August 2, 2022

Memorandum #2022-108

TO: Regional Connectors Study Steering Committee and Working Group

BY: Camelia Ravanbakht, RCS Project Coordinator

RE: Regional Connectors Study Steering Committee and Working Group Joint Meeting – August 9, 2022
Please RSVP by COB Thursday, August 4, 2022

Attached is the agenda for the **Joint Steering (Policy) Committee and Working Group** meeting of the Regional Connectors Study (RCS) scheduled for **Tuesday, August 9, 2022, at 9:30 AM.**

This meeting will be held in person in Board Room A/B of the Regional Building located at 723 Woodlake Drive, Chesapeake.

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Attachments

RCS Steering Committee and Working Group Members

Voting Members:

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

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

Nonvoting Members:
Ivan Rucker (FHWA)
Rick Dwyer (HRMFFA)
Kevin Page (HRTAC)
Lesley Dobbins-Noble (USACE)
Col. Brian Hallberg (USACE)
George Janek (USACE)
Keith Lockwood (USACE)
Robert Pruhs (USACE)
Zack Hoekwater (USCG)
Gene Leonard (USCG)
Michael King (USN)
Pamela Phillips (VDOT)
Jennifer Salyers (VDOT)
Chris Hall (VDOT)
Stephen Edwards (VPA)
Barbara Nelson (VPA)

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

Project Coordinator:
Camelia Ravanbakht

Project Consultants:
Paul Prideaux
Lorna Parkins

Agenda

Regional Connectors Study

Joint Steering (Policy) Committee and Working Group Meeting

Tuesday August 9, 2022

9:30 AM

The Regional Building, Regional Board Room, 723 Woodlake Drive, Chesapeake, Virginia

1. **Call to Order**

2. **Welcome and Introductions**

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

4. **Minutes** (**Action Requested**)
   Summary Minutes from April 26, 2022, Joint Steering (Policy) Committee and Working Group Meeting

   Attachment 4 - Summary Minutes of April 26, 2022

   Recommended Action: **For Approval**
   Motion: Approve Summary Minutes of April 26, 2022, Meeting

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

   Ms. Lorna Parkins, Michael Baker International, RCS Project Co-Manager

   At the April 26, 2022, Joint Steering (Policy) Committee and Working Group Meeting, Ms. Parkins, MBI, RCS Project Co-Manager, reviewed the results of Step 1: Qualitative Evaluation of Mandated Segments and Segment Bundling. Following her presentation, the members were invited to submit their questions and comments to the consultant Team. All comments have been received and distributed to the Joint Committee members on July 7, 2022.

   Since that time, the Consultant Team has completed their responses to all the submitted comments. Ms. Parkins will brief the Joint Committee on this item.

Attachment 5 – Matrix of Comments and Responses

Recommended Action: **For Information and Discussion**

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

Lorna Parkins and Paul Prideaux, MBI, RCS Project Co-Managers

At the last Joint Meeting of April 26, 2022, Ms. Parkins (MBI), RCS Project Co-Manager, reviewed the results of Step 1: Qualitative Evaluation of Mandated Segments and Segment Bundling. She described the assumed characteristics of the five mandated segments analyzed, and presented qualitative findings and highlights for each segment in the following categories:

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

During the meeting, four Segment Bundles (A, B, C, and D) were recommended and approved by the Steering Committee and Working Group members. They are listed below and shown in Attachment 6A:

Bundle A – I-664 North of College Drive
Bundle B – I-664 North of College Drive and VA 164
Bundle C – I-664 North of College Drive, I-664 Connector, I-564 Connector
Bundle D – I-664 North of College Drive, VA 164, VA 164 Connector, I-564 Connector

Since the last Joint Meeting, the Consultant Team has used these four segment bundles to run the travel demand model for congestion benefits and economic impacts.

Ms. Parkins and Mr. Prideaux will brief the Joint Committee on the results of Step 2 congestion benefits and economic impact evaluations.

Attachments

- Attachment 6A - Maps of Four Segment Bundles
- Attachment 6B – Results of Congestion Benefits and Economic Impacts

Recommended Action: **For Information and Discussion**

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

Lorna Parkins, MBI, RCS Project Co-Manager

The scope of work and schedule for Phase 3 of the Regional Connectors was modified and approved by the Joint Committee in January 2022. The revised scope of work consists of a four-step process including public engagement throughout the study. The Engagement Plan includes website updates, two rounds of public meetings, and a Regional Connector Symposium.

The public meetings consist of in-person meetings, pop-up meetings, and an online open house on the Study website. The Consultant Team has developed an updated outreach plan and schedule for the Joint Committee's consideration reflecting the revised scope of work and incorporating the best practices for post COVID-19 engagement.

Ms. Parkins (MBI), RCS Project Co-Manager, will brief the Joint Committee on this item.

Attachment 7 – Updated Outreach Plan and Schedule

Recommended Action: **For Information and Discussion**

8. For Your Information

RCS Diary of Key Decision Points: 2017 to Present

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

Attachment 8 – RCS Diary

9. RCS Next Meeting: September 27, 2022 – 9:30 AM, Regional Building, Chesapeake

10. Other Items of Interest

11. Adjournment

Regional Connectors Study
Joint Steering (Policy) Committee & Working Group Meeting Minutes
April 26, 2022 – 9:30 am

Steering (Policy) Committee

The following voting members attended the meeting (alphabetically by city):
Rick West (CH)
Donnie Tuck (HA)
McKinley Price, Chair (NN)
Shannon Glover (PO)
Michael Duman (SU)
Robert Dyer (VB)

The following voting members were absent from the meeting (alphabetically by city):
Martin Thomas (NO)

Working Group

The following voting members attended the meeting (alphabetically by city):
Troy Eisenberger (CH)
Angela Rico (NN)
Debbie Mangiaracina (NO)
Carl Jackson (PO)
Jason Souders (SU)
Ric Lowman (VB)

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

Others

The following others attended the meeting (alphabetically by last name):
Rob Case (HRTPO)
Robert A. Crum, Jr. (HRTPO/HRPDC)
Lesley Dobbins-Noble (USACE)
Rick Dwyer (HRFFMA)
Kyle Gilmer (HRTPO)
George Janek (USACE)
Steve Jones (Naval Station Norfolk)
Claudette Lajoie (Solstice Environmental)
Chris Largy (Michael Baker Intl.)
Karen McPherson (McPherson Consulting)
Barb Nelson (VPA)
Keith Nichols (HRTPO)
Kevin Page (HRTAC)
Lorna Parkins (Michael Baker Intl.)
Pavithra Parthasarathi (HRTPO)
Paul Prideaux (Michael Baker Intl.)
Craig Quigley (HRMFFA)
Camelia Ravanbakht (RCS Independent Coordinator)
Dale Stith (HRTPO)
Eric Stringfield (VDOT)

1. Call to Order

Chair McKinley Price called the meeting to order at 9:30 a.m.

2. Welcome and Introductions

Mr. Robert Crum, HRTPO Executive Director, asked attendees to introduce themselves.

3. Public Comment Period

There were no public comments.

4. Minutes

The January 11, 2022 minutes were approved.

5. Regional Connectors Study (RCS): Qualitative Evaluation of Segments and Bundles

At the January 11, 2022 Joint Meeting, the Steering (Policy) Committee and Working Group approved a four-step process for moving forward. Ms. Lorna Parkins, RCS Co-Project Manager (Michael Baker Intl.), presented the results of Step 1 "Qualitative Evaluation of Mandated Segments and Bundling of Segments". Near the beginning of her presentation, she invited Dale Stith (HRTPO) to give a quick review of the HRTPO long-range planning process.

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

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

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

Ms. Parkins presented recommended bundling of segments (into four bundles) to be used in the measurement of benefits, e.g. congestion relief, economic impacts, etc.

Recommendations up for approval:

- Placing the southern portion of the I-664 segment in the study "baseline".
- Bundling segments into four bundles (A, B, C, and D, as described on the slides) for analysis of benefits.

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

6. For Your Information

The agenda referred to a Diary of key decision points included in the agenda packet.

7. RCS Next Meeting

Ms. Parkins stated that the next meetings of the Joint RCS Steering (Policy) Committee and Working Group will be held in June and July.

8. Other Items of Interest

There were no other items of interest.

9. Adjournment

The meeting was adjourned approximately at 10:40 a.m.

Number	Page	Section	Source	Comment	Response
1	22	VA 164	Carl Jackson - City of Portsmouth	"Constrained Work Areas High: "The widening shown in the SEIS is proposed to be into the median that includes two Commonwealth Railway railroad tracks. This poses a significant challenge to construction the widening and likely crash wall between the tracks and VA-164. Furthermore, should any widening occur along the outside shoulder to mitigate conflicts with the railroad, the corridor is constrained by adjacent residential and commercial parcels. Resolving the challenges involved with constructing toward either the railroad or adjacent residential and commercial properties will incur a significant impact to the timing of the project." The highlighted facts above should provide a more realistic assumption that widening VA 164 will have a high impact either widening to the median or on the outside.	Agreed. This is a constrained corridor that will be addressed as the planning process continues. More advanced conceptual design will be done later in the planning process that will further identify corridor constraints and impacts.
2	22	VA 164	Carl Jackson - City of Portsmouth	"Local Government or Agency Minimal/No impacts for local entities have been identified at this time" · Why are Local Government Agency constraints considered "minimal" if Portsmouth is opposed to this? Granted the roadway is owned and maintained by the state but I can't imagine VDOT or FHWA moving forward with a project with strong local opposition. This constraint should be considered 'High". Our opposition is listed (Page 51 "Documented opposition from stakeholders Portsmouth")	The qualitative rating for the the VA 164 segment will be changed to reflect Portsmouth's concerns. Portsmouth will be included in the discussion as the planning and design process outreach, with opportunities to raise, raise, document and resolve concerns. This inclusive process including Portsmouth will continue as detailed planning proceeds at a later date.
3	23	VA 164	Carl Jackson - City of Portsmouth	"Environmental Justice (low income and minority communities) Moderate: Moderate Expansion to the eastbound side of VA-164 may require a portion of easement from Ebony Heights Park; however, further detailed design may avoid and/or minimize any potential impacts. No residents or neighboring communities would be relocated." · Where is the detailed design showing no residents will be relocated? · It should also be noted that Impacts to Ebony Heights Park care significant as City Council has indicated that recreation is a priority and enhancing recreational opportunities is also a key part of the City Manager's holistic crime reduction strategy. · Any project that takes away from recreational opportunities within Portsmouth communities will be met with resistance.	Noted. We have seen that Ebony Heights Park is both a recreational and hallowed ground, and will pay close attention to this park as planning and design progresses by the project owner. More advanced conceptual design will be done later in the planning process. At this first tier planning stage, it does not appear that any residential structures fall within the preliminary and developing Limits of Disturbance. The planning process is still in its early stages, and will continue to solicit, document and resolve comments and concerns about relocation, displacement and property from Portsmouth in later stages of planning and design.

Number	Page	Section	Source	Comment	Response
4		VA 164	Carl Jackson - City of Portsmouth	"Communities within 500 feet of the proposed construction to the north and south of the corridor are majority minority with over 25% of households in poverty. 102 houses 58 2-story apartments, 44 garden apartment blocks, and 3 churches." · This should be a non-starter for any roadway project that truly acknowledges Environmental Justice.	Noted. Communities within 500 feet of the preliminary Limits of Disturbance for VA 164 are diverse racially and in income. As this and future planning and project development processes continue, outreach, partnering and collaboration with neighboring communities will engage these communities to mitigate any potential impacts.
5	39	VA 164	Carl Jackson - City of Portsmouth	"VDEQ Virginia Construction General Permit Minimal Assumption that all required stormwater controls and requirements pursuant to this permit will be obtained and adhered to. It is assumed for this segment that all additional stormwater controls would be located within the boundaries of the LOD." · The limits of disturbance for VA-164 do not include any space for stormwater management. How is this any different for the RCS? Where is this accounted for in the analysis?	At this early planning stage, it is unknown what additional impervious surface will be constructed. The future design process will develop better estimates of impervious surface burden to determine what best management practices to implement, and where, in the future timeframe that is indicated in the RCS segment tiering recommendation.
6		VA 164	Carl Jackson - City of Portsmouth	In summary, we believe that the analysis of VA 164 needs to be done with the assumptions of the SEIS and showing an outside widening which will reveal higher impacts to residential and commercial businesses and give the alternative a HIGH impact rating overall. This will provide a more realistic comparison to the other alternatives. The analysis for the VA 164 Connector showing HIGH impact ratings for almost every category is more consistent with the kind of analysis that should be done with VA 164.	Noted. The planning process is in its early stages. We appreciate your comments, as they provide us the opportunity to understand, respond, and work with Portsmouth to reach the development outcome that is best for the communities neighboring VA 164 , Portsmouth, and the region. The qualitative analysis presented in May of 2022 balanced widening to the inside of existing VA 164 per input from key stakeholders, and the next step of the quantitative analysis is further refining the design of the corridor for impact analysis.
7		VA 164 Connector	D. Dees - US Navy	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.	Understood. As a result of this required specification, the RCS Team is developing the VA 164 connector corridor with an 1,800-foot distance from the planned refueling in addition to a visual barrier in future design iterations.

Number	Page	Section	Source	Comment	Response
8		VA 164 Connector	D. Dees - US Navy	1.a. As proposed the l-164 Connector roadway is adjacent to the comer 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.	Understood. As a result of this required buffer, the RCS Team is developing the VA 164 connector corridor with an 1,800-foot distance from the planned refueling in addition to a visual barrier in future design iterations.
9		VA 164 Connector	D. Dees - US Navy	1.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.	Understood. The RCS Team is developing the VA 164 connector corridor with an 1,800-foot distance from the planned refueling in addition to a visual barrier in future design iterations.
10		VA 164 Connector	D. Dees - US Navy	1.c. The current proposed 1-164 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.	Understood. The RCS Team is developing the VA 164 connector corridor with an 1,800-foot distance from the planned refueling in addition to a visual barrier in future design iterations.
11		VA 164 Connector	D. Dees - US Navy	1.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:	The RCS evaluation team acknowledges that strategic importance of Craney Island within the context of Naval Station Norfolk and are staying in communication with stakeholders like the Navy throughout the process to ensure that the planning process evolves into a design and construction process that serves both the strategic and regional needs of the Hampton Roads region.
12		VA 164 Connector	D. Dees - US Navy	1.d.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.	Understood. The RCS report in May of 2022 was a qualitative assessment, and the RCS team is now working on refining the quantitative understanding of traffic demand modeling and design needs. The RCS team and the agencies that carry this planning process forward to design, construction and operations will work in partnership with the Navy to develop, design, and construct the VA 164 connector alignment, roadway, and facilities in a way that does not impair the planned functions of Craney Island.

Number	Page	Section	Source	Comment	Response
13		VA 164 Connector	D. Dees - US Navy	1.d.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.	Understood. The RCS report in May of 2022 was a qualitative assessment, and the RCS team is now working on refining the quantitative understanding of traffic demand modeling and design needs. The RCS team and the agencies that carry this planning process forward to design, construction and operations will work in partnership with the Navy to develop, design, and construct the VA 164 connector alignment, roadway, and facilities in a way that does not impair the planned functions of Craney Island.
14		VA 164 Connector	D. Dees - US Navy	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.	Understood. The RCS report in May of 2022 was a qualitative assessment, and the RCS team is now working on refining the quantitative understanding of traffic demand modeling and design needs. The RCS team and the agencies that carry this planning process forward to design, construction and operations will work in partnership with the Navy to develop, design, and construct the VA 164 connector alignment, roadway, and facilities in a way that does not impair the planned functions of Craney Island.
15		I-564 Connector	D. Dees - US Navy	2. The proposed 1-564 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 1-564 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.	Understood. It should be noted that the fueling facility referred to in this comment is within 300 feet of the existing Intermodal connector, which is currently planned to have the same alignment as the proposed I-564 connector. There are currently walls separating the Navy's fuel facility from the existing Intermodal connector. To satisfy the 1,800 foot the setback from the fueling facility would require a significant re-evaluation of the I-564 connector by FHWA, VDOT, Norfolk, and Port of Virginia. At the time that the segment design is developed further the appropriate mitigation will be determined in consideration of the security protocols in place at that time.

Number	Page	Section	Source	Comment	Response
16		I-564 Connector	D. Dees - US Navy	3. Based on the information available in the Phase 3 Qualitative Analysis for 1-564 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.	Understood. At the end of the Phase 3 (Step 2) Quantitative analysis, which we are conducting now, we will recommend tiering of the segments into three tiers that correspond to timing of/readiness for implementation, with Tier 1 the most ready. As the project moves into design and construction, the project owner will be able to make decisions about equipment height and clearance to accommodate the Navy's operational needs in Norfolk. The RCS team will not be the project owner in the final stages of planning, design and construction.
17		I-564 Connector	D. Dees - US Navy	4. The proposed 1-564 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 1-64 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 lA 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.	Understood. As the project moves into- design and construction, the project owner will be able to make decisions about equipment height and clearance to accommodate the Navy's operational needs in Norfolk. The RCS team will not be the project owner in the final stages of planning, design and construction.

Number	Page	Section	Source	Comment	Response
18		I-564 Connector	D. Dees - US Navy	5. As reflected in the Phase 3 Qualitative Analysis drawing and cross section for the 1-564 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 1-564 Connector are compatible with current missions and operations adjacent to the southern boundary of Naval Station Norfolk.	Understood. At the end of the Phase 3 (Step 2) Quantitative analysis, which we are conducting now, we will recommend tiering of the segments into three tiers that correspond to timing of/readiness for implementation, with Tier 1 the most ready and Tier 3 the least ready. At the time of project design and construction, the project owner will be able to make decisions about equipment height and clearance to accommodate the Navy's operational needs in Norfolk. At this early planning stage of the segment tiering process the Regional Connectors study is not considering an elevated section between the end of the existing Intermodal connector and the end of Norfolk International Terminal Pier 3. Instead, the I-564 connector is planned to be underground along the length of existing NIT Pier 3 and tunnel under the Elizabeth River shipping lanes to surface at a bridge to the west of the NIT and to the north of Craney island. It may be possible to tunnel the I-564 connector further East approaching the Hampton Boulevard underpass, but that design will involve additional costs.
19		I-564 Connector	D. Dees - US Navy	6. Based on proposed alignment of 1-564 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 1-564 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 l 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 onloading 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.	Understood. The NIT pier alignment that the RCS alternatives is currently planning on using is nearest to Naval Station Norfolk's Pier 1. Evolving security and visibility technology may resolve these security concerns as the I-564 corridor progresses from planning to design. Evolving transportation technology may change the corridor design as well. Horizontal and vertical clearances required by the Navy for essential security will be considered in the future plannig and design process.

Number	Page	Section	Source	Comment	Response
20		I-564 Connector	D. Dees - US Navy	7. The water area north of the proposed 1-564 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.	Understood. The boundaries of Naval Station Norfolk as codified in the CFR begin along the northern edge of NIT pier 3. The RCS study does not plan nor contemplate exceeding the northern edge of Pier 3 of the NIT during the construction or operations of the I-564 connector. The RCS team will plan for and produce cost estimates to account for the need for vetting and hiring personnel with sufficient security clearances to work in the vicinity of Norfolk Naval Station Pier 1.
21		I-564 Connector	D. Dees - US Navy	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.	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.
22		I-564 Connector	D. Dees - US Navy	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.	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.
23		I-564 Connector	D. Dees - US Navy	10. 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.	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.
24		VA 164 Connector	D. Dees - US Navy	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.	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.

Number	Page	Section	Source	Comment	Response
25		I-564 Connector	D. Dees - US Navy	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 1-564 and the SPUI at "D'' Ave, and is relevant to the interchange spacing in the corridor.	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth entities such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.
26		I-564 Connector	D. Dees - US Navy	13. Based on the current alignment of I-564 Connector it appears modifications may be required to the recent finalized 1-564 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	Correct. The Regional Connectors Study is a conceptual planning stage of design. The future stages of the project will be carried forward by regional or commonwealth such as HRTAC and VDOT. They will maintain communication and coordination with stakeholders and decisionmakers throughout the planning, design, and construction process.
27		VA 164 Connector	Lesley Dobbins-Noble Chief, Operations Branch U.S. Army Corps of Engineers, Norfolk District	April 29, 2022 - Provided federal real estate GIS boundary of Craney Island Dredged Material Management Area (CIDMMA)	Received corrected GIS boundary file and included in project mapping.
28		VA 164 Connector	Lesley Dobbins-Noble Chief, Operations Branch U.S. Army Corps of Engineers, Norfolk District	May 5, 2022 - Reiterate that the concerns expressed in the 2016 letter from previous Norfolk District Corps of Engineers Commander, COL Jason Kelly, are still valid - Of utmost concern for the Norfolk District Operations Branch at this time are the potential impacts associated with the 164 Connector segment. - The raised roadway that transits alongside the eastern edge of Craney Island is of major concern to the Operations Branch as we routinely utilize the eastern side of Craney Island to access our rehandling basin and moor Corps and contractor vessels at the bulkhead. The raised roadway poses an access concern due to the restriction of passage of government vessels equipped with cranes, as they require greater overhead clearance.	Understood. We will continue to work with the COE to understand the operations requirements for the Craney Island Dredge Disposal Facility and incorporate all requirements into the planning and design. The RCS team will not be the project owner in the final stages of planning, design and construction.

Attachment 5

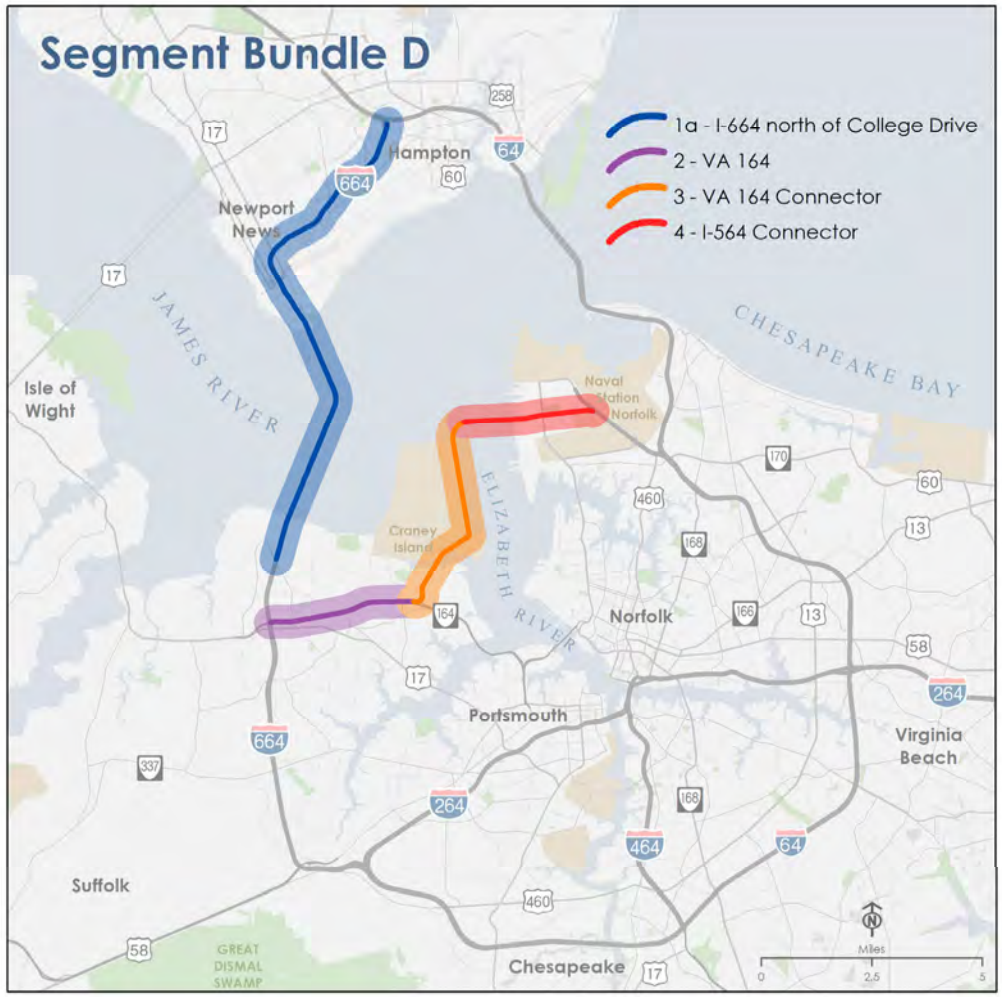
Number	Page	Section	Source	Comment	Response
29		VA 164 Connector	Lesley Dobbins-Noble Chief, Operations Branch U.S. Army Corps of Engineers, Norfolk District	5/5/2022 - As you are aware, the Norfolk District Corps of Engineers will be required to assess any proposed roadway alignment through the Section 408 evaluation process. During that review, district staff will determine whether the proposal poses a detrimental effect on our approved civil works projects.	Understood. Section 408 permit requirements for the Craney Island Dredge Disposal Facility will be taken into consideration during the permitability review efforts.
30		VA 164 Connector	George Janek Norfolk District Regulatory Branch (May 3, 2022)	June 2016 letter which outlines some of the Corps' concerns with transportation segments which may affect Craney Island and federal navigation channels	Comment noted. All concerns addressed in the June 2016 letter have been incorporated into the permitability review tables for each of the segments. Particular of note is the Craney Island Dredge Disposal Facility Section 408 status and new GIS boundary received May 2022.
31		RCS	George Janek Norfolk District Regulatory Branch (May 3, 2022)	Each of the six mandated segments, and "bundled" combinations of these segments, must have independent utility and can only be permitted if they are separate and complete projects with logical termini.	Comment noted. The first tier review only included a segment evaluation while the second level of review is including segments joined into logical bundles for evaluations with logical termini.
32	8	RCS	George Janek Norfolk District Regulatory Branch (May 3, 2022)	As part of the Mitigation of Environmental Factors analysis, you should consider whether there are tidal and/or nontidal compensation credits available from approved commercial banks.	Comment noted. At this time in the evaluation, we only have rough order of magnitude impacts numbers for tidal and nontidal US Waters resources. As detailed design continues for specific bundles, more detailed impact numbers will be available to the project owner and coordination on available credits with approved commercial banks will be completed. Final planning, design, and construction will continue under the project owner, after the term of the RCS team.
33	9	RCS	George Janek Norfolk District Regulatory Branch (May 3, 2022)	408, 404, and Section 10 permits are all related. If there are 408 issues with a segment, there will likely be permitting issues as well.	Comment noted and consultant agrees.
34	19	RCS	George Janek Norfolk District Regulatory Branch (May 3, 2022)	Segment 1A: Even if there are no wetland impacts from this alternative, potential impacts from bridges, tunnels, and island configurations could be significant.	Comment noted. All segments have undergone an initial environmental review with additional evaluations occurring as more detailed design information becomes available.

Number	Page	Section	Source	Comment	Response
35	24	VA 164 Connector	George Janek Norfolk District Regulatory Branch (May 3, 2022)	Segment 3: Concur with this statement: “Determining the suitability of construction over/through the CIDMMA facility at the end of its lifespan will be a significant challenge and will require significant resources to resolve.” Until 408 issues associated with CIDMMA are resolved, Corps Regulatory will be unable to issue a permit.	Comment noted and consultant agrees.
36	25	VA 164 Connector	George Janek Norfolk District Regulatory Branch (May 3, 2022)	Segment 3: Wetland impacts are projected to be 31.3 acres. This will require either the purchase of credits or remediation. What does “remediation” mean? The Corps usually requires wetland credits to offset unavoidable wetland impacts, and depending on the type of wetland impacts (tidal vs. nontidal) there may be a shortage of available credits in this watershed.	Comment noted. At this time in the evaluation, we only have rough order of magnitude impacts numbers for tidal and nontidal US Waters resources. As detailed design continues for specific bundles, more detailed impact numbers will be available to the project owner and coordination on available credits with approved commercial banks will be completed. Final planning, design, and construction will continue under the project owner, after the term of the RCS team.
37	26	I-564 Connector	George Janek Norfolk District Regulatory Branch (May 3, 2022)	Segment 4: Even though there may not be wetland impacts associated with the I-564 Connector, mitigation may be required for impacts to EFH, shallow water areas, and other impacts to subaqueous bottom.	Comment noted. At this time in the evaluation, we only have rough order of magnitude impacts numbers for tidal and nontidal US Waters resources. As detailed design continues for specific bundles, more detailed impact numbers will be available to the project owner and coordination on available credits with approved commercial banks will be completed. Final planning, design, and construction will continue under the project owner, after the term of the RCS team.
38		RCS	George Janek Norfolk District Regulatory Branch (May 3, 2022)	Environmental justice impacts of all segments must be identified early and coordinated with affected communities.	Comment noted. All segments have undergone an initial environmental justice review with additional evaluations occurring as more detailed design information becomes available.
39	39	VA 164 Connector	George Janek Norfolk District Regulatory Branch (May 3, 2022)	Segment 3: This segment probably has “high” 408 issues, not moderate, due to its proximity to CIDMMA.	Comment noted. Craney Island Dredge Disposal Facility Section 408 status and new GIS boundary received May 2022. The status of this segment will be changed for ongoing and future tiering coordination.
40	61	I-664 N. of College Dr.	George Janek Norfolk District Regulatory Branch (May 3, 2022)	re: Colonial Waterbird nesting habitat: Anticipate strong interest in and public objections to impacts to colonial nesting birds. Mitigation requirements for displaced birds may be required under Migratory Bird Treaty Act.	Comment noted. Consultant will make note of all comments during the public involvement stage of this project.

Number	Page	Section	Source	Comment	Response
41	62	I-664 N. of College Dr.	George Janek Norfolk District Regulatory Branch (May 3, 2022)	benthic species: Pilings and riprap from new bridge and tunnel structures are probably not sufficient to offset impacts to benthic species. This has not been considered compensation on other large projects.	Comment noted. No specific measures can be determined at this level of engineering design.
42	62	I-664 N. of College Dr.	George Janek Norfolk District Regulatory Branch (May 3, 2022)	benthic species: Construction BMPs like TOYR, dredging BMPs, etc. may help mitigate turbidity impacts. However, “compliance with the VESCH” and “strict adherence to erosion and sediment control measures” are statements that are too general. These practices are intended for upland construction and stormwater control and generally don’t apply to marine construction. It’s not too early to start exploring more project-specific measures to control turbidity. These types of vague general statements are used throughout this section of the document.	Comment noted. No specific measures can be determined at this level of engineering design.
43	64	I-664 N. of College Dr.	George Janek Norfolk District Regulatory Branch (May 3, 2022)	Potential Future Changes in Policy Issues: Impacts to shallow water habitat (are less than 2 meters deep) may require in-kind compensation.	Comment noted.
44	70	VA 164	George Janek Norfolk District Regulatory Branch (May 3, 2022)	Environmental Justice: EJ is more than relocating residents or affected populations. Noise and air quality impacts must also be taken into account and coordinated early with stakeholders and affected communities.	Comment noted. All segments have undergone an initial environmental justice review with additional evaluations occurring as more detailed design information becomes available. At this qualitative stage, noise and air quality were not specifically measured or modeled, but described generally as potential impacts. Noise wall information will be incorporated into the more detailed planning and design reviews. As this and future planning and project development processes continue, outreach, partnering and collaboration with neighboring communities will engage these communities to mitigate any potential impacts.
45	78	I-564 Connector	George Janek Norfolk District Regulatory Branch (May 3, 2022)	Colonial Waterbird nesting habitat: The use of bird dogs to discourage bird nesting within the LOD may be an effective deterrent but will not be considered as a mitigation measure for bird nesting impacts.	Comment noted. Additional mitigation measures for bird nesting impacts will be evaluated as more detailed design allows for the determination of potential bird nesting impacts. The RCS team will not be the project owner in the final stages of planning, design and construction.

ATTACHMENT 6A

Segment 1b (I664 South of College Drive) included in the 2045 RCS Baseline Network



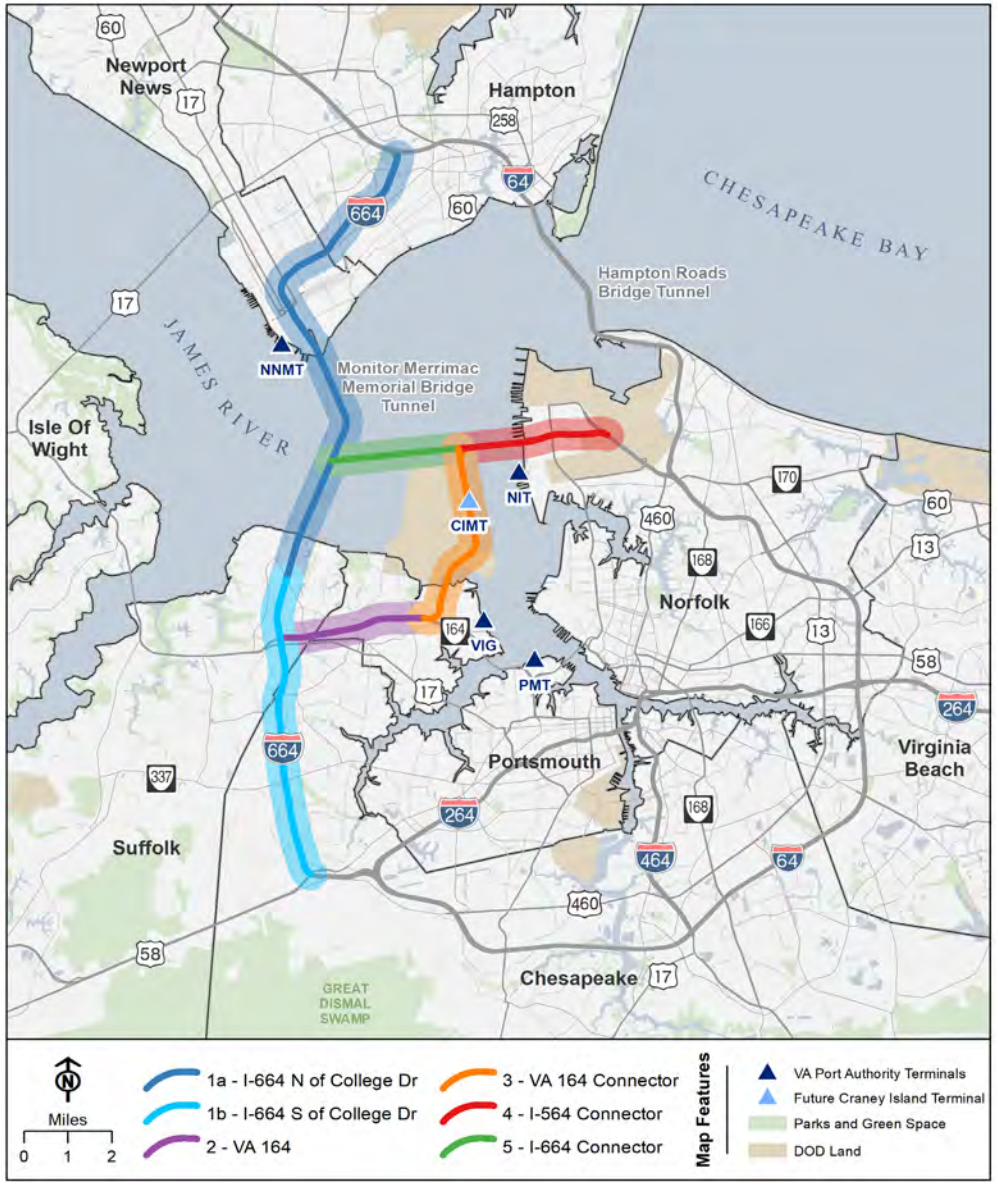
Segment 1b (I664 South of College Drive) included in the 2045 RCS Baseline Network

ATTACHMENT 6B

- Summary Congestion Results
  - Regional Results
  - Key Facilities

- Summary Economic Results

Mandated Segments



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REGIONAL CONNECTORS STUDY

SUMMARY CONGESTION ANALYSIS RESULTS

Michael Baker INTERNATIONAL

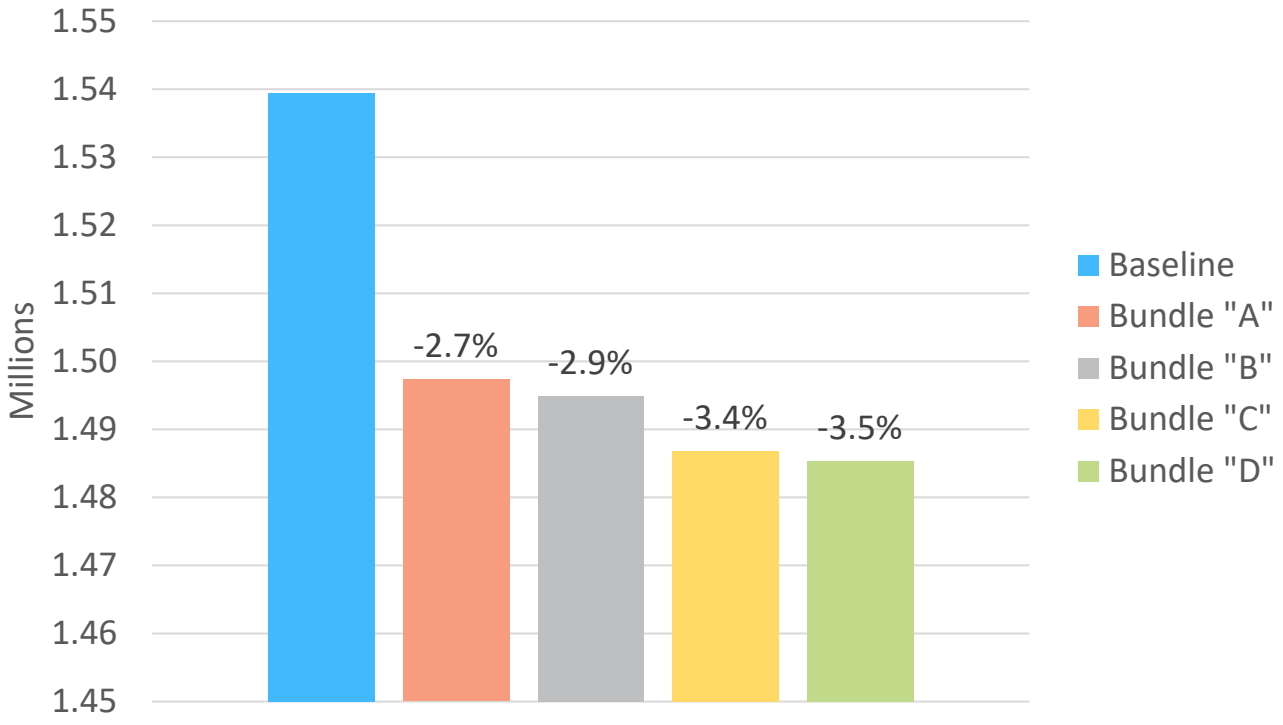
Congestion Analysis Takeaways – Regional Results

- Total regional travel levels (vehicle miles of travel - VMT) are similar for the baseline and all four bundles, but vehicle hours of travel are reduced with all four bundles. This is a result of reduction of congestion.
- Additional harbor crossing capacity reduces travelers' delay (the additional time spent driving due to congested conditions) by 10-14% daily and 12-17% in the peak periods relative to the 2045 baseline.
- Bundles C and D have the greatest cumulative effect on congestion.

Cost estimates for segments (next meeting) will bring greater insight on cost-effectiveness of the congestion benefits

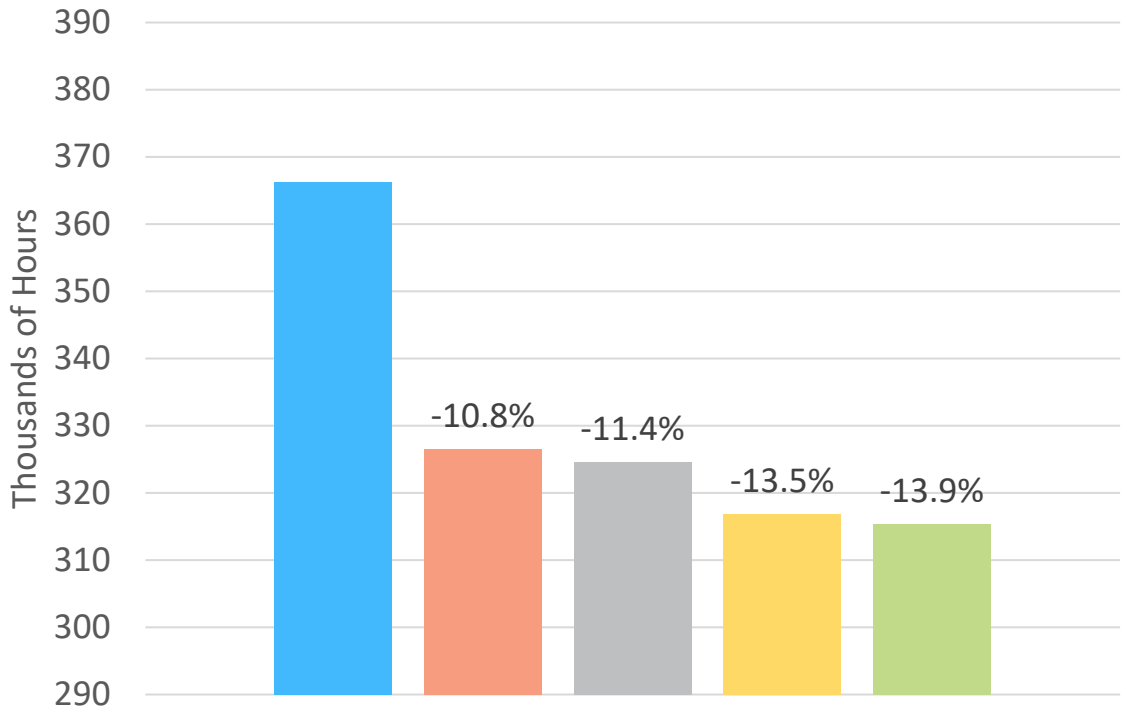
Regional Results of Congestion Analysis

2045 Regional Vehicle Hours of Travel



Vehicle hours of travel are the cumulative time of travelers spent on all the regional roadways

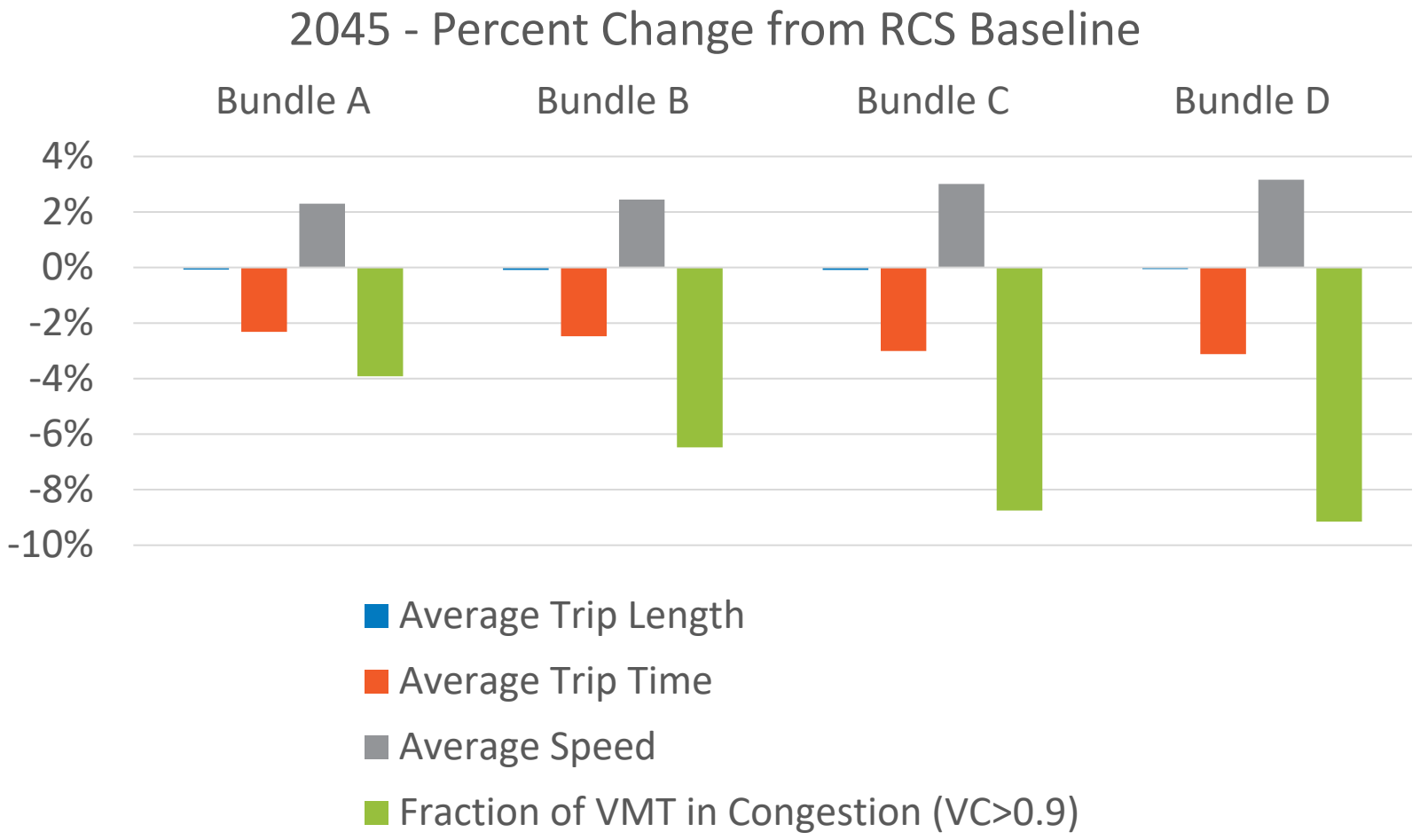
2045 Regional Delay



Delay is the amount of vehicle hours of travel spent due to traffic congestion

Congestion Analysis Takeaways – Regional Results

- Average trip length varies little
- Average trip time decreases
- Average speed increases
- Share of congested travel decreases significantly, leading to improved reliability



Congestion Analysis Results – Key Facilities

- Hampton Roads Bridge Tunnel sees some relief from the bundles
  - Reduced peak period volumes and increased speeds in managed lanes; less overall benefit to the general-purpose lanes
- Comparing the 2045 Baseline and Bundles, Bundle A results in the highest daily volumes across the three existing North-South harbor crossings while Bundle D results in the lowest volumes.
- Midtown and Downtown tunnels have slightly higher daily volumes with Bundles A and B, and 5-6% lower volumes with Bundles C and D.
- Hampton Boulevard has lower daily volumes in Bundles C and D compared to the 2045 baseline, providing some congestion relief.

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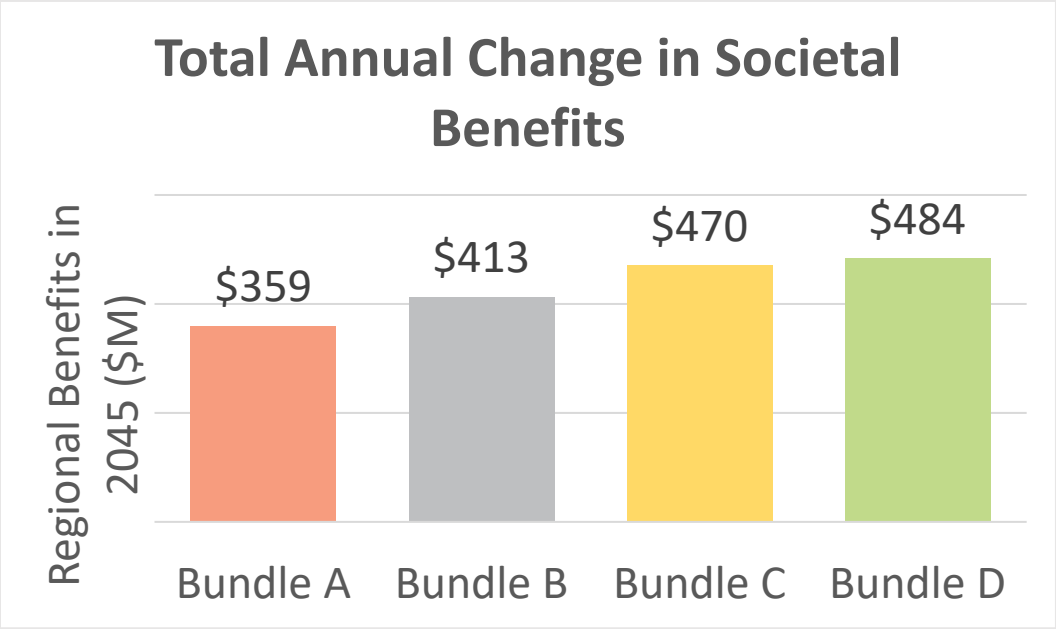
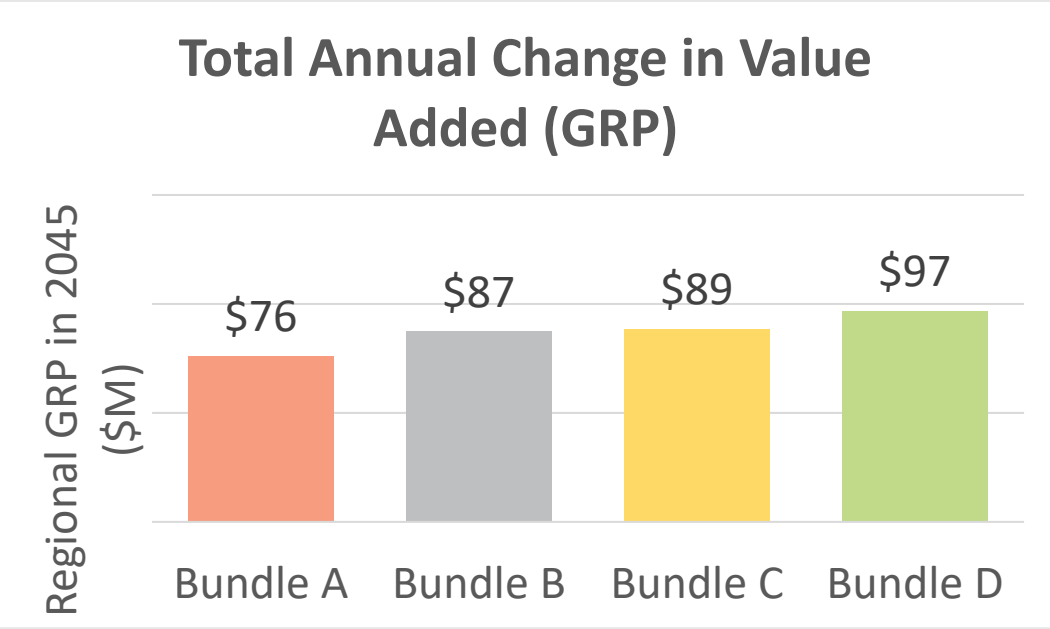
REGIONAL CONNECTORS STUDY

SUMMARY ECONOMIC RESULTS

Michael Baker INTERNATIONAL

Regional Economic Results in 2045
(Annual, $M, incremental effects relative to 2045 baseline)





- Benefits dominated by time and reliability savings
- Very minimal effects related to VMT reductions (emissions, safety, vehicle operating costs)

- Greatest incremental benefits and economic impacts from Segment 1A in Bundle A
- Greatest overall economic value from Bundle D

GRP – Gross Regional Product (total value of production minus intermediate goods and services). The 2020 GRP was $154 B.

Attachment 7

HRTPO Regional Connectors Study Public Meeting Proposal

July 28, 2022

In consideration of the changes to the HRTPO Regional Connectors Study scope of work and to apply best practices for public engagement post-pandemic, the project team proposes to modify the original number of public meetings from nine (9) in person meetings to four (4) in-person meetings per round of engagement supported by three pop-up events per round. An online open house will provide people who are unable to attend in-person public meetings access to project information, meeting materials, the meeting presentation, and the opportunity to provide input.

Staffing for each in-person public meeting will include up to three (3) PRR engagement staff members, project team members from Michael Baker, and representatives from HRTPO.

Four (4) Public Meetings Approach

Host four public meetings in the areas most impacted by the segment bundles, at facilities with suitable hours available, parking, and transit access:

City area	Study impact	Venue recommendations
West Norfolk – Hampton Blvd/W. Little Creek Rd/ODU/Larchmont corridor	Impact from either 564 Connector or 164 Connector	• Lambert's Point Community Center (closer to 164) • Titustown Community Center (closer to 564)
Portsmouth – Churchland area	164 Connector	• Churchland Public Library • Churchland Elementary School
Southern Newport News/Hampton	North 664 Connector	• Main Street Library (Newport News) • West Hampton Community Center (Hampton)
Suffolk	664/164 Connector	• Col. Fred Murray Middle School

Pop-up Events

The project team will manage a table at three event locations in Hampton Roads to educate the public about the Regional Connectors Study and upcoming opportunities for public input

at in-person meetings or through the online open house. Locations for the pop-up events may include, but are not limited to:

- Activity hubs such as major shopping centers
- Community events
- Fall festivals
- Farmers markets
- Local libraries
- Recreation or community centers
- Transit stations

Online Open House

An online open house (OOH) will offer the public an opportunity to view information about the Regional Connectors Study and the tiered segments, an online comment form, and additional links to project information. Graphics and a presentation video can be included to highlight the project. The OOH would open after all four in-person meetings have been held.

Schedule

Task	Timing
Develop and finalize meeting proposal and venue recommendations	By August 15, 2022
Confirm venues and schedule meetings	By September 9, 2022
Identify pop-up event locations and schedule	August-September 2022
Update stakeholder and community email lists, including EJ list.	July-September 2022
Develop public meeting and pop-up events plan	August 2022
Draft materials/graphics to promote meetings • Comment cards for pop-up events (and meetings) • Email/e-newsletter copy • Event flyer • Newspaper ad for Virginian-Pilot and Daily Press • Social media plan • Press release • Website copy	September 2022
Online Open House development (8 weeks)	September – November 2022

Task	Timing
Distribute promotional materials (emails sent 2-3 weeks before meeting, local newspaper ads published two weeks before meetings)	October-mid November 2022
Develop public meeting materials (will use in online open house as well) • Directional signs • Fact Sheet • FAQ • Presentation boards *(Michael Baker- PRR review)* • PPT presentation *(Michael Baker- PRR review)* • Sign-in sheets	October 2022
Attend Community Advisory Committee Meeting	October 13, 2022
Attend pop-up events	October-November 2022
Host public meetings	Ideally, week of November 14-18 and November 28-December 2. Wrap all meetings up by December 9
Launch online open house	TBD, based on public meeting schedule
Summary of public comments	December 31

Regional Connectors Study

Summary of Key Decision Points

Prepared By: Camelia Ravanbakht, PhD
RCS Project Coordinator
November 13, 2020
Revised: December 2020, January 2021, February 2021, April 2021, May 2021, June 2021, October 2021, December 2021, April 2022, July 2022.

Abstract:

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

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

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

2017

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

Item#5: Draft Guidance for Scope of Work

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

2018

Working Group meeting on 05/11/2018:

Item#5: Contract Negotiations with Selected Consultant:

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

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

Working Group meeting on 06/04/18:

Item#5: Revised Phase 1 Scope:

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

2019

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

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

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

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

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

Motion:

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

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

Motion:

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

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

Item#3: Committee Organizational Structure:

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

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

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

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

Item#5: Phase 2 Supplement Budget Omission:

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

Item#7: Scenario Planning and Greater Growth Assumptions:
The consultant will run the models with 16% employment growth, and then present the results to the Working Group for it to decide whether that produces sufficient variation in the congestion of the existing + committed network between the three Greater Growth scenarios. Should upward revisions be deemed necessary by the Working Group, the consultant will run the models with employment growth rates up to 21% until sufficient variation between the scenarios is determined. The Committee approved the Scenario Narratives, Goals, Objectives, and Performance Measures.

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

Item#6. Draft Phase 3 Scope of Work:
Craig Eddy (MBI) presented the draft Phase 3 scope, schedule, and budget using slides. The Committee approved the scope, schedule, and budget as presented.

2020

Working Group Electronic Meeting 06/12/2020

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

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

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

Working Group Electronic Meeting on 07/09/ 2020:

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

Working Group Electronic Meeting on 08/13/2020:

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

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

Working Group Electronic Meeting on 08/27/2020:

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

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

Working Group Electronic Meeting on 10/08/2020:

Item #5. RCS: Modeling Update on Congestion Measures

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

Item #6. Mandated and Other Potential Segments:

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

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

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

Item #5: RCS Phase 2 Status Report:

Motion: The joint body approved Phase 2 completion, including Greater Growth scenario planning differentiation and travel demand modeling performance measures. The motion was moved by Mayor Rowe (Portsmouth) and seconded by Mayor Dyer (Virginia Beach). Prior to the vote, at the request of Mayor Rowe (Portsmouth), Cathy Vick (VPA) and Barbara Nelson (VPA) verbalized the Port's perspective, including expected growth of the Port. The motion passed unanimously by individual voice vote.

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

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

Working Group Electronic Meeting on 12/10/2020:

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

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

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

2021

Working Group Electronic Meeting 01/14/2021

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

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

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

Working Group Electronic Meeting 02/11/2021

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

The Consultant Team presented the traffic volume results from travel demand model runs for 2045 Baseline, Alternatives 2, 3, and 5. The presentation also included summaries of two

meetings separately conducted on January 29, 2021, with ACOE and the Navy and on February 5,2021, with the Port of Virginia staff. Discussions focused on Segment 164 Connector regarding issues and constraints (listed below) expressed by ACOE, Navy and the City of Portsmouth:

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

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

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

Working Group Electronic Meeting 03/11/2021 - Cancelled

Working Group Electronic Meeting 04/08/2021

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

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

- Group discussion took place regarding the assumptions for HRELN toll rates, HRTPO Board approved 2045 list of projects, Bowers Hill Study recommended concept plans, and various design options.

- The WG members agreed to move all four alternatives (2, 3, 6, and 7) to the next step of the modeling process. In addition, they agreed to run Alternative 6 under two versions – with and without improvements to VA 164. Furthermore, they agreed to run each of the five preliminary alternatives under two design options for MMMBT: 6 General Purpose (GP) Lanes + 2 Managed Lanes (ML) and 4General Purpose Lanes + 4 Managed Lanes.

The next modeling runs will therefore include 10 Alternatives with the E+C Network (October 2020 version) while ensuring consistency with the Bowers - Hill Study recommended concept plans and HRTAC approved Initial Tolling Policy for HRELN ($0.06/mile or $0.25 per gantry). This is consistent with the scope of work.

Working Group Electronic Meeting 05/25/2021

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

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

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

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

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

REGIONAL CONNECTORS STUDY

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

2

3

6

7

8

Modeling Assumptions

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

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

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

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

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

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

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

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

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

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

There was extensive discussion among the Steering (Policy) Committee members regarding the importance of Alternatives 5A, 5B, 7A, and 7B even though they had been recommended for removal. The addition of Alternatives 5A, 5B, 7A, and 7B, would result in 12 preliminary alternatives to be studied when added to the 8 recommended by the Working Group, which exceeds the number allowable (maximum of ten Alternatives) as per the scope of work. During the meeting, the Steering Committee was made aware of this scope limitation.

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

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

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

RCS on Temporary Pause: July 2021 – September 2021

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

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

Item #5: RCS Background and Recommended Path Forward:

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

Mr. Crum noted that he met with members of the Steering (Policy) Group after the June meeting. In these discussions he heard that some of the options in the RCS may not be constructed for decades; technology, community growth, and needs will evolve over time; there are questions and concerns about some segments but it's too early to eliminate them at this stage, the RCS should determine each segment's advantages and disadvantages, and ready-to-go projects shouldn't be slowed down.

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

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

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

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

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

Item #6: RCS: Proposed Approach to Study Completion

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

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

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

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

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

REGIONAL CONNECTORS STUDY

2022

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

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

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

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

The updated Study process will consist of four steps:

- Step 1 – Draft Segment Tiering (3 months)
  - Qualitative assessment of construction, permitting, and readiness
- Step 2 – Final Segment Tiering (3 months) – to include updating the RCS 2045 Baseline Network
  - Congestion reduction evaluation
  - Revised design and cost estimation
- Step 3 – Full recommendations to the HRTPO (6 months)
  - Scenario analysis
  - Traffic operations analysis
- Step 4 – Final Report (4 months)
  - Public engagement and documentation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Recommendations for approval:

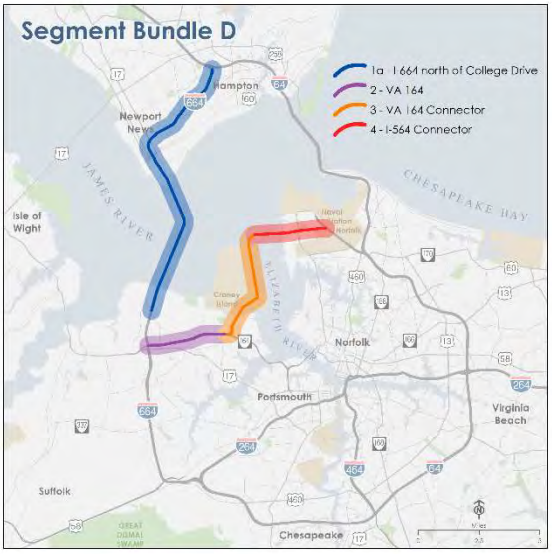
- Placing the southern portion of the I-664 segment in the RCS 2045 "baseline".
- Bundling segments into four bundles (A, B, C, and D, as shown below) for analysis of benefits.

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


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

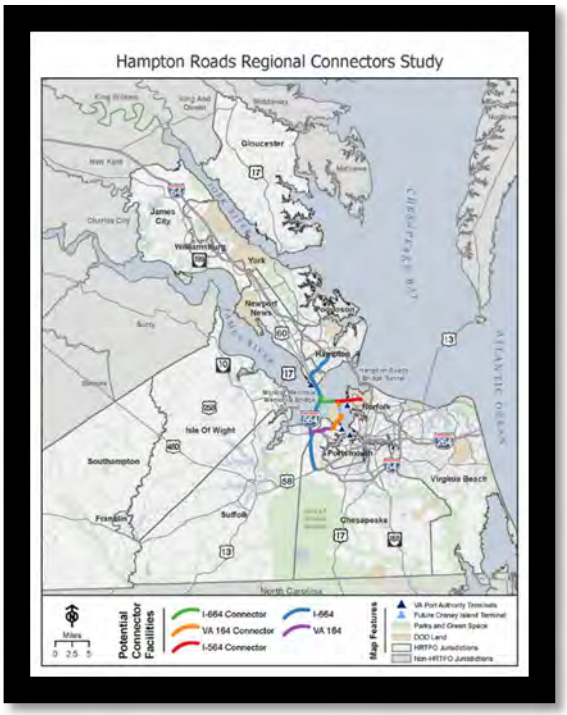

Segment Bundle B
1a - I-664 north of College Drive
2 - VA 164
Hampton
Newport News
Isle of Wight
JAMES RIVER
CHESAPEAKE BAY
ELIZABETH RIVER
Norfolk
Portsmouth
Virginia Beach
Suffolk
Chesapeake


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


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

REGIONAL CONNECTORS STUDY

APPENDIX A – STUDY AREA



REGIONAL CONNECTORS STUDY

Appendix B: Funding

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

Funded by HRTAC, Administered by HRTPO

the heartbeat of HAMPTON ROADS TPO
TRANSPORTATION PLANNING ORGANIZATION

HRTAC
Hampton Roads Transportation Accountability Commission