channels Federal Navigation Project (Norfolk Harbor Project) and the Craney Island Dredged Material Management Area Federal Project. The Norfolk Harbor Project includes the federal channel elements of Channel to Newport News, Sewells Point to Lambert Bend Channel, Sewells Point Anchorage Area, and Newport News Anchorage Area. The Craney Island Dredged Material Management Area includes the upland containment cells, the Craney Island Re-handling Basin, and the eastward expansion portion of the Craney Island Dredged Material Management Area Project.

The enclosed document provides my preliminary comments and concerns regarding the five mandated segments. These comments and concerns are predominately based on information provided to the Norfolk District in 2016 in the Hampton Roads Crossing Study Supplemental Environmental Impact Statement Alternatives Technical Report as this current Regional Connectors Study is conceptual in nature. The enclosed document also provides scoping level comments from the Regulatory Branch intended to prepare you for the future permitting action.

The Norfolk District appreciates the opportunity to be included in this long-range transportation planning effort for the Hampton Roads region, especially with regard to improving connectivity between the Southside and the Peninsula. My staff will be happy

to continue coordination on this project to assist in addressing these concerns for potential impacts to federally authorized civil works projects and Department of the Army permitting requirements.

If you require further information, please do not hesitate to contact Keith Lockwood, Chief, Water Resources Division, via email at keith.b.lockwood@usace.army.mil or via telephone at (757) 201-7004.

Sincerely,

Brian P. Hallberg, PMP
Colonel, U.S. Army
Commanding

Enclosure

cc:
Lorna Parkins (Michael Baker International)
Paul Prideaux (Michael Baker International)
Cynthia Mulkey (HRTPO)
Ed Sundra (Federal Highway Administration)

U.S. Army Corps of Engineers (USACE), Norfolk District
Comments/concerns on the Regional Connectors Study (RCS)

1. Pursuant to Section 14 of the Rivers and Harbors Act of 1899, 33 USC 408 (Section 408), the USACE Norfolk District (Norfolk District) will need to evaluate impacts from proposed segments 1, 3, 4 and 5 on USACE federally authorized civil works projects.

As interpreted by agency policy, Section 408 prohibits the alteration of federally authorized USACE civil works projects unless the acting party obtains Section 408 permission prior to making the alteration. The term alteration refers to any action by a non-USACE entity that builds upon, alters, improves, moves, obstructs, occupies, or uses such a project. The USACE may grant such permission when it determines that the proposed alteration will neither impair the usefulness of the civil works project nor be injurious to the public interest. The USACE has published Section 408 guidance in Engineer Circular (EC) 1165-2-220, dated 10 September 2018, "Policy and Procedural Guidance for Processing Requests to Alter US Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408," which provides the policy and procedural guidance for Section 408 requests.

Section 408 review can be accomplished for this project once the plans have been developed to a sufficient level to allow for assessment of potential effects to federal navigation channels and anchorage areas and to the operation of the CIDMMA. The basic requirements for a complete Section 408 request are listed in EC 1165-2-220, Paragraph 11. This is the minimal information necessary to start an evaluation, but additional information may be required for the Norfolk District to make a final decision.

2. Former Norfolk District Commander, COL Jason Kelly, commented on the Hampton Roads Crossing Study (HRCS) Supplemental Environmental Impact Statement (SEIS) Alternatives Technical Report (ATR), provided in 2016 and hereafter referred to as the HRCS ART. Many of the comments/concerns listed in that letter are still applicable to the Regional Connectors Study, as they pertain to mandated segments 3, 4, and 5. Segments 3, 4, and 5 surround and traverse the Craney Island Dredged Material Management Area (CIDMMA) and have the potential to alter the facility in the following manner:

a. Obstructions or restrictions to navigable access will impair the ability of the Norfolk District to maintain and operate the CIDMMA and federal navigation channels and anchorages. Proposed alterations to the CIDMMA have the potential to pose disruptions to facility operation and maintenance, to negatively impact contractor access, and to lengthen contract performance periods, all resulting in increased costs to the federal government and users of CIDMMA.

i. The HRCS ATR indicated a vertical clearance for all bridge crossings of 18-feet relative to North American Vertical Datum of 1988 (NAVO 88). The proposed vertical clearance will restrict navigable access to the CIDMMA. Restricted vertical clearance

will prohibit delivery of construction materials and equipment and limit the types of vessels calling on the facility including USACE vessels and contractor vessels (i.e., tugs, derrick boats, barges, and cranes). The Norfolk District requires continued unconstrained navigable access to the CIDMMA to meet its mission requirements.

ii. The proposed vertical clearance of bridge crossings near the CIDMMA in the HRCS ATR (Segment 3) will restrict access for vessels using the Craney Island Rehandling Basin (CIRB) bulkhead facility and construction lay-down area. Cranes and similar equipment would be required to break-down and re-erect to clear the Virginia Port Authority rail and the proposed bridge structures. Proposed alterations to the project such as this will negatively impact facility operation and maintenance and contract performance periods and will result in increased costs to the federal government and users of CIDMMA.

3. Segment 3 traverses the east side of the CIDMMA and proposes to take land in the existing south containment cell. Relocation and reconstruction of the containment dike to the west will impair and reduce the long-term capacity of the CIDMMA. In addition to the concerns related to the effect of this alignment on CIDMMA capacity, it bears mentioning that utilization of the site by users other than the federal government would require authorization from the Norfolk District Real Estate Office.

4. Construction of Segments 4 and 5, and possibly ongoing use of those segments once constructed, will restrict pipeline alignments for dredged material placement operations for projects directly pumping into the CIDMMA. Access for pipelines and tender vessels will be required at multiple locations under bridge structures. Constraining dredge pipeline access for dredged material placement operations at CIDMMA will result in increased costs to the federal government and users of CIDMMA and negatively impact mission. Construction and long-term operation of those segments would need to be executed in a manner that minimizes impacts to contractors' ability to install and maintain submerged and floating pipelines and ancillary equipment.

5. Impacts to navigation for Segments 1, 3, 4, and 5 must be vetted and approved by the U.S. Coast Guard (USCG) Sector Virginia in advance of receipt of Section 408 permission by the Norfolk District.

6. Portions of the roadway segments proposed will include work within jurisdictional areas requiring a Department of the Army (DA) permit pursuant to Section 10 of the Rivers and Harbors Act (RHA) (33 U.S.C. § 403), Section 404 of the Clean Water Act (33 U.S.C. § 1344), and/or Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413) (Section 10/404/103). Each proposed segment will need to be evaluated through the NEPA process to determine the Least Environmentally Damaging Practicable Alternative (LEDPA), which is the only alternative that can be permitted. The use of a collaborative process for the study of this

project is recommended, documenting concurrence of the pertinent federal agencies at important steps, to provide the local governments and the public with a more dependable framework for planning decisions. The Norfolk District Regulatory Branch has developed a merged, synchronized process with the Federal Highway Administration (FHWA) and Virginia Department of Transportation (VDOT), and the use of that process in this situation is encouraged. This process will require:

a. Demonstration of project purpose and need.

b. Analysis to ensure that each roadway segment has independent utility and logical termini.

c. Documentation that the applicant has undertaken a thorough environmental study and demonstrated avoidance and minimization of impacts to wetlands, streams, and other aquatic resources to the maximum extent practicable.

d. Submission of a mitigation plan to offset unavoidable impacts to jurisdictional areas through in-kind mitigation.

e. Documentation to support the Norfolk District's analysis of environmental justice issues to ensure that the proposed work will not result in disproportionately high and adverse health or environmental effects on disadvantaged populations through noise, pollution, traffic congestion, tolls, etc., or reduce equitable access to healthy, sustainable, and resilient environments.

g. Your Regulatory Project Manager moving forward will be Justin Summers. You can reach him at (540) 986-6793 or Justin.Summers@usace.army.mil.

Regional Connectors Study

Summary of Key Decision Points

Prepared By: Camelia Ravanbakht, PhD
RCS Independent Project Coordinator

November 13, 2020

Revised: December 2020, January 2021, February 2021, April 2021, May 2021, June 2021, October 2021, December 2021, April 2022, July 2022, September 2022, November 2022, February 2023, June 2023, September 2023, December 2023.

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, Mr. Keith Nichols, and Ms. Kathlene Grauberger of HRTPO.

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

REGIONAL CONNECTORS STUDY

2017

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

Item#5: Draft Guidance for Scope of Work

Motion: Mayor Sessoms (VB) moved the endorsement and recommendation of the HRTPO Board's 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 a 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.

REGIONAL CONNECTORS STUDY

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 on 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 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:

The 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 three 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 27th 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 and VHT from 2017 to 2045 Base. Members expressed concerns about a decrease. Bill Thomas indicated that he intends to perform more checking of the modeling results.

The 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 Electronic 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 if 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:

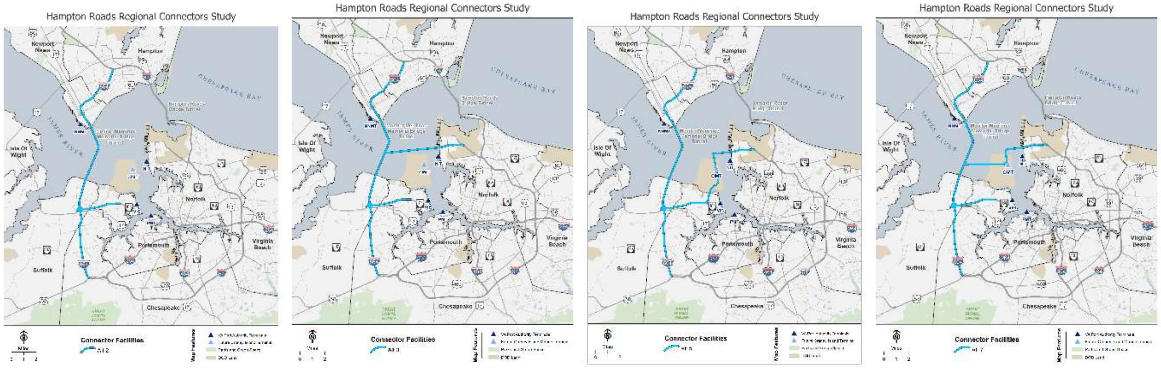
- All five Mandated Segments (I-664, I-664 Connector, I-564 Connector, VA 164, VA 164 Connector
- I-664 and VA 164
- I-664, VA 164, I-664 Connector, I-564 Connector
- I-664, VA 164, I-664 Connector, VA 164 Connector
- I-664, VA 164, VA 164 Connector, I-564 Connector

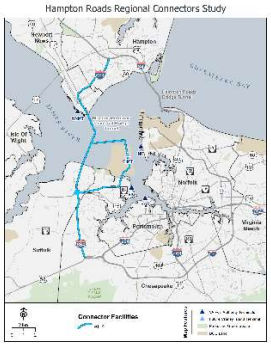
2021

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 below graphics). Traffic volumes were tabulated for 2017, 2045 Baseline, 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

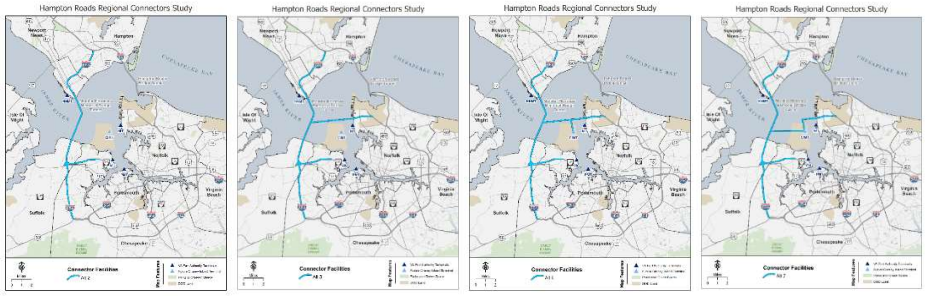
Item#5: **Regional Connectors Study: Development of Preliminary Alternatives**

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, 2021, with ACOE and the Navy and on February 5,2021, 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 the next phase of the Navy Fuel Depot project 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 General Purpose (GP) Lanes + 2 Managed Lanes (ML) and 4General Purpose Lanes + 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 Bowers - Hill 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.

Working Group Electronic Meeting 05/25/2021

Item#5: Regional Connectors Study Phase 3: Development of Preliminary Alternatives

- The Consultant Team presented the travel demand modeling results on five Alternatives (2, 3, 6, 7, and 8) selected at the April 8 meeting (see below Graphics 5A). The results were based on two design options for MMMBT: Option A (6GP+2M) and Option B (4GP+4M).

- The 2045 travel demand networks used for modeling these ten alternatives were corrected since the April 8th meeting to reflect the HRTAC Initial Toll Policy on the HRELN ($0.06/mile) and were also consistent with the recommendations from the Bowers-Hill Interchange Improvement Study (see Modeling assumptions below).

- The WG members agreed on eliminating Alternative 7 under both design options A and B due to design limitations and low estimated traffic volumes.

- The WG members agreed and selected Alternatives 2, 3, 6, and 8 with Options A and B to be moved to the next step of the analysis. The motion passed unanimously to recommend these 8 Alternatives for the Steering Committee's consideration and approval at their next meeting to be scheduled in the June/July timeframe.

REGIONAL CONNECTORS STUDY

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

2

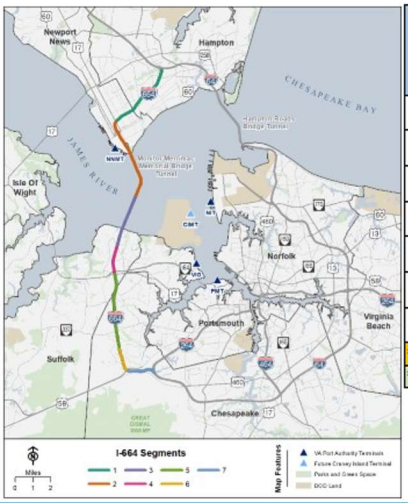
3

6

7

8

Modeling Assumptions



I-664 Roadway Segments	Actual Existing Lanes	MMMBT Design Option (6+2)	MMMBT Design Option (4+4)	Comments
I-64 to Terminal Avenue Interchange	6	6+2	6+4/2*	
Terminal Avenue Interchange to I-664 Connector	4	6+2	4+4	MMMBT
I-664 Connector to College Dr. (Exit 8)	4	6+2	4+4	
College Dr. (Exit 8) to VA 164**	6	6+4	6+4	Bowers Hill Study Area
VA 164 to Dock Landing Rd**	4	4+4	4+4	
Dock Landing Rd to US 58 (Bowers Hill)**	4	6+4	6+4	
US 58 (Bowers Hill) to I-264W**	8	8+4	8+4	
* Adds/drops second HOT lane at Powhatan Parkway				
**Per Bowers Hill Interchange Improvement Study				

Joint Steering (Policy) Committee and Working Group Electronic Meeting 06/22/2021

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

The Consultant Team provided an update of activities conducted since the October 27, 2020, Joint meeting. Mr. Craig Eddy reviewed Alternatives 1 through 8 as considered by the Working Group during the past several months. Mr. Eddy further indicated that the Working Group had eliminated Alternative 1 (high cost), Alternatives 4 and 5 (VA 164 Connector constraints and issues raised by the Navy, Army Corps of Engineers, and city of Portsmouth), and Alternative 7 (low estimated traffic volumes and design constraints). Lastly, Mr. Eddy shared with the members the four alternatives (Alternatives 2, 3, 6, and 8) under two design options A and B that were recommended by the Working Group for the Steering Committee's approval.

Motion: Chair Price requested the members for a motion to approve the Working Group's recommended alternatives and design options. Mr. Thomas (Norfolk) indicated that a funding request has been submitted to Congress for the Craney Island Access Study. He further requested the Chair to include Alternatives 5 and 7 in the final list of Preliminary Alternatives. Following some discussions and the absence of several members of the Policy Committee, Chair Price directed the staff to schedule a 30-minute electronic meeting the following week for the joint group to reconvene and act on this one item: selection of Preliminary Alternatives.

Joint Steering (Policy) Committee and Working Group Electronic Meeting 06/30/2021

Item#4: **Regional Connectors Study Phase 3: Development of Preliminary Alternatives**

The purpose of this meeting was for the members to vote on the Working Group recommended Alternatives 2, 3, 6, and 8 under two design options A and B (a total of 8 Alternatives). The design options pertain to the number of general purpose (GP) and managed (M) lanes on I-664 from its interchange with I-64 on the peninsula to its proposed interchange with the I-664 Connector over the Hampton Roads Harbor. Option A would provide 6 GP and 2 M while Option B would provide 4 GP and 4 M.

Mayor Price (Newport News) initiated this item by asking for a motion to move ahead with the alternatives recommended by the working group that were to be voted on at the previous week's (June 22) meeting. Mayor Tuck (Hampton) made a motion, and Mayor Glover (Portsmouth) seconded the motion.

Vice-Mayor Thomas (Norfolk) made a substitute motion. The substitute motion is to include Alternatives 5 and 7 in the study, due to the burden of truck traffic on Hampton Boulevard, the burden that will be imposed by the future Craney Island Terminal, and the possibility that these alternatives may be cheaper. Vice-Mayor Thomas (Norfolk) then mentioned the possibility of an additional $3.1 million in

federal earmark that was requested for a study to look at access to the future Craney Island Terminal. Mayor Dyer (Virginia Beach) seconded the substitute motion.

There was extensive discussion among the Steering (Policy) Committee members regarding the importance of Alternatives 5A, 5B, 7A, and 7B even though they had been recommended for removal. The addition of Alternatives 5A, 5B, 7A, and 7B, would result in twelve preliminary alternatives to be studied when added to the 8 recommended by the Working Group, which exceeds the number allowable (maximum of ten Alternatives) as per the scope of work. During the meeting, the Steering Committee was made aware of this scope limitation.

Motion: Vice-Mayor Thomas (Norfolk) amended his substitute motion. His amended substitute motion is to defer the action today to determine how much additional funding would be required to analyze 12 alternatives simultaneously through Phase 3 (including Alternatives 5 and 7) and to explore what additional money is available from HRTAC to fund the additional analysis. Mayor Tuck (Hampton) moved approval of the amended substitute motion; Mayor Dyer (Virginia Beach) seconded.

The Motion passed with five Yes votes and two No votes requiring:

- an estimated cost/per additional alternative (beyond 10)
- an inquiry as to the availability of additional funds from HRTAC for such study

RCS on Temporary Pause: July 2021 – September 2021

Following the June 30, 2021, Joint Steering (Policy) Committee/Working Group meeting, Robert Crum, HRPDC/HRTPO Executive Director collaborated diligently with the Committee members to resolve notable issues and develop a path forward to complete the RCS.

Joint Steering (Policy) Committee and Working Group Meeting 10/12/2021

Item #5: RCS Background and Recommended Path Forward:

Robert Crum, HRPDC/HRTPO Executive Director made a presentation on the path forward for the RCS. He began his presentation by introducing the consultant's new project leadership – Lorna Parkins and Paul Prideaux – and by highlighting the mandated segments and the past philosophy of the study.

Mr. Crum noted that he met with members of the Steering (Policy) Group after the June meeting. In these discussions he heard that some of the options in the RCS may not be constructed for decades; technology, community growth, and needs will evolve over time; there are questions and concerns

about some segments but it's too early to eliminate them at this stage, the RCS should determine each segment's advantages and disadvantages, and ready-to-go projects shouldn't be slowed down.

Mr. Crum stated that HRTPO staff and the consultant team believe that retaining certain segments through the next stage of analysis can be accomplished without the need for additional funding. He added that each of these segments would be advanced to the next phase of this study, where an analysis would be completed on the degree to which each segment addresses the needs of the region.

Mr. Crum added that the cost, constructability, permitability and congestion relief of the various segments will be evaluated, and the various segments will be ranked using this evaluation and staged based on project readiness.

Mr. Crum concluded his presentation by noting the following potential category groupings:

- Those segments that are ready for advancement should be recommended for consideration in the fiscally constrained portion of the Hampton Roads 2050 Long-Range Transportation Plan.
- Those segments which require further refinement and maturation will be recommended for consideration in the 2050 Vision Plan as projects requiring further evaluation for permitability and constructability.
- Those segments that due to technical issues or other items will be retained but will warrant further consideration by the community at the appropriate time.

Motion: Mayor Dyer (Virginia Beach) made a motion to approve the recommended path forward and Mayor Duman (Suffolk) seconded. The motion was unanimously approved.

Item #6: RCS: Proposed Approach to Study Completion

Lorna Parkins (MBI) RCS Project Co-Manager noted that the mandated study segments have not changed. The updated methodology will simply sort the segments into chronological tiers based on readiness and known challenges associated with construction and permitting. She added that the updated Phase 3 Process will establish a tiering framework, apply the framework to tier the segments, evaluate congestion relief and finalize segments tiers, and provide the information for the 2050 LRTP and prioritization process.

Ms. Parkins added that there will be three tiers. Tier 1 will have favorable constructability, permitting and readiness; Tier 2 will have favorable or mixed constructability and permitting but less favorable readiness; and Tier 3 will be challenged for constructability and permitting and a higher degree of uncertainty.

Ms. Parkins noted that individual segments will be organized into bundles for analysis, and the congestion relief evaluation will include as many as three logical bundles for evaluation. The consultant team will evaluate congestion relief and other system effects of the bundles, and the evaluation results will finalize the tiering of the segments.

Mr. Jackson (Portsmouth) mentioned that the Working Group has had a strong role in the study to this point and asked if the Working Group will continue to have this role moving forward. Mr. Crum (HRTPO) replied that the Working Group will continue to be key in the technical work of the study. Mr. Crum (HRTPO)also noted that committee members indicated a preference for more Joint Steering (Policy) and Working Group meetings moving forward.

Joint Steering (Policy) Committee and Working Group Meeting 12/07/2021 – Cancelled

2022

Joint Steering (Policy) Committee and Working Group Meeting 01/11/2022

Item# 5. Regional Connectors Study (RCS): Scope of Work and Schedule Update:

Ms. Lorna Parkins, RCS Co-Project Manager, briefed the Joint Committee members on the updated scope of work and schedule associated with the RCS. She stated that the updated methodology approved by the Steering Committee at the October 21, 2021, meeting will be used to evaluate and sort the RCS segments into chronological tiers based on readiness and known challenges associated with construction and permitting. She then provided a summary of the following three tiers:

- Tier 1
  - Favorable constructability and permitting
  - Favorable readiness
- Tier 2
  - Favorable or mixed constructability and permitting
  - Less favorable readiness
- Tier 3
  - Currently challenged for constructability and permitting
  - Higher degree of uncertainty/requires additional information

The updated Study process will consist of four steps:

- Step 1 – Draft Segment Tiering (3 months)
  - Qualitative assessment of construction, permitting, and readiness
- Step 2 – Final Segment Tiering (3 months) – to include updating the RCS 2045 Baseline Network
  - Congestion reduction evaluation
  - Revised design and cost estimation
- Step 3 – Full recommendations to the HRTPO (6 months)

    - Scenario analysis
    - Traffic operations analysis
- Step 4 – Final Report (4 months)
    - Public engagement and documentation

Ms. Parkins stated that the consultant team will come back to the Joint RCS at the beginning of Step 2 to determine if any projects need to be added to the base network. She noted that although the schedule is tight, the consultant team should be able to make the original study completion date of June 2023.

Mr. Carl Jackson (Portsmouth) asked whether the Joint RCS was being asked to consider approving the updated study process or the baseline network. Ms. Parkins replied that the Joint RCS will be asked to vote on the updated study process.

Mayor Donnie Tuck (Hampton) stated that there were possible funding earmarks that may be brought forth from Congress and inquired about the status of the earmarks. Mr. Kevin Page, HRTAC Executive Director, replied that he was unaware of any federal funding at this time.

Motion: Mayor Rick West (Chesapeake) Moved to approve the revised RCS Scope of Work and Schedule; seconded by Mayor Donnie Tuck (Hampton). The Motion Carried.

Item# 6. Regional Connectors Study: Draft Evaluation Measures for Segment Tiering

Ms. Lorna Parkins stated that as noted in her previous presentation regarding the revised scope of work, the mandated RCS segments will be evaluated utilizing the following criteria:

- Permitting Issues
- Construction Complexity
- Project Readiness
- Congestion Relief

Ms. Parkins noted that the consultant team has developed a series of draft measures and factors for evaluating the mandated segments on the first three criteria. She summarized each criterion and stated that this evaluation will provide a comprehensive understanding of the mandated segments including impacts to community residents and businesses, environmental justice populations, regional economic drivers, and the environment.

She indicated that the outcome of this evaluation will provide logical information, supported by qualitative and quantitative observations, which will support the initial draft designation of the mandatory segments into three tiers as described in the revised scope of work.

Ms. Amy Inman (Norfolk) inquired as to the quality of evaluating the segments with these measures based on unknown traffic impacts. Ms. Parkins acknowledged that there are unknown factors; however, the impacts on the segment alignments will be initially based on the current level of engineering.

Motion: Mayor Rick West (Chesapeake) Moved to approve the draft Evaluation Measures; seconded by Mayor Donnie Tuck (Hampton). The Motion Carried.

Joint Steering (Policy) Committee and Working Group Meeting 04/26/2022

Item# 5. Regional Connectors Study (RCS): Qualitative Evaluation of Mandated Segments and Segment Bundling (Action Requested)

At the January 11, 2022, Joint Meeting, the Steering Committee approved a four-step process for moving forward. Ms. Lorna Parkins, RCS Co-Project Manager (MBI), presented the results of Step 1 "Qualitative Evaluation of Mandated Segments and Bundling of Segments". Dale Stith (HRTPO) provided the members with a quick review of the HRTPO long-range transportation planning process.

Ms. Parkins described the assumed characteristics of the five mandated segments analyzed, and presented qualitative findings for each segment in the following categories:

- Construction Complexity
- Permitting Issues and Key Environmental Impacts
- Project Readiness

- ✓ Carl Jackson (Portsmouth) expressed concern about possible undercounting of property takes for the VA 164 Widening segment.
- ✓ Concerning the I-664 Connector segment, Lesley Dobbins-Noble (COE) suggested a high impact rating due to the Section 408 process for Craney Island.
- ✓ Concerning the VA 164 Connector segment, Steve Jones (Naval Station Norfolk) asked whether it had been changed to at-grade where it crosses the fuel depot.
- ✓ Kevin Page (HRTAC) noted that a crash wall is not required in the 99-year railroad permit. He also suggested that the southern portion of the I-664 segment—included in HRTAC's 2045 long-range plan of finance (to be approved by HRTAC in June) be considered "a given" and to be included in the RCS 2045 "baseline".
- ✓ Ms. Parkins noted that that is one of her recommendations.
- ✓ Mayor Price (Newport News) mentioned that VDEQ is studying the air-quality effects of the coal piles which may be impacted by widening of the northern portion of I-664.

Ms. Parkins presented recommended bundling of segments (four bundles) to be used in the measurement of benefits in the congestion relief evaluation and economic impacts analysis.

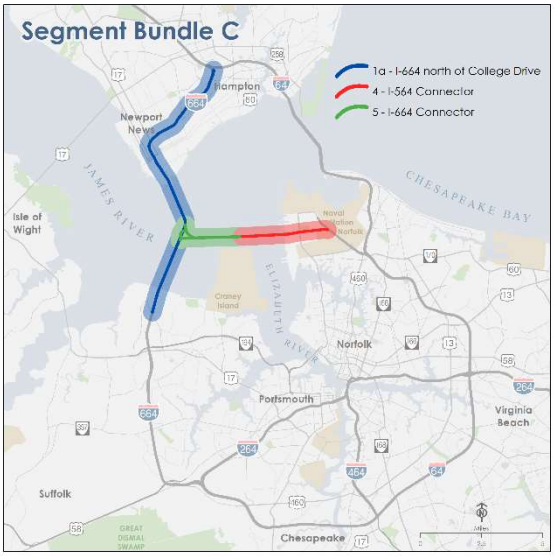
Recommendations for approval:

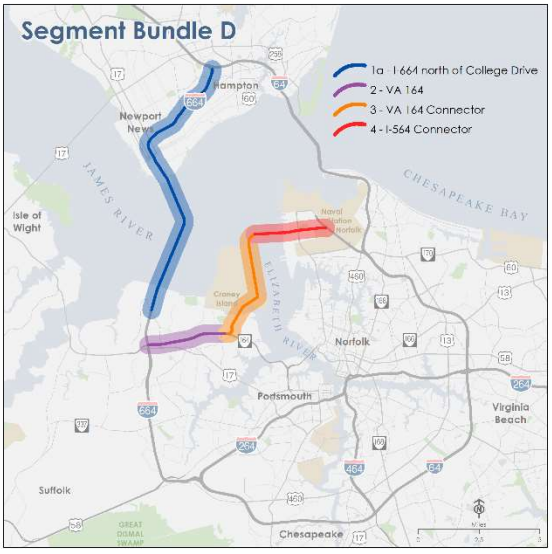
- Placing the southern portion of the I-664 segment in the RCS 2045 "baseline".
- Bundling segments into four bundles (A, B, C, and D, as shown below) for analysis of benefits.

Motion: Mayor Tuck (Hampton) moved to approve the above recommendations; seconded by Mayor Dyer (Va. Beach). The motion carried.


Segment Bundle A
1a - I-664 north of College Drive
Hampton
Newport News
Isle of Wight
JAMES RIVER
CHESAPEAKE BAY
ELIZABETH RIVER
Norfolk
Portsmouth
Virginia Beach
Suffolk
Chesapeake


Segment Bundle B
1a - I-664 north of College Drive
2 - VA 164
Hampton
Newport News
Isle of Wight
JAMES RIVER
CHESAPEAKE BAY
ELIZABETH RIVER
Norfolk
Portsmouth
Virginia Beach
Suffolk
Chesapeake


Segment Bundle C
1a - I-664 north of College Drive
4 - I-564 Connector
5 - I-664 Connector
Hampton
Newport News
Isle of Wight
JAMES RIVER
CHESAPEAKE BAY
ELIZABETH RIVER
Norfolk
Portsmouth
Virginia Beach
Suffolk
Chesapeake


Segment Bundle D
1a - I-664 north of College Drive
2 - VA 164
3 - VA 164 Connector
4 - I-564 Connector
Hampton
Newport News
Isle of Wight
JAMES RIVER
CHESAPEAKE BAY
ELIZABETH RIVER
Norfolk
Portsmouth
Virginia Beach
Suffolk
Chesapeake

REGIONAL CONNECTORS STUDY

Joint Steering (Policy) Committee and Working Group Meeting 08/09/2022

Item #5. Regional Connectors Study: Step 1: Qualitative Evaluation of Mandated Segments and Segment Bundling – Comments and Responses

Ms. Parkins discussed the Phase 3 Process Graphic and noted that the study is currently in Step 2 which includes the congestion reduction evaluation, revised design, and cost estimation. At the end of Step 2 draft segments will be tiered, which will be followed by public meetings.

Ms. Parkins reminded the group of the definition of project segments vs. bundles, followed by how segments will be classified using tiers. Tier 1 will include segments that are ready for advancement and recommended for consideration in the HRTPO 2050 LRTP. Tier 2 will include segments which require further refinement and will be recommended for consideration in the HRTPO 2050 Vision Plan. Tier 3 will include segments that due to technical challenges and uncertainties will be further developed at an appropriate time in the future.

Ms. Parkins detailed the comments that were received from committee members on the mandated segments. These comments include:

- The City of Portsmouth provided comments on the VA 164 Widening, including recommending further refinement of alignment assumptions, looking at local impacts and local opposition, analyzing stormwater management concerns, and incorporating Environmental Justice concerns.
- The Navy provided comments on the VA 164 Connector. These comments reflect the security requirements of the Navy Fuel Depot and fuel pipeline facilities, and also the strategic nature of both the Fuel Depot and the Colonial Pipeline.
- The Navy also provided comments on the I-564 Connector. These comments include the security requirements of the Navy Fuel Depot, height restrictions due to flight paths, security concerns at Gate 6 and at Piers 1-3, and changing assumptions for the ATI interchange along the I-564 Intermodal Connector.
- The US Army Corps of Engineers (USACE) Operations provided comments on the VA 164 Connector. These included updated data on Craney Island, concerns on Craney Island operations, and Section 408 permit requirements.
- The USACE Regulatory also provided comments, including comments on independent utility, future permitting requirements, wetland impacts and remediation, Environmental Justice concerns, and endangered species evaluations.
- The Port of Virginia provided comments supporting the VA 164 and I-564 Connectors. They also noted that security concerns can be resolved during later stages of project development after further planning and conceptual design.

Ms. Parkins added that it is very helpful to receive all these comments, particularly for constructability, permitting, and readiness considerations.

No Action was required for this item.

Item #6. Regional Connectors Study: Step 2 – Congestion Reduction Evaluation and Economic Impacts Analysis

Mr. Prideaux introduced the topic by noting that Michael Baker used the HRTPO 2045 Regional Travel Demand Model to evaluate improvements. They looked at both regionwide results and results at key facilities and prepared a summary of economic results.

Mr. Prideaux discussed the segment bundles that were analyzed:

- Segment Bundle A is comprised of Segment 1a (I-664 north of College Drive).
- Segment Bundle B is comprised of Segment 1a (I-664 north of College Drive) and Segment 2 (VA 164)
- Segment Bundle C is comprised of Segment 1a (I-664 north of College Drive), Segment 4 (I-564 Connector), and Segment 5 (I-664 Connector)
- Segment Bundle D is comprised of Segment 1a (I-664 north of College Drive), Segment 2 (VA 164), Segment 3 (VA 164 Connector) and Segment 4 (I-564 Connector)

Mr. Prideaux noted that Segment 1b (I-664 south of College Drive) was included in the 2045 RCS Baseline Network, based on a decision made at the last RCS meeting.

Mr. Prideaux provided highlights on the congestion analysis for the regionwide results. He noted that total regional travel levels are similar for the 2045 baseline and all four bundles, but vehicle-hours of travel and delay are reduced with all four bundles because of reduced congestion. He also noted that Bundles C and D have the greatest benefit on vehicle-hours of travel and delays. Mr. Prideaux added that Bundles C and D have the largest reduction in the share of congested travel, which would lead to improved travel time reliability.

Mr. Jackson (Portsmouth) asked if we could further determine whether Bundle C or Bundle D would have the greatest reduction in congestion. He expressed his concern that Bundle D has many more issues than Bundle C. Mr. Prideaux and Ms. Parkins replied that they would provide further analysis of these bundles with the upcoming cost effectiveness analysis.

Ms. Parkins provided a summary of the economic impact analysis. She highlighted the societal benefits of each Bundle in 2045 relative to the 2045 baseline conditions and noted that Bundle D had the highest societal benefits, largely due to time and reliability savings. Ms. Parkins also highlighted the regional economic impact in 2045 relative to 2045 baseline conditions, in terms of increase in the Gross Regional Product. Bundle D has the most cumulative benefit, with most of that being due to impacts of Segment 1a.

Mayor Price (Newport News) asked if we could determine how certain potential large economic development projects that could increase housing and population levels would impact congestion. Ms. Parkins replied that this will be looked at as part of the scenario analysis, with the three scenarios of Greater Growth on the Water, in Urban Centers, and in Suburban Centers.

Mr. Crum (HRTPO) mentioned the escalating costs of the HRBT project through the years and noted that there are costs associated with waiting. Mr. Crum (HRTPO) asked if we could get into these costs of waiting in the RCS in terms of escalating construction costs. Mayor Price (Newport News) added that escalating costs through the years was also an issue for the CBBT project. Ms. Parkins replied that their team will think about how to represent this opportunity cost in the study.

Mr. Stringfield (VDOT) asked if all the bundles include Bundle A, which improves the Monitor-Merrimac Memorial Bridge tunnel. Ms. Parkins replied that yes, all four bundles include improvements at the tunnel. Ms. Parkins added that they have been coordinating with HRSD in terms of the proposed alignment of improvements to I-664.

Mayor Tuck (Hampton) asked about increasing costs and the ability to fund projects now versus years in the future. Mr. Crum (HRTPO) replied that this is a conversation for this group to have with the HRTPO Board as the study progresses with costs provided by the consultant. Ms. Parkins added that there is about a year left remaining on the study, and then that question should be addressed in the HRTPO Long-Range transportation planning process.

No Action was required for this item.

Item #7. Regional Connectors Study: Phase 3: Public Engagement Plan – Proposed Outreach Plan

Ms. Parkins introduced the proposed outreach plan by noting that strategies have changed due to the pandemic. She noted that the plan no longer is to take a preferred alternative to the public, but rather to take the tiering of projects to the public. The plan is now for a more hybrid approach. This will include four in-person meetings (Lower Peninsula, Norfolk, Suffolk, and Portsmouth), three pop-up meetings (including events spread out geographically), and more online engagement to reach those unable to attend in-person meetings.

Ms. Parkins highlighted maps showing demographics and transit routes to help with determining the four proposed meeting locations.

Mr. Stringfield (VDOT) asked about online engagement, and whether they are planning to run an online survey to accompany each public meeting or are they planning to run a single survey throughout the entire public involvement period. Ms. Parkins replied that public meetings will be at the front end of the public involvement period and that the survey will continue to be available afterward for the full public involvement period.

Mayor Glover (Portsmouth) noted that public meetings in that area of Portsmouth are typically held at Churchland High School, since it is a larger venue.

Ms. Parkins wrapped up the presentation by noting that a discussion of possible locations for pop-up meetings, such as at fall festivals, will be discussed at the next meeting.

No Action was required for this item.

Joint Steering (Policy) Committee and Working Group Meeting 09/27/2022

6. Phase 3: Step 2 – Cost Estimation and Revised Design: Draft Segment Tiering (Action Item)

Ms. Parkins provided a brief overview of the Qualitative Analysis (Step 1) of the five mandated segments. She reviewed the segments and segment bundles which will be later used in the segment tiering process.

Mr. Prideaux provided a brief update on the Quantitative Analysis (Step 2) of the five mandated segments. He indicated that the Quantitative Analysis includes three elements: Congestion Benefits, Economic Impacts, and Cost estimates. He mentioned the congestion benefits and economic impacts were reviewed at the August 9, 2022, Joint Meeting. He then reviewed the cost for each of the mandated segments and indicated the methodology was based on VDOT's Cost Estimating Program (PCES).

To avoid presenting information twice—once today, and once again with a quorum present—after discussion and consensus, Mayor Price adjourned the meeting at approximately 10:30 a.m. Mr. Crum said that he would check the calendars of the mayors and schedule a meeting to conduct the business planned for today's meeting.

Joint Steering (Policy) Committee and Working Group Meeting 11/17/2022

5. Regional Connectors Study Phase 3: Step 2 – Draft Segment Tiering

Ms. Parkins provided a definition of the three tiers. Segments in Tier I would be ready for advancement and recommended for consideration in the fiscally constrained portion of the 2050 Long Range Transportation Plan (LRTP). Tier II segments would require further refinement and would be recommended for consideration in the 2050 Transportation Vision Plan. Tier III segments will be further developed in the future due to technical challenges and uncertainties. Ms. Parkins wrapped up her presentation by noting that based on the quantitative and qualitative analyses, the consultant team recommends Segments 1a (I-664 Widening) and 2 (VA 164 Widening) for Tier I and Segments 3 (VA 164 Connector), 4 (I-664 Connector), and 5 (I-564 Connector) for Tier III.

Motion: Following an extensive discussion on the recommended segment tiering, the Steering (Policy) Committee and Working Group unanimously approved a motion to direct the consultant to move forward with two tiers: Tier I would remain the same and contain Segments 1a and 2. Tier II and Tier III would be combined into one tier (referred to as Tier II) and would contain Segments 3, 4, and 5. Tier I projects would be recommended for consideration in the fiscally constrained 2050 LRTP, while Tier II segments would be recommended for consideration in the 2050 Vision Plan.

Vice-Mayor Thomas (Norfolk) made the motion and Mayor West seconded the motion. The motion was unanimously approved.

6. Regional Connectors Study Phase 3: Step 3 – Scenario Analysis

Ms. Parkins (MBI) introduced the scenario analysis and provided a description of the three greater growth scenarios. She added that the consultant team had recommended that the analysis be applied to two scenario bundles from Tier I and II segments – Bundle A (Segment 1a – I-664/MMMBT) and Bundle B (Segment 1a plus Segment 2 - VA 164). However, she added that this wording will need to be revisited now that Tiers II and III have been combined.

Mayor Price (Newport News) made a recommendation not to further study Segments 3, 4, and 5 at this point.

Ms. Vick (VPA) replied that, while we perhaps don't need to do an operational analysis on those segments, a stress test of future growth should still be completed.

Motion: A motion was made for the consultant to move forward with scenario planning on three bundles, including Bundles A and B. The consultant will consider the segments to include in the third bundle based on the technical team's professional judgement. However, the consultant will only complete a traffic operational analysis on Bundles A and B.

Mayor West made the motion and Vice-Mayor Thomas seconded the motion. The motion was unanimously approved.

Joint Steering (Policy) Committee and Working Group Meeting 02/13/2023

6. Regional Connectors Study Phase 3 – Step 3: Congestion Evaluation and Economic Impacts of Tier I and Tier II Segments

Ms. Parkins reminded the attendees of the actions taken at the November 17, 2022, Joint meeting, specifically the segments recommended for Tier I and II. The consultant team was directed to analyze three bundles of Tier I and II segments in the scenario analysis and Tier I segments in the traffic operations analysis.

For scenario analysis, Ms. Parkins compared the 2045 Baseline and three Greater Growth Scenarios (reflecting employment growth and increase in population). Greater growth scenarios reflect two times the employment growth from 2015-2045 and the associated increase in population growth. Ms. Parkins noted that the consultant team selected Bundles B, C, and D for the scenario analysis.

Ms. Parkins highlighted the congestion and economic results:

- Bundle B (Tier I segments) consistently delivers the best results

- Total travel time is impacted more by the land use scenarios than the bundles
- There is more congestion overall with greater growth scenarios
- With greater congestion, scenarios show additional benefits from the segments

Regarding societal benefits, Bundle D has the greatest total economic value in 2045 among the bundles across all scenarios except the suburban scenario, where bundle C performs best. Moreover, greater growth along the water or suburban areas tends to enhance the benefits of the segments (regardless of which bundle is selected).

Mr. Jackson (Portsmouth) said it would be nice to see the benefits specific to congestion relief of Bundle C to Bundle B. Ms. Parkins noted that the documentation would include all the details.

7. Regional Connectors Study Phase 3: Public Engagement - Summary of Public Meetings

Ms. Parkins provided an update on public engagement; three pop-ups were held in January, and four open houses were held in February, with 68 people attending. The public comments centered on the themes listed below. Additionally, many questions and conversations with the public focused on project development and timelines.:

- Congestion
- Tolls
- Alternatives to personal vehicles
- Environment
- "Benefits and Burdens" feedback
- Project timelines

Mayor Tuck (Hampton) asked a question about the segments included in Tier II. Mayor Tuck acknowledged that including the Tier II segments in the 2050 Vision Plan allows the projects to be potentially funded in the future. Mayor Tuck's question was about balancing the advancement of these projects with the concerns raised by stakeholders.

Ms. Parthasarathi (HRTPO) discussed the rationale for including the Tier II segments in the Vision Plan, noting that it allows opportunities for studies/future funding that would be required before these projects can be advanced to construction.

Ms. Parkins mentioned modifications in certain segment alignments incorporated into the analysis and factored into cost estimates.

Chair Dyer (Virginia Beach) stressed the importance of identifying barriers (Navy's concern over how I-564/664/164 Connectors would impact the Navy's facilities, connecting the Connectors to the region's Express Lanes) to success.

Joint Steering (Policy) Committee and Working Group Meeting 06/16/2023

5 and 6. Phase 3 – Step 3: Congestion Evaluation and Economic Impacts of Tier I (item 5) and Tier II Segments; Traffic Operations Analysis (item 6)

Lorna Parkins (MBI) and Paul Prideaux (MBI), RCS Project Co-Managers, presented a summary of overall project accomplishments and reviewed the results of congestion evaluation, economic impacts, and traffic operations analysis. The voting members approved the results of Scenario Planning, Congestion Benefits, and Economic Impacts of Bundles B, C, and D (item 5); and the results of the Traffic Operations Analysis (item 6) with Vice-Mayor Thomas (Norfolk) making the motion and Mayor Duman (Suffolk) seconding the motion.

7. Phase 3 – Public Engagement Plan

Lorna Parkins (MBI) provided a summary from:

- Public Meetings (Round 1), January-March 2023;
- Regional Connectivity Symposium, May 25, 2023 and
- Upcoming Public Meetings (Round 2), Summer 2023.

Chair Dyer (Virginia Beach) commented on the importance of the study to plan for potential growth in the region. Chair Dyer also indicated how congestion could impact military readiness. He stressed as we move forward there is a need to make the military a focal point.
Mayor Glover (Portsmouth) agreed with the importance of the study to reduce congestion but reminded the members of the adverse impacts of some of these regional projects/tolls have had on the city of Portsmouth. He reminded the leaders to be mindful and fair in the process as we move forward.

Bob Crum (HRTPO) indicated as the recommended projects are being sent forward to the Long-Range Transportation Plan (LRTP) process, the HRTPO will consider all the public comments, issues and comments discussed today by the members.

Joint Steering (Policy) Committee and Working Group Meeting 09/15/2023

5. Regional Connectors Study Phase 3 – Step 4: Final Documentation and Recommendations (Action Requested)

Ms. Lorna Parkins (MBI), RCS Project Co-Manager, presented slides summarizing previous study phases, overall project accomplishments, tiering recommendations and their relationship with the regional Long-Range Transportation Plan, summary of stress testing on the Tier I recommendations, and summary of input and common themes from public engagement on the tiering recommendations. Ms. Parkins also provided a brief overview of the RCS end products.

After the presentation, Mr. Crum acknowledged that Mayor Shannon Glover of Portsmouth expressed some concerns but was unable to attend the meeting in person and in his place, city staff would read in a statement expressing these concerns. Mr. James Wright, Portsmouth Interim Deputy City Manager/City Engineer, made the following statement:

> *"The City of Portsmouth appreciates the opportunity to participate in the Regional Connectors Study as part of the Steering Committee and Working Group. The energy and efforts put forth in this study will set the goals and priorities for the future of transportation in the region and for the citizens of Portsmouth. As such, we are disappointed with the quality of the responses provided over the course of the study to the concerns expressed by the City of Portsmouth as they relate to the impacts to its citizens associated with the VA- 164 Widening and VA-164 Connector projects. The City of Portsmouth has significant reservations about the information provided and what appears to be a disconnect in how the study represents the potential impacts of these projects on our residents. We look forward to meeting with the TPO Chairman and the consultant to discuss our concerns and these issues prior to finalizing the draft report for this study."*

Mr. Crum thanked Mr. Wright for the comments and stated that a working meeting with the TPO, HRTAC, Baker team, and Portsmouth staff would be arranged soon. This meeting would provide an opportunity for the Baker team to address how concerns have been addressed in the study thus far and city staff would have another opportunity to voice concerns about issues they still feel need to be addressed. Feedback from the meeting would then be used to make revisions as necessary. Subsequently, TPO staff could then call a virtual meeting of the Joint RCS Steering (Policy) Committee and Working Group to consider recommended actions, followed by consideration of said actions at the November TPO Board meeting.

Chair Dyer agreed with the next steps, stating that he wants to help remove any barriers to success, adding that localities should be in alignment and agreement on these regional connectors.

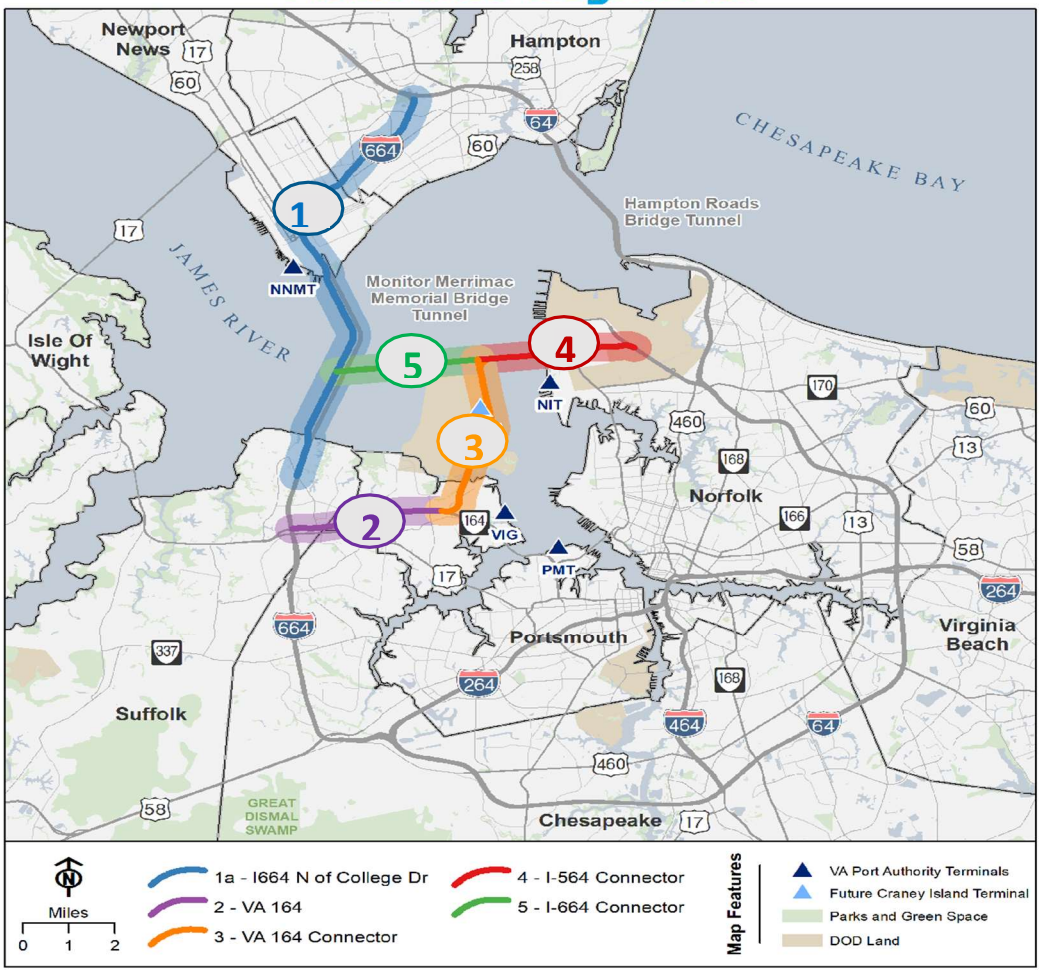
Mayor Donnie Tuck (Hampton) asked some questions pertaining to previous feedback provided by Portsmouth staff and Mayor Glover at earlier meetings, asking for clarification on the city's stance on these projects. Mr. Wright stated that city staff want to more fully understand potential impacts to citizens of Portsmouth.

Mayor Tuck moved to defer the action item until after the working meeting with Portsmouth staff. Mr. Wright seconded the motion. The motion carried.

Mr. Crum conveyed appreciation to the group for considering Portsmouth's concerns and request. He reiterated that the working meeting will be scheduled quickly and that the subsequent documentation, including the concerns that have been addressed to date in the study, is a great opportunity to memorialize issues and concerns for future efforts. Mr. Crum also highlighted the progress that has been achieved with the study, including learning more about the alignments and landing on the Monitor-Merrimac Memorial Bridge-Tunnel improvements as a next step. Mr. Crum also stated that modifications to the RCS recommendations or end products would be shared with the Port for their feedback prior to reconvening the Joint RCS Steering (Policy) Committee and Working Group.

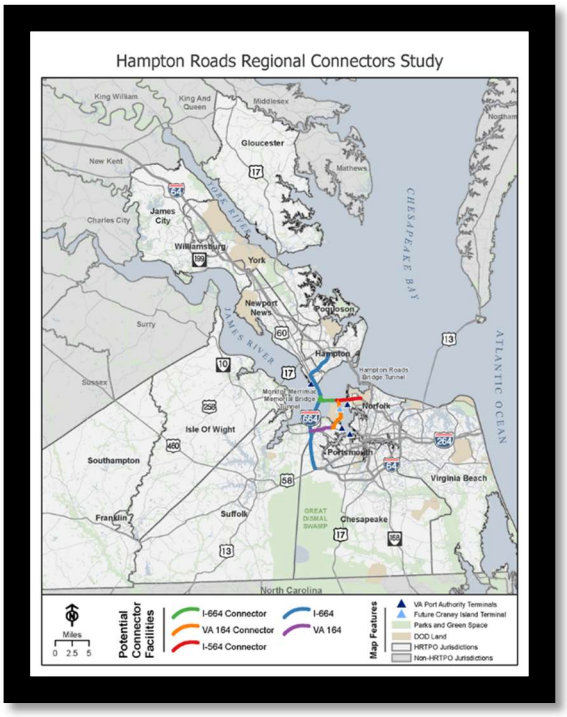
REGIONAL CONNECTORS STUDY

Mandated Segments



Attachment 6

APPENDIX A – STUDY AREA



REGIONAL CONNECTORS STUDY

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
Grand Total	**$6,949,967**

Funded by HRTAC, Administered by HRTPO

the heartbeat of HAMPTON ROADS TPO
TRANSPORTATION PLANNING ORGANIZATION

HRTAC
Hampton Roads Transportation Accountability Commission