REGIONAL CONNECTORS STUDY

HRTPO Regional Connectors Study

SUMMARY REPORT

Draft: December 2023

HAMPTON ROADS TPO

Michael Baker INTERNATIONAL

REGIONAL CONNECTORS STUDY

SUMMARY REPORT
PART 1: SUMMARY OF ANALYSIS

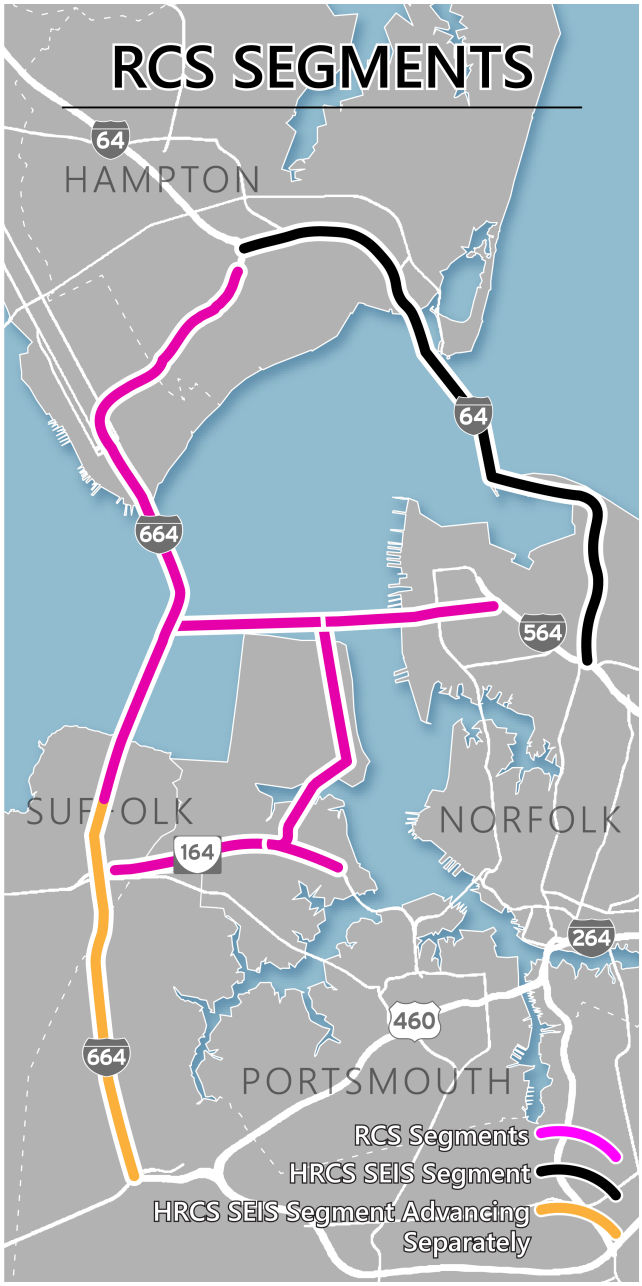
HAMPTON ROADS TPO

Michael Baker INTERNATIONAL

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

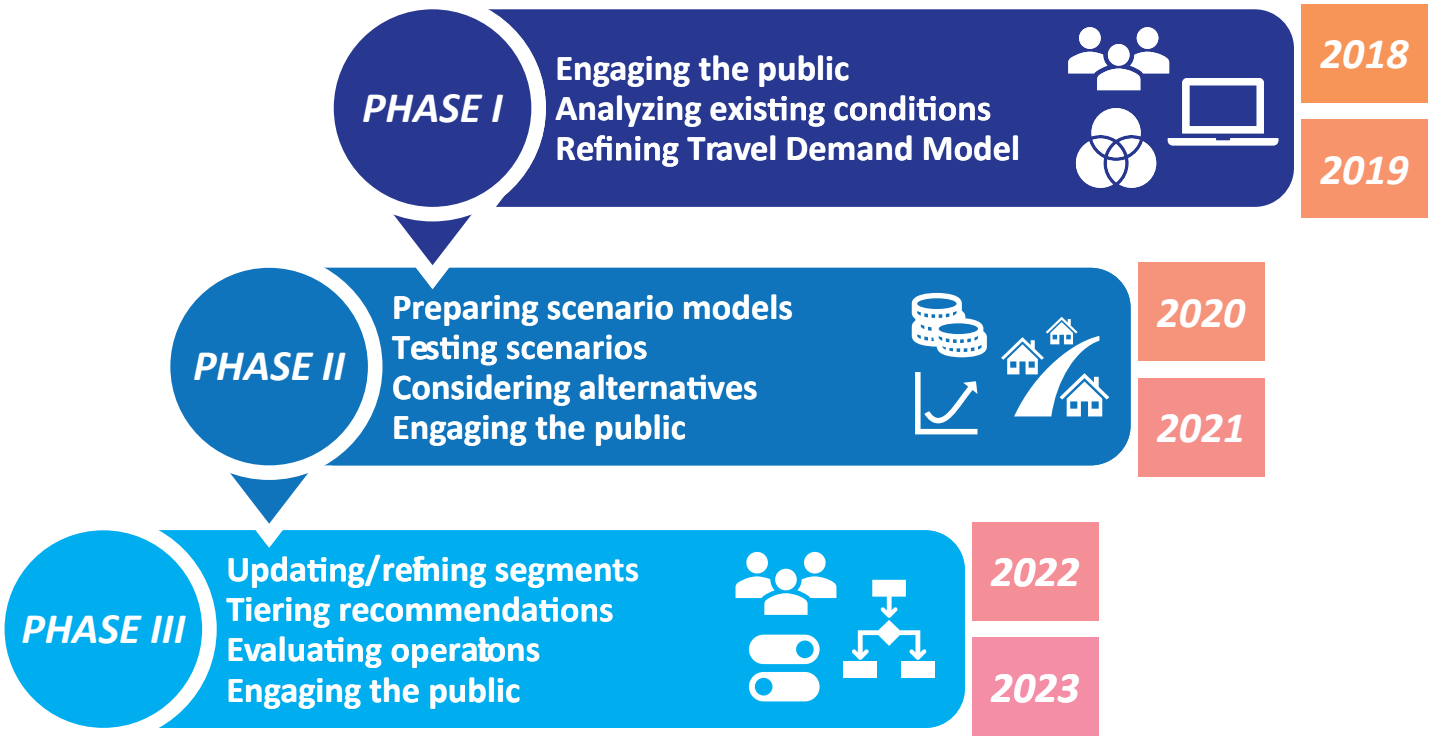
PROJECT HISTORY

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

GREATER GROWTH ON THE WATER

GREATER GROWTH IN URBAN CENTERS

GREATER SUBURBAN/ GREENFIELD GROWTH

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).

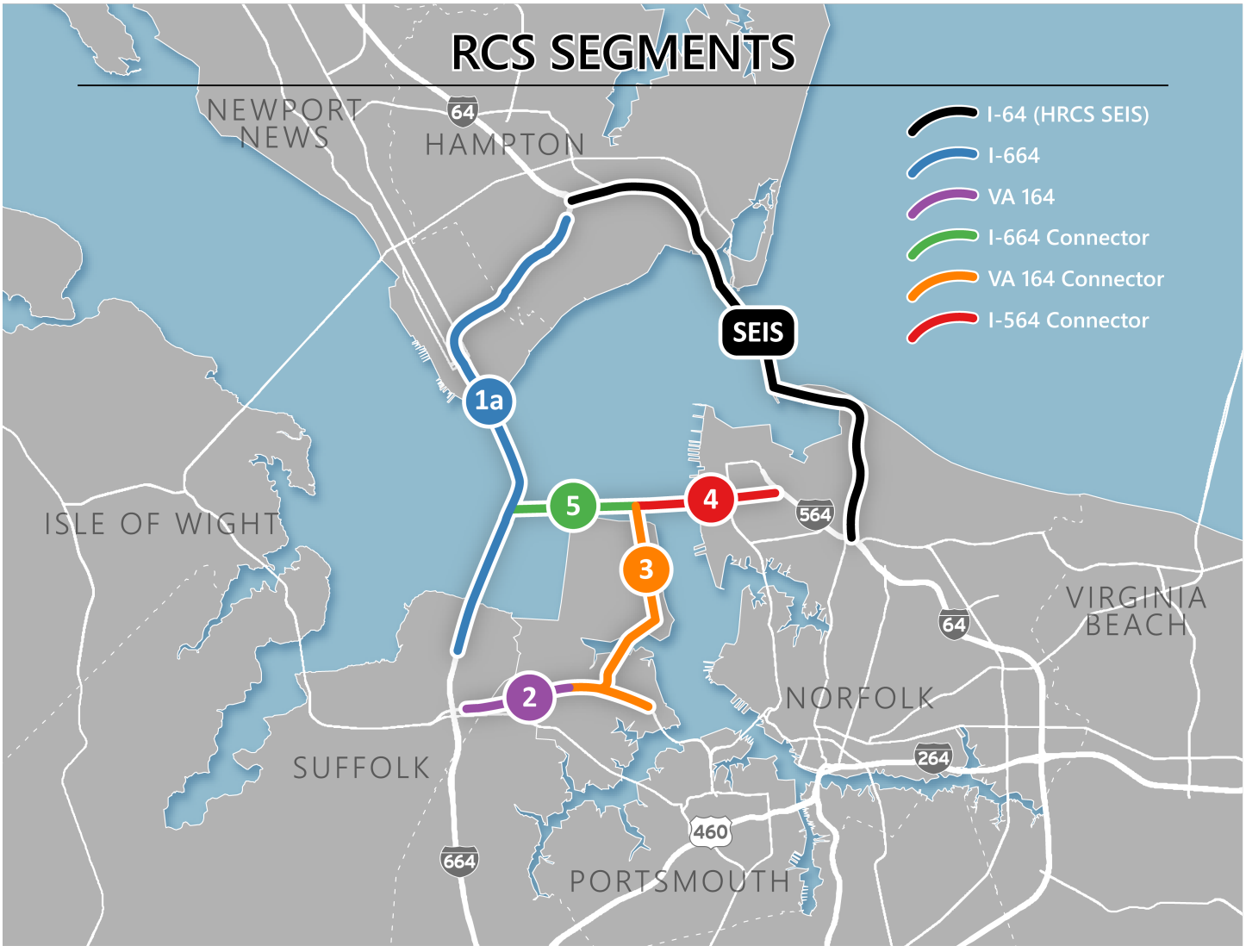
Segment 2 (VA 164 Widening): This segment of VA 164 would be widened to six lanes: three lanes in each direction. The widening would use existing right-of-way to the extent possible.

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

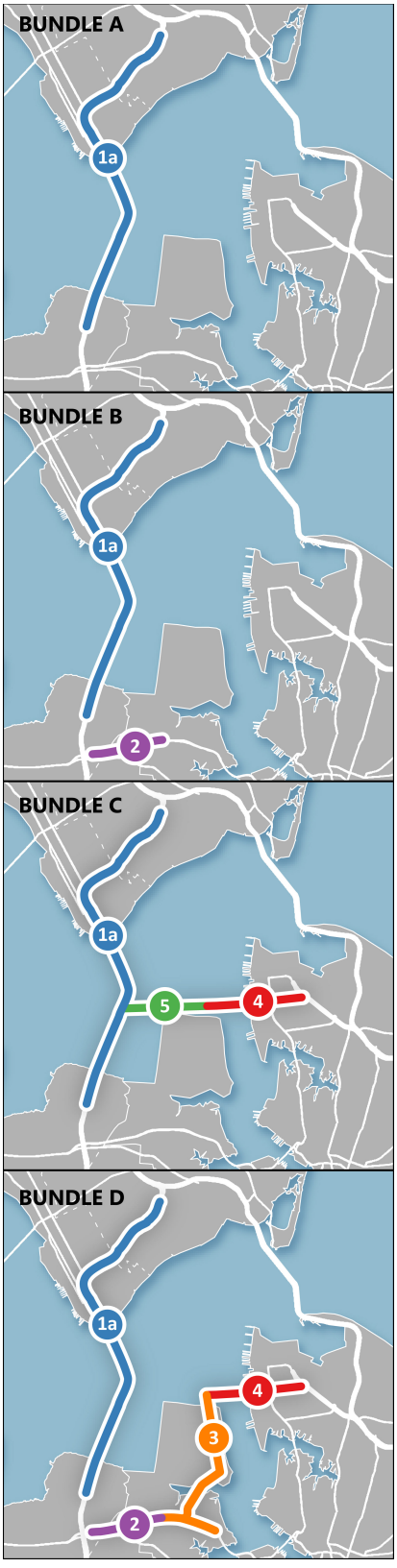
QUANTITATIVE EVALUATION

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.

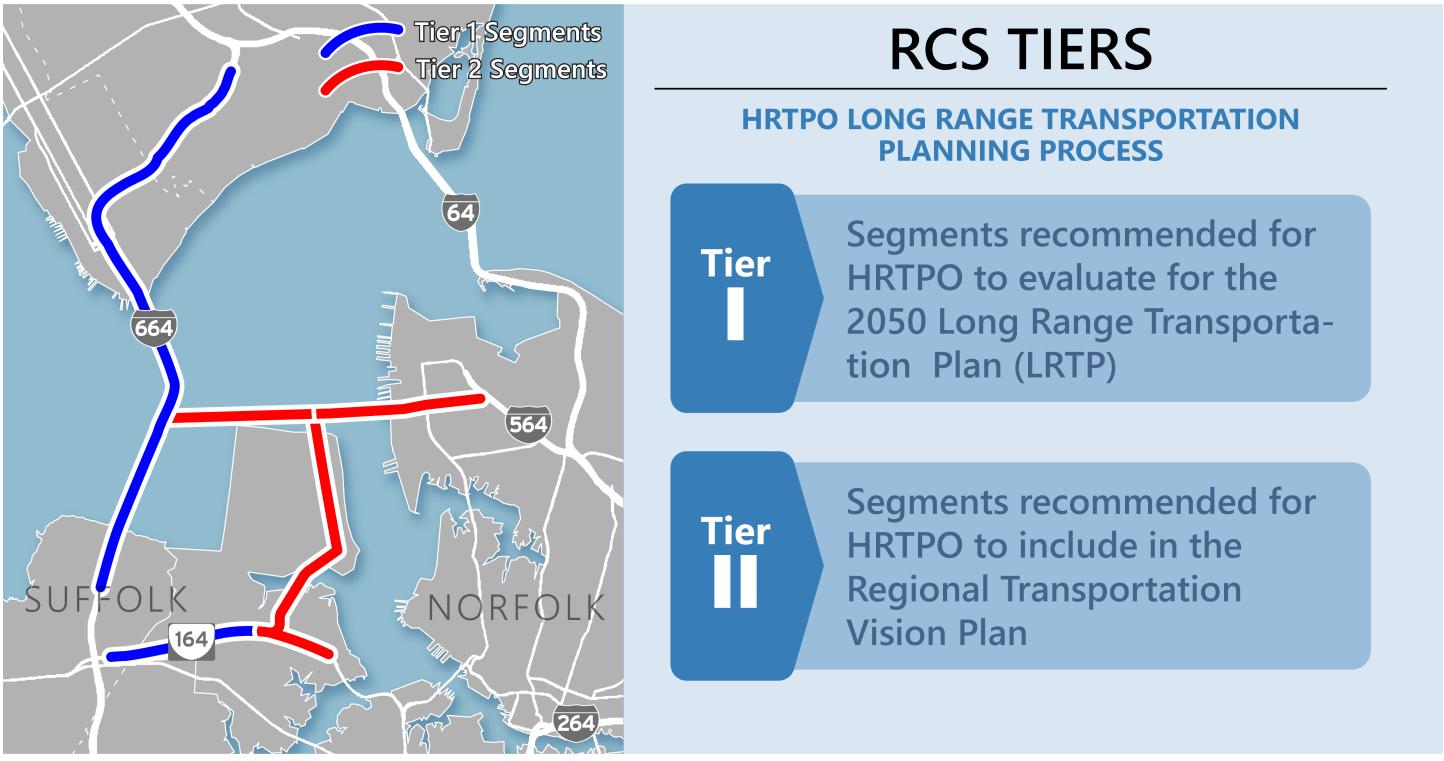
Figure 7. Summary of Quantitative and Qualitative Analysis

	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

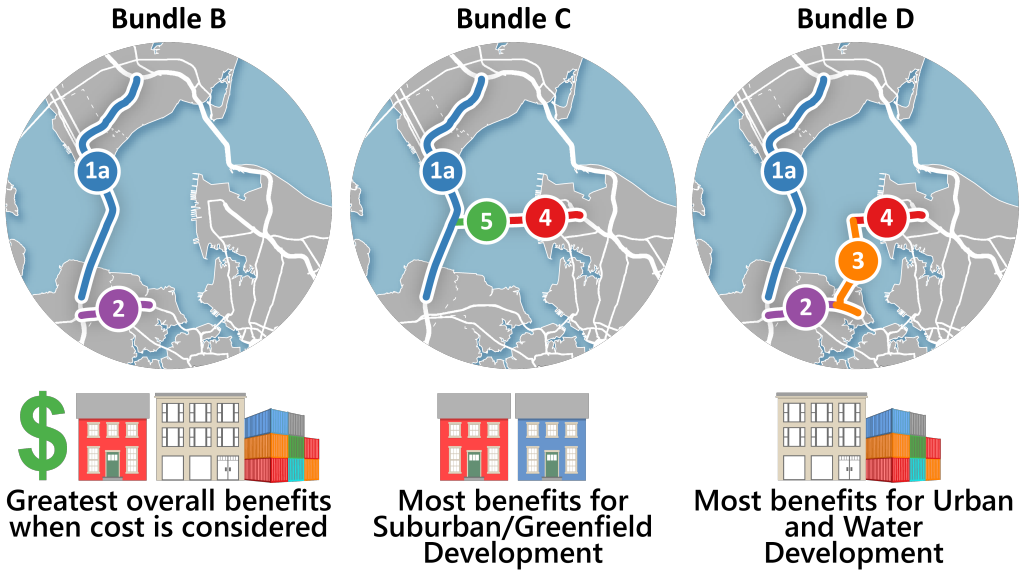
Bundles B, C, and D were coded into HRTPO's travel demand model and run through the three Greater Growth Scenarios as part of the stress test. All of the Greater Growth Scenarios project an increase in regional congestion if no actions are taken to accommodate this growth. The Greater Growth in Urban 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.

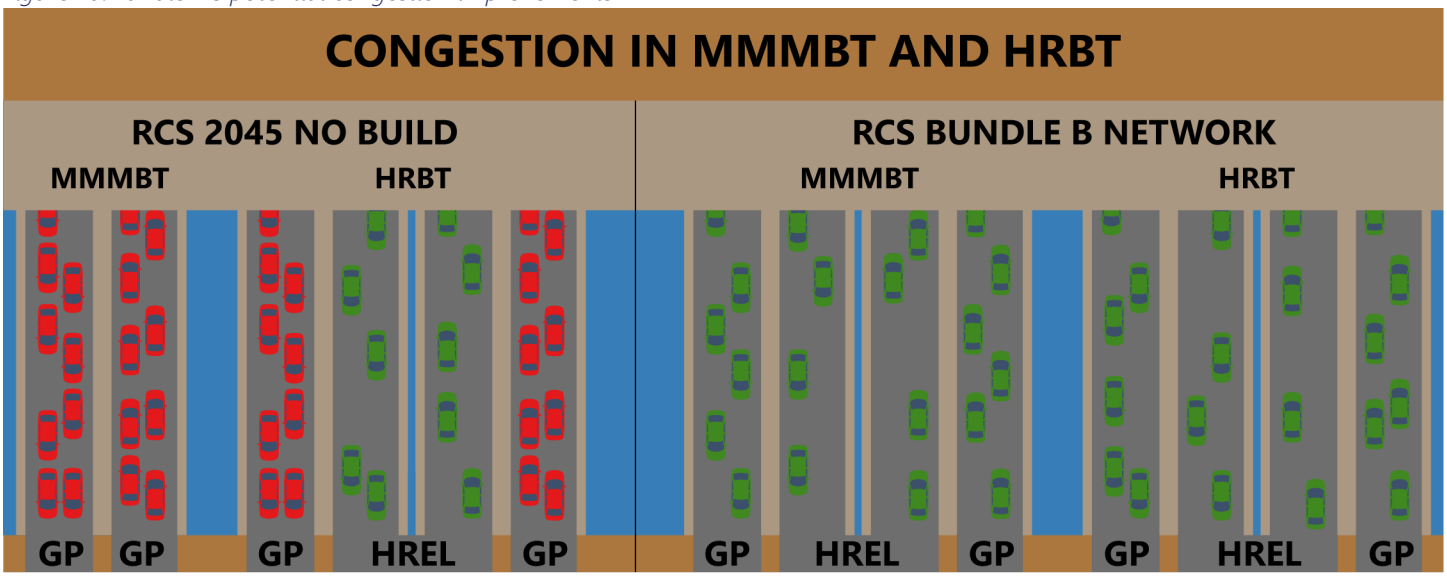
Figure 9. Results of the Congestion and Economic Stress Tests



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.

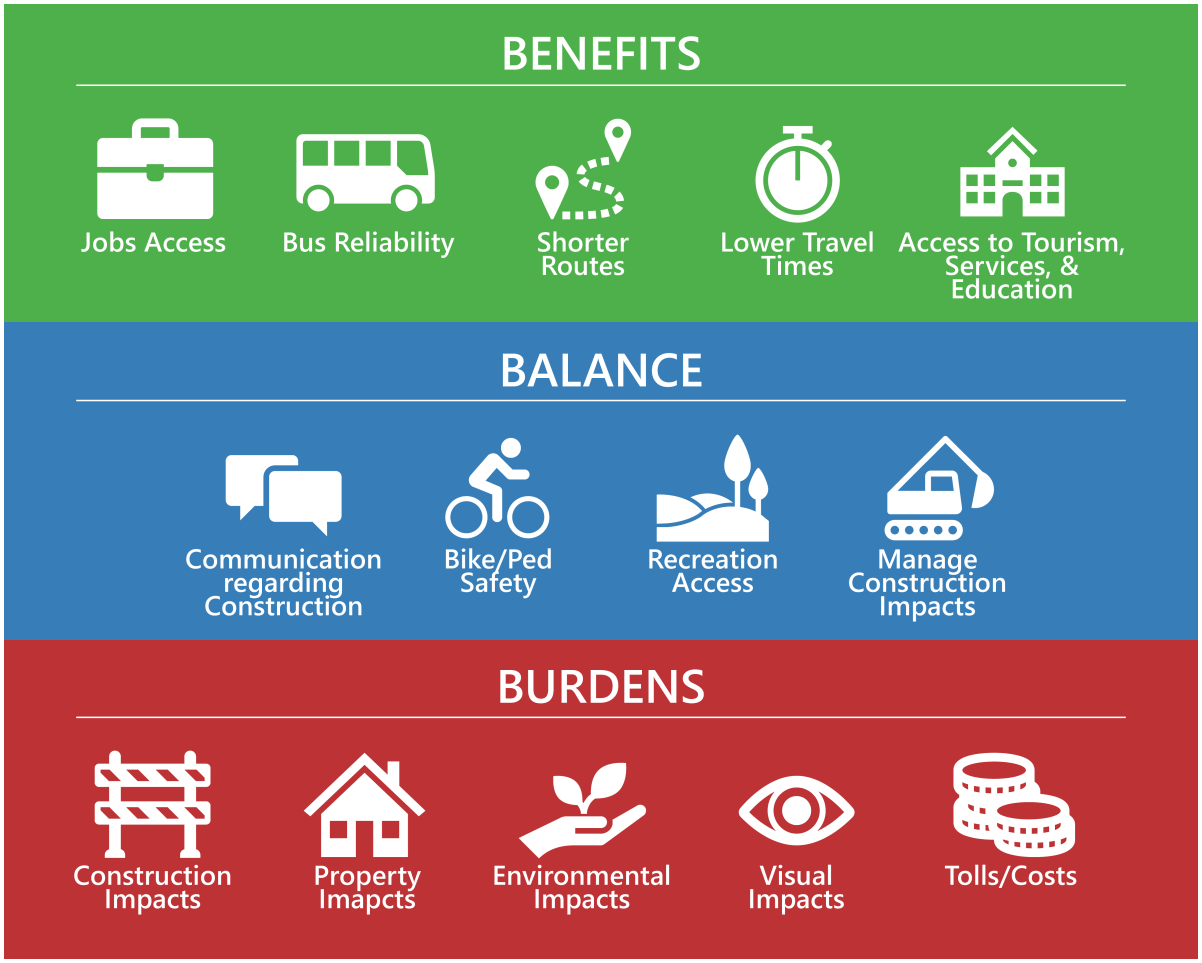
During the second part of the stress test in Phase III, the initial tiering recommendations were taken to the public in January-February of 2023 through engagement that included three pop-ups, four open house meetings, and an online open house. In these meetings, the analysis of permitting issues, readiness, 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

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

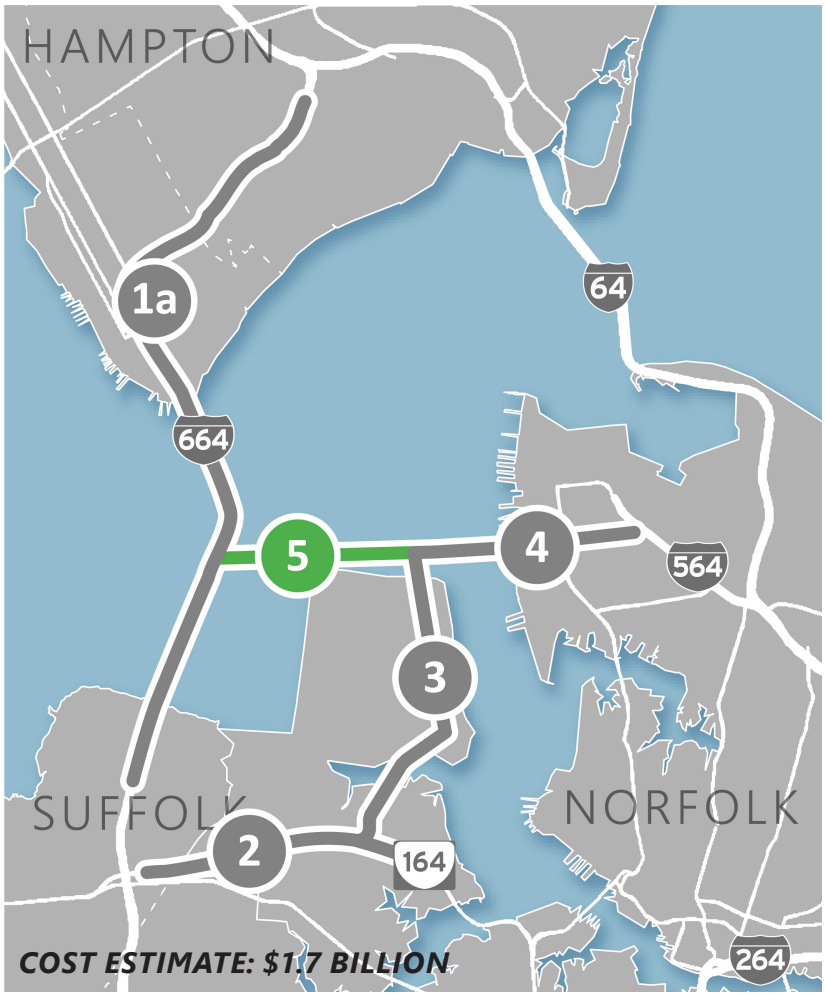
Construct a new four-lane highway, two lanes in each direction, from I-664 to a new mid-harbor island connection to I-564 Connector and/or VA-164 Connector.

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

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

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.

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

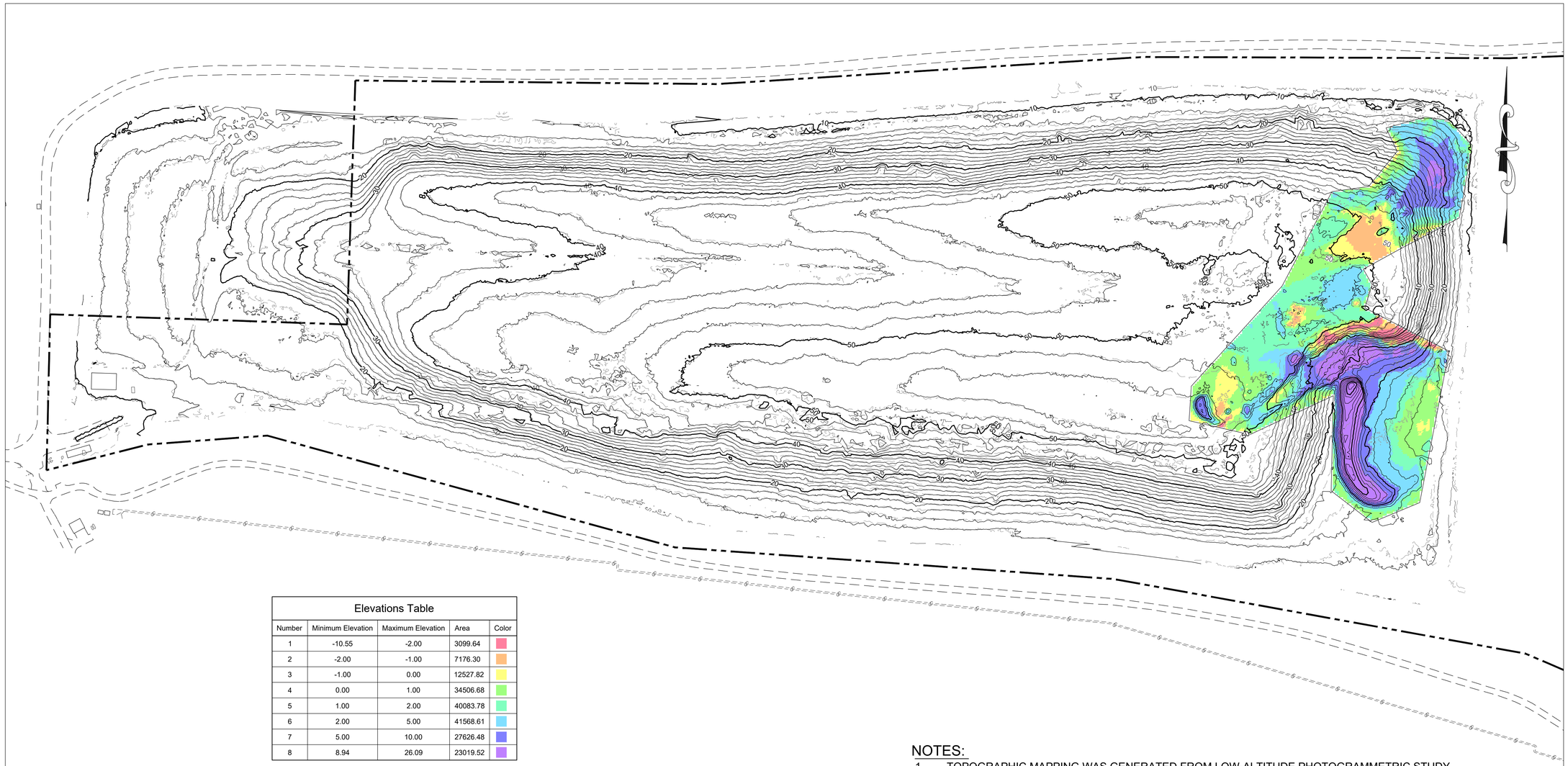
Thank you for this opportunity to serve you. We trust that you will find this information helpful. If you have any questions or need additional information, please do not hesitate to call me at (804) 355-4520.

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
Powered by partnership.
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

6/3/2010 8:47:56 AM L:\Portsmouth\dwg\2023 Volumes\2022 vs 2023.dwg Layout=Layout1

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.

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 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
Powered by partnership.

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 (SCO) 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 I-664	Segment 9 I-64 from I-664 to I-464	Segment 10 (SI) I-464 and I-564 Connector	Segment 10C I-464 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-464 Connector and VA 164 Connector Interchange	Segment 12C I-464 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 passes					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 UFC 60176, I-564 Air Terminal Interchange, which is east of Hampton Boulevard and identified in the 2040 Regional Long Range Transportation Plan.

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.