This section has been added since publication of the Draft SEIS.

INTRODUCTION

The Federal Highway Administration (FHWA) and the Virginia Department of Transportation (VDOT) have provided written responses to all substantive comments provided by individuals, agencies, elected officials, localities, and other representatives during the Draft Supplemental Environmental Impact Statement (SEIS) public comment period (August 5, 2016 through September 19, 2016).

Comments received from the public via comment forms, oral testimony, emails, and mail have been grouped into common themes and summarized for the purposes of providing detailed responses. All themes have been listed alphabetically, numbered consecutively, and include the number of times each comment theme was mentioned. **Table H-1** provides the public with an organized index to use in locating responses to individual comments.

Comments and responses received from the agencies and other stakeholders have been organized into two groups: (1) agency and elected officials and (2) localities and other representatives from the public. Responses to these comments are provided after the public comment responses. Copies of the comments are provided on the left-hand side of the page, with corresponding responses on the right-hand side. Comments from agencies, elected officials, localities, other representatives from the public have been ordered by submittal date and comments submitted on the same date have been listed alphabetically, as shown in the Table of Contents for each of these sections (Page H-39 and H-181, respectively).

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1. Acknowledgement of congestion problem in Hampton Roads.

Number of Comments: 3

Response: The purpose of the Hampton Roads Crossing Study (HRCS) is to relieve congestion at the I-64 Hampton Roads Bridge-Tunnel (HRBT) in a manner that improves accessibility, transit, emergency evacuation, and military and goods movement along the primary transportation corridors in the Hampton Roads region, including the I-64, I-664, I-564, and VA 164 corridors. Traffic capacity is currently inadequate at peak travel times on all of the Study Area Corridors leading to reduced speeds and long, unpredictable travel times and congestion. The goals of the study include relieving congestion and increasing capacity in order to achieve greater regional accessibility, as outlined in the Study's Purpose and Need.

2. Block views from bridges to help reduce congestion.

Number of Comments: 1

Response: Congestion on the HRBT and I-64 approaches is caused by several factors. The current tunnel is geometrically deficient. Insufficient tunnel height results in truck turnarounds, and lack of shoulders in the tunnel results in a "perceived bottleneck" causing drivers to lower speeds. The current capacity of I-64 is also insufficient for the number of vehicles that the interstate carries, leading to congestion at the HRBT. Visual barriers are not currently part of the proposed improvements; details such as these may be considered during the detailed design phase after a Record of Decision (ROD) is issued.

3. Bridge only crossing (no tunnel).

Number of Comments: 5

Response: Due to the high volume of commercial and naval ship traffic in the Study Area, each of the major water crossings evaluated in the SEIS has been designed with a combination bridge-tunnel. Two designated shipping lanes pass through the harbor and are federally maintained by the US Army Corps of Engineers (USACE): the Newport News Channel and the Norfolk Harbor Reach Channel. The Virginia Maritime Association provided feedback in July 2015 indicating that the new tunnels should be designed to be at least 55 feet in depth. The bridge-tunnel design in the SEIS allows each harbor to maintain a channel that can accommodate the large container ships that pass through the Panama Canal, referred to as "Super Post Panamax" ships. Tunneling the entire length of the crossings is cost prohibitive; therefore, the combination bridge-tunnel design is used.

33 USC 408 (commonly referred to as "Section 408") allows for alteration or use of a USACE civil works project if the activity will not be detrimental to the public interest and will not impair the usefulness of the project. Section 408 is discussed in detail in **Section 3.8.1.2** of the Final SEIS. A high bridge option would pose greater permanent Section 408 issues than a bridge-tunnel that matched current configurations. Such an option may not be preferable or permittable due to greater impacts to

hydrodynamic characteristics and visual impact to nearby communities and historic properties than a tunnel alignment. A high bridge would introduce a height restriction over the shipping channel that does not exist today. VDOT and FHWA have committed that improvements proposed in the HRCS SEIS to the I-64 corridor would be largely confined to existing right-of-way. To meet this commitment, the Build Alternatives in the HRCS SEIS consist of a six-lane facility along I-64. Furthermore, a high bridge would require 500-foot to 800-foot tall towers that would be potential obstructions to aviation (HRBT *High Bridge Technical Memorandum*, July 2012, appended to HRBT *Alternatives Technical Report*, November 2012).

4. Build one individual project at a time.

Number of Comments: 2

Response: Given the magnitude and scope of the alternatives considered, the Draft SEIS introduced and solicited public comment on the concept of Operationally Independent Sections (OIS). An OIS is a portion of an alternative that could be built and function as a viable transportation facility even if other portions of the alternative are not advanced. Environmental impacts have been quantified by roadway alignment segment in the Draft SEIS and are presented in detail in **Appendix A** of the document. Since publication of the Draft SEIS, the Commonwealth Transportation Board (CTB) identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the federal Cooperating Agencies for the study (the USACE, the US Environmental Protection Agency (USEPA), the Federal Transit Administration (FTA), the US National Oceanic and Atmospheric Administration(NOAA), the US Navy, and the US Coast Guard (USCG)), as well as unanimous support by the Hampton Roads Transportation Planning Organization (HRTPO) and the Hampton Roads Transportation Accountability Commission (HRTAC), informed CTB's decision.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the Least Environmentally Damaging Practicable Alternative (LEDPA), per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the Craney Island Dredged Material Management Area (CIDMMA) and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other

corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and National Environmental Policy Act (NEPA) studies.

5. Build segments 11 and 12 at-grade.

Number of Comments: 1

Response: Segments 11 and 12, the I-664 connector and the proposed interchange north of Craney Island, were part of Alternatives C and D in the Draft SEIS. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO Long-Range Transportation Plan (LRTP) (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP. Therefore, Segments 11 and 12 are no longer being advanced as part of the HRCS SEIS.

6. Build stacked lanes rather than constructing wider right-of-way.

Number of Comments: 4

Response: The NEPA study evaluates all reasonable alternatives and presents the worst-case impact for the area within the determined "Limit of Disturbance" or LOD. The LOD is designed to take into consideration potential future modifications to the alignment, including, but not limited to future stormwater management facilities and the potential to operate managed lanes. The LOD represents a worst-case scenario in terms of potential impacts. The impacts provided in the SEIS are preliminary estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. Additional efforts will be made to refine and reduce these impacts during the final design and permitting process after a ROD is issued. Design-level considerations would be made within the budget constraints.

7. Concern about noise impacts.

Number of Comments: 3

Response: The noise assessment has been performed pursuant to 23 CFR 772: Procedures for Abatement of Highway Noise and Construction Noise and the VDOT *Highway Traffic Noise Impact Analysis Guidance Manual* (Version 7, July 2015). Construction of noise barriers would be considered where noise impacts are anticipated. Noise barriers were evaluated for each alternative in the *HRCS Noise Analysis Technical Report (2016)*. Proposed noise barriers for the refined Preferred Alternative are shown in **Appendix B** of the Final SEIS. The *HRCS Noise Analysis Technical Report* identified several areas for which noise abatement is presently considered to be warranted in accordance with VDOT noise abatement policy. The noise analysis is a planning-level (preliminary) study that represents traffic noise impact evaluations and noise abatement assessments for preliminary design configurations. Traffic projections are preliminary and would be reevaluated during the final design noise analysis, accounting for final lane configuration and managed lanes that may be part of the design. A more detailed review will be completed during final design of the Preferred Alternative after the issuance of a ROD. If noise barriers are determined to be feasible and reasonable in final design, those benefited by the barriers would be given an opportunity to decide whether they are in favor of construction of the barrier(s), per VDOT's Guidance Manual, Section

7.3.10.1 *Viewpoints of the Benefited Receptors*, Section 12.3 *Affected Receptors/Community*, and Section 12.4 *Voting Procedures*.

8. Concern about impacts to stormwater runoff.

Number of Comments: 2

Response: At this stage of the project, detailed drainage and hydraulic/hydrological studies have not been completed. Detailed stormwater management strategies, including the need for and placement of stormwater facilities, would be determined during the final design and permitting process after a ROD is issued. Stormwater runoff would be controlled in accordance with all applicable state regulations. The Virginia Stormwater Management Program, implemented by Virginia Department of Environmental Quality (VDEQ), includes regulations (9 VAC 25-870) requiring water quality treatment, stream channel protection and flood control standards for all new construction and redevelopment projects. Each project must address compliance through the use of the Virginia Runoff Reduction Method, a stormwater compliance framework. The Virginia Construction General Permit outlines specific measures that development projects must address, including the development of a Stormwater Pollution Prevention Plan. The project would also comply with Executive Order 13508, the Chesapeake Bay Total Maximum Daily Load requirements, and the Commonwealth of Virginia Watershed Implementation Plan. Additionally, Sections 107 and 303 of VDOT's specifications require the use of stormwater management practices to address issues such as post-development storm flows and downstream channel capacity. The required permits would be obtained and/or procedures put into place prior to the initiation of project construction. As part of the permitting process, the required federal and state agencies such as USACE, VDEQ, and the EPA would be coordinated with regarding water quality issues. Part of this coordination would involve instituting these agencies' requirements to avoid and minimize impacts to jurisdictional areas to the greatest extent practicable, which would include placement of best management practices outside of Waters of the US. Permits are generally conditioned such that the project must not permanently restrict or impede the passage of normal or expected high flows, and that the pre-construction course, condition, capacity, and location of open waters must be maintained to the maximum extent practicable.

9. Concern about impacts to safety (number of accidents, national security, emergency response, and construction safety).

Number of Comments: 4

Response: The alternatives have been developed in accordance with applicable standards and safety guidelines, including:

- VDOT Road Design Manual (2008)
- VDOT Road and Bridge Standards (2015)
- American Association of Highway Transportation Officials (AASHTO) Policy on Geometric Design of Highways and Streets (2011)
- AASHTO Policy on Design Standards Interstate System (2005)
- AASHTO Guide for High Occupancy Vehicle Facilities (2004)
- FHWA-NHI-10-034 *Technical Manual for Design and Construction of Road Tunnels-Civil Elements (2009)*

- ASHRAE: American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ventilation of tunnels)

By adhering to the latest design standards, the improvements to the HRCS facilities (roadway, bridges and tunnel) will improve safety for users. The reduction in congestion will enhance emergency evacuation capability and decrease response time for emergency services, providing for better security and increased safety in the region. The proposed new tunnel includes a separate egress passageway which will facilitate exit from the tunnel in emergency situations.

Detailed construction safety measures will be provided in the Maintenance of Traffic (MOT) Plan which would be developed during the more detailed design phase after the issuance of a ROD.

10. Concern about impacts to natural resources.

Number of Comments: 5

Response: As part of the HRCS SEIS, impacts to natural resources were investigated and identified. The information is provided in detail in the *Natural Resources Technical Report* and summarized in the Draft SEIS and the Final SEIS. The natural resources studied include: water resources (tidal waterways, navigation channels, wetlands, water quality, floodplains, hydrodynamics, dredging and disposal, and water supply); Virginia Coastal Zone Management Program; wildlife habitat (terrestrial, waterbird nesting, benthics, essential fish habitat, anadromous fish, submerged aquatic vegetation, and invasive species); and Threatened and Endangered Species.

VDOT and the FHWA have coordinated with regulatory agencies such as the USACE, and the National Marine Fisheries Service (NMFS) throughout the study to identify, minimize, and mitigate impacts to natural resources, as described in **Chapter 3** of the Final SEIS.

HRTPO and HRTAC unanimously endorsed Alternative A as their Preferred Alternative on October 20, 2016. VDOT subsequently updated their recommendation of a Preferred Alternative to Alternative A on November 14, 2016, and requested USACE's concurrence that Alternative A can be considered the preliminary LEDPA. USACE concurred on VDOT's recommendation for Alternative A as the Preferred Alternative on December 2, 2016. USACE based their concurrence on information in the Draft SEIS which demonstrated that Alternative A sufficiently meets the HRCS Purpose and Need and would have less environmental impacts than the other build alternatives in the Draft SEIS, including Alternative B. USACE also found no reason to disagree that Alternative A may be considered the preliminarily LEDPA.

The impacts provided in the SEIS are preliminary estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. Additional efforts will be made to refine and reduce these impacts during the final design and permitting process after a ROD is issued.

11. Concern about dredge material disposal.

Number of Comments: 1

Response: The impacts provided in the SEIS are preliminary estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. Additional efforts will be made to refine and reduce these impacts during the final design and permitting process after a ROD is issued.

While dredged material disposal locations have not yet been identified, the amount of dredged material will depend on the method of construction. Disposal may include beneficial uses (such as structural fill for tunnel island expansions, wetlands restoration, beach nourishment, shoreline construction, and habitat creation), upland Confined Disposal Facilities, and ocean disposal. More information on potential dredge disposal sites and restrictions related to these locations can be found in Section 2.1.7 of the *HRCS Natural Resources Technical Report*. Decisions on dredge disposal would be made during detailed design and procurement activities, as they may have a bearing on how the project is constructed and how potential offerors may approach the project.

12. Concern about impacts to schools.

Number of Comments: 2

Response: No schools or universities would be directly impacted as a result of the implementation of the project. Willoughby Elementary School is located approximately 120 feet east of I-64 in Norfolk. However, the proposed widening along I-64 at this location would be to the west; therefore, no changes would occur adjacent to the school property. Two other school facilities are proximal to I-64: Ocean View Elementary School is approximately 300 feet from I-64 and Northside Middle School is approximately 530 feet from I-64. The I-64 corridor exists today and improvements would not cause additional impact to these facilities.

Since publication of the Draft SEIS, the Preferred Alternative has been modified so that none of the property of Hampton University would be permanently impacted. These modifications include increasing the side slopes to a ratio of 2:1 and the addition of guardrail along eastbound I-64 just north of the Mallory Street interchange; reduction of the shoulder width and a retaining wall along eastbound I-64 between the Settlers Landing Road interchange and the Mallory Street interchange; and locating the proposed eastbound HRBT approach bridge in the location of existing HRBT approach bridge and shifting the existing bridge to the east. A Memorandum of Agreement (MOA) will be prepared to specify how temporary access along the Hampton University property would be provided during construction.

13. Concern about property impacts.

Number of Comments: 13

Response: During the public review of the HRBT DEIS in 2012, there was a clear lack of public and political support for the level of impacts associated with the 8- and 10-lane build alternatives. Specifically, potential impacts to Hampton University, Hampton National Cemetery, and the high number of displacements were key issues identified by the public, elected officials, and University and Veterans Affairs officials. Given the lack of support, VDOT and FHWA agreed that improvements considered along the I-64 corridor in the HRCS SEIS would be confined largely to existing right of way. This resulted in the Preferred Alternative consisting of a six-lane facility along I-64 with one bridge-tunnel structure crossing Hampton Roads. The SEIS provides preliminary impact estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. The impacts have been calculated using a worst-case scenario, or the largest potential footprint that may be required to construct the improvements, for the proposed six-lane facility on I-64. Additional efforts will be made to refine and reduce these impacts during the final design and permitting process after a ROD is issued.

Throughout the alternatives development and refinement processes VDOT has worked to reduce impacts to properties using a variety of techniques including shifting the roadway away from properties, use of retaining walls to minimize the footprint of the roadway, and utilization of the median for roadway expansion. VDOT held two rounds of public meetings during the development of the Draft SEIS which allowed members of the surrounding residential communities to discuss concerns with the project team and held location public hearings upon release of the Draft SEIS where the public could comment on the study. The impacts presented in the Draft and Final SEIS as well as the *HRCS Right of Way Technical Memorandum* are considered planning level impacts. These impacts are based on the preliminary engineering that is completed to inform the NEPA document and subsequent identification of a preferred alternative. Once the FHWA has issued a ROD for the Preferred Alternative, VDOT would advance to detailed design. At that time final property impacts would be determined.

14. Connecting to ports is priority.

Number of Comments: 6

Response: One of the stated project needs is to increase access to port facilities (see Purpose and Need **Chapter 1** in Final SEIS). With freight volumes expected to grow as a result of the expansion of the Panama Canal, trucks will further contribute to and be impacted by roadway congestion. As discussed in Section 2.7 of the Draft SEIS, the Preferred Alternative, Alternative A, would expand interstate capacity along the I-64 corridor, which would benefit freight traffic in the region. The Preferred Alternative does not provide a new connection to the port, but it does expand capacity along I-64 which would provide benefits to the freight movement and access between port facilities and the surrounding region. HRTPO, HRTAC, and CTB have committed to future study in the region to further address port access and connectivity.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Though these improvements are not included in the Preferred Alternative for the HRCS SEIS, they remain regional priorities. HRTPO has set aside funding to continue to study the crossing of the Elizabeth River and improvements to these other study area corridors which would improve connections to the ports. These future decisions will be the subject of separate feasibility and NEPA studies.

15. Concern about cost.

Number of Comments: 4

Response: Alternative A, the Preferred Alternative, is the least expensive alternative considered in the Draft SEIS. In the Draft and Final SEIS the estimated cost to construct Alternative A/the Preferred Alternative is $3.3 billion. The methodologies used in developing the cost estimates presented in the NEPA document are provided in detail in Appendix B of the *HRCS Alternatives Technical Report* and **Section 2.6.2** of the Final SEIS.

HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA will only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP. Thus the Preferred Alternative can be fully implemented within limits of the financial plan.

16. Concern about emergency response/assistance.

Number of Comments: 1

Response: The current capacity of I-64 is insufficient for the number of vehicles that the interstate carries. The Preferred Alternative, Alternative A, would provide two additional lanes (one in each direction) along I-64 and at the HRBT. By increasing the capacity of the roadway, widening from four to six lanes, overall roadway congestion would be reduced. By reducing congestion, emergency response time should improve along I-64. Additionally, shoulders would be upgraded in locations of roadway widening and where bridges are being replaced. Shoulder widths would allow emergency vehicle access in congested traffic. In a few locations, shoulder widths would be narrowed to minimize impacts to adjacent resources such as Hampton University. Emergency operations during and beyond construction are outside of the scope of a NEPA study. Emergency access during construction would be addressed during the development of a MOT Plan which would be developed during the more detailed design phase.

17. Concern about evacuations.

Number of Comments: 10

Response: One of the established needs of the study is to enhance emergency evacuation capability, particularly at the HRBT (see **Section 1.4.6** of the Final SEIS). The Preferred Alternative would provide two additional lanes along I-64, a designated evacuation route, and at the HRBT. Alternative A would provide capacity improvements for those regions directed to use the HRBT as a primary evacuation route from Hampton Roads. As indicated in the Virginia Hurricane Evacuation Study (May 2008), I-64 and the HRBT are defined as one of the "most critical segments" for evacuation in the region. Whether or not the evacuation plan requires updating would be determined after construction of the project.

18. Concern about sea level rise.

Number of Comments: 7

Response: Sea level rise is the primary potential change discussed in the SEIS. **Chapter 3** discussed a 2008 US Department of Transportation Center for Climate Change and Environmental Forecasting study, *The Potential Impacts of Global Sea Level Rise on Transportation Infrastructure,* was designed to produce high level estimates of the net effect of sea level rise and storm surge on the transportation network. The study evaluated nine scenarios of sea level rise between 6 and 59 centimeters. For each scenario, regularly inundated areas and at-risk areas for the transportation system were estimated. Based on the analysis, the majority of the HRCS study area corridors fall outside of the potentially regularly inundated and at-risk areas due to sea level rise and storm surge for all scenarios. However, two portions of the corridors fall within regularly inundated areas under the higher sea level rise scenarios: I-64 (in Hampton) and the VA 164 Connector (along the eastern edge of CIDMMA).

The design and cost estimates included in the SEIS meet standards included in AASHTO 2009 Guide Specifications for Bridges Vulnerable to Coastal Storms and VDOT Structure and Bridge Division standard practice. A determination as to how these standards would be applied to the Preferred Alternative would be made during the final design phases, following the issuance of a ROD. Any proposed bridges would include a vertical clearance above water relative to North American Vertical Datum 88 (NAVD) of 18 feet, which includes 1 foot of clearance above the 100-year design wave crest elevation (elevation 12 feet

relative to NAVD 88 plus 1 foot) per, plus an assumed 5 feet for potential sea level rise over the next century.

19. Concern about impacts to real estate values along I-664.

Number of Comments: 1

Response: The Preferred Alternative does not include any improvements to I-664. As a result, there would be no property impacts along I-664 as a result of the Preferred Alternative.

20. Concern about impacts to visual conditions.

Number of Comments: 1

Response: As documented in **Section 3.11** of the Draft and Final SEIS and the *HRCS Visual Technical Memorandum*, changes to visual conditions as a result of the project are anticipated to be minor to moderate. The most pronounced effects to the visual character of the Study Area would include widened roadways, increased amounts of pavement, and new bridge-tunnel structures parallel to the existing structures. However, views outside of the roadway corridor and to the periphery would not be affected. Under the Preferred Alternative the new bridge structures would be located in the existing corridor and therefore would be consistent with the existing visual character, and would not provide a new visual barrier to existing viewsheds. More detailed visual impacts would be determined during the final design phases of the study, after the issuance of a ROD. A future Design Public Hearing would be held to relay this information to the public.

21. Concern about impacts to local traffic patterns.

Number of Comments: 1

Response: Local traffic patterns would not be permanently altered as a result of the implementation of the Preferred Alternative. As the project consists of widening existing interstate and crossings, all traffic movements that currently exist would continue to exist after construction of the project, and no new traffic movements would be added onto local roadways. Details of how the Preferred Alternative would impact existing interchanges and underpasses would be determined during final design. There may be temporary closures and detours during construction; these closures would be minimized to the extent possible during design, and would be closely coordinated with local communities. One step of the detailed designs that would follow an anticipated ROD from FHWA is the development of a MOT Plan that would speak to how traffic would be altered during construction. Currently, there is no timeline in place to estimate when MOT may be developed.

22. Concern for businesses / economic conditions.

Number of Comments: 2

Response: Economic conditions, including potential impacts of the alternatives to income, employment and business, were considered for all retained Build Alternatives in Section 3.2.4 of the Draft SEIS and for the Preferred Alternative in **Section 3.2.4** of the Final SEIS. There would be no direct impact to businesses under the Preferred Alternative. Indirect impacts to business in the Study Area Corridors would be minimized through careful planning during the more detailed design phases that would occur after FHWA issues a ROD. Ongoing coordination with area businesses, particularly those located adjacent to proposed improvements or detour routes, would occur to prevent or minimize both short- and long-term

disruptions. More detailed economic impacts and temporary construction impacts would be determined during the final design phases of the study, after the issuance of a ROD. A future Design Public Hearing would be held to relay this information to the public.

Sections 2.6.2 through 2.6.5 of the Draft SEIS describe how each Build Alternative meets the project Purpose and Need elements, which includes increasing regional accessibility; addressing geometric deficiencies; improving strategic military connectivity; and increasing access to port facilities. By addressing these project needs, the access to existing businesses, port facilities, and military installations along these routes would be improved. Overall, business in the Study Area Corridors would benefit from the improved accessibility and reduced congestion along the improved interstates.

23. Concern about truck traffic.

Number of Comments: 8

Response: The large port facilities in the region generate substantial truck traffic on area roadways which includes both long- and short-haul truck traffic. The Preferred Alternative would reduce congestion, increase accessibility, and address geometric deficiencies along I-64, all of which would improve travel conditions for all users, including trucks. Analysis provided in Section 5.4 and Appendix L of the *HRCS Traffic and Transportation Technical Report* indicates that the distribution of truck trips to and from the Port over the region's roadway network would remain relatively unchanged compared to No-Build conditions under the Preferred Alternative.

24. Construct two more structures (parallel bridge-tunnels).

Number of Comments: 1

Response: Adding more than one additional bridge-tunnel crossing at the HRBT to increase the number of lanes along I-64 would result in higher environmental impacts, right-of-way impacts, and costs. During the public review of the HRBT DEIS in 2012, there was a clear lack of public and political support for the level of impacts associated with the 8- and 10-lane build alternatives. Specifically, potential impacts to Hampton University, Hampton National Cemetery, and the high number of displacements were key issues identified by the public, elected officials, and University and Veterans Affairs officials. Given the lack of support, VDOT and FHWA agreed that improvements considered along the I-64 corridor in the HRCS SEIS would be confined largely to existing right of way. This has resulted in the Preferred Alternative consisting of a six-lane facility along I-64 with one bridge-tunnel structure crossing Hampton Roads. The SEIS provides preliminary impact estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. The impacts have been calculated using a worst-case scenario, or the largest potential footprint that may be required to construct the improvements, for the proposed six-lane facility on I-64. The final impacts would be determined during the final design and permitting process after a ROD is issued.

25. Direct traffic based on destination / reroute traffic.

Number of Comments: 2

Response: Transportation System Management (TSM) / Transportation Demand Management (TDM) improvements maximize the efficiency of the current transportation system or reduce the demand for travel on the system through the implementation of low-cost improvements. Examples of TSM activities include the addition of turn lanes, optimized signalization at intersections, and Intelligent Transportation

Systems. Examples of TDM activities include ride sharing, van and carpooling, installation of park and ride facilities, and encouragement of telecommuting. TSM/TDM improvements, by their nature, are minor and therefore would not address inadequate capacity, congestion, or geometric deficiencies. Notwithstanding, the Retained Build Alternatives did not preclude TSM/TDM elements from being implemented in conjunction with a Build Alternative. While not a standalone alternative, TSM/TDM improvements could be implemented independently or included as part of a Preferred Alternative.

Currently, electronic variable message signs located around the Hampton Roads region, including on southbound I-64 north of I-664, indicate travel times to Virginia Beach, the Outer Banks, and other destinations. VDOT would consider other measures to notify travelers of roadway conditions during final design.

26. Extend HOV hours.

Number of Comments: 1

Response: As noted in the response to comment number 25, TSM/TDM elements such as HOV operational considerations would not address the components of the Purpose and Need. Currently the HOV lanes are underutilized so extending HOV lanes would not be beneficial. Notwithstanding, the Retained Build Alternatives did not preclude TSM/TDM elements from being implemented in conjunction with a Build Alternative. While not a standalone alternative, TSM/TDM improvements could be implemented independently or included as part of a Preferred Alternative.

27. Funding mechanism.

Number of Comments: 25

Response: HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA will only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP. The source of this funding is from HRTAC with decisions as to if the facility should be managed/tolled to come during more detailed design phases.

The final mechanisms for funding Alternative A, and whether or not the crossings would be tolled, has not yet been determined. High Occupancy/Tolled Lanes, or HOT lanes, are one of the options being considered. HOT lanes are High Occupancy Vehicle (HOV) lanes that also allow lower occupancy vehicles to gain access to the lanes by paying a toll. HOT lanes optimize the number of people and vehicles that travel on the lanes, managing demand through a user fee.

To date, neither the final funding strategy nor a managed lane strategy for the Preferred Alternative have been determined. Should a management strategy, such as HOT or HOV lanes be selected, the final design would accommodate additional roadway elements related to the specific strategy, such as a four-foot wide buffer between the general purpose and managed lanes and lane entrances and exits. Tolling and funding will be addressed following issuance of a ROD. Several managed lane options are under consideration as part of the study, although the final determination has not yet been made by regional planning agencies (HRTPO, HRTAC, and CTB).

28. General project support.

Number of Comments: 24

Response: Comment noted.

29. High Rise Bridge needed before third crossing.

Number of Comments: 1

Response: The High Rise Bridge is a separate study that completed the NEPA environmental process with the issuance of a Finding of No Significant Impact from the FHWA on August 22, 2016. Phase 1 of the High Rise Bridge improvements are fully funded in the 2015-2018 Transportation Improvement Program and the entire project is funded for construction in the HRTPO LRTP. More information on the High Rise Bridge Study can be found here: http://virginiadot.org/projects/hamptonroads/i64_southside__high_rise_bridge_phased_construction.asp.

In its action to endorse a preferred alternative for the HRCS SEIS, the HRTPO laid out a timeline in which all of the region's priority projects could be completed. The High Rise Bridge can be completed along with the HRCS improvements (in addition to three other major projects: Bower's Hill Interchange, Rt 460/58/13, and the Ft Eustis Blvd Interchange). This timeline is included in a presentation available here: http://www.hrtpo.org/uploads/docs/102016TPO-Presentation%2017-HRCS-SEIS%20Update%20with%20HRTAC.pdf.

30. How much of the 23607 zip code area will be impacted?

Number of Comments: 1

Response: Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS (see response to comment number 76 for additional details). Alternative A does not include any improvements to I-664, which is where zip code 23607 is located. Therefore, there would be no environmental impacts or impacts to properties along I-664 related to the implementation of the preferred alternative from the HRCS SEIS.

31. Concern about conflicts and contract obligations with the Elizabeth River Crossings management of the Midtown and Downtown Tunnels

Number of Comments: 1

Response: Such considerations were not taken into account as part of the NEPA study. The cost estimates provided in the Draft and Final SEIS include a 40% contingency which is meant to account for some unknown costs. Financial obligations, such as those referenced in the comment, are not specifically accounted for in the NEPA process. Such considerations would be addressed during more detailed design phases.

32. Incentivize carpooling, telecommuting, etc./Need to think outside the box to solve problem.

Number of Comments: 1

Response: The magnitude of the structural and capacity deficiencies of the roadway network in the region require large-scale solutions, such as those presented in the Draft and Final SEIS. As stated in **Chapter 1**, the needs for the study include improving transit access, enhancing emergency evacuation, improving military connectivity, and increasing access to ports. All of which could not be accomplished with initiatives to carpool and telecommute. Such initiatives are known as Transportation System Management and TSM/TDM measures. While TSM/TDM can improve the efficiency of current transportation systems or reduce the demand for travel, they are generally minor by nature and could not address the existing problems of inadequate capacity and deficient geometry. As described in **Section 2.4**, TSM/TDM measures alone would therefore not meet the Purpose and Need of the study. While these options did not meet the Purpose and Need of the study, they could be implemented as independent actions along the corridor or elsewhere in the region.

33. Increase capacity from Greenbrier to MMMBT.

Number of Comments: 1

Response: Increasing capacity from Greenbrier Parkway to the Monitor Merrimac Memorial Bridge-Tunnel (MMMBT) falls largely within the scope of the High Rise Bridge project. See response to comment number 29 for additional information.

34. I-64: lane widths in tunnel.

Number of Comments: 1

Response: The existing tunnel travel lanes are 11.5 feet wide. In the Draft SEIS, the design proposed that the existing westbound tunnel be restriped to accommodate one travel lane in the center of the tunnel. This lane would be restriped to meet AASHTO standards, with travel lanes a minimum of 12 feet wide. The remaining 5.5 feet would be allotted as shoulder. Design modifications since the publication of the Draft SEIS include locating the proposed eastbound HRBT approach bridge in the location of existing HRBT approach bridge and shifting the existing bridge to the east. A MOA will be prepared to specify how temporary access along the Hampton University property would be provided during construction.

These dimensions have been used to inform impacts and cost estimates in the SEIS but are not design commitments. Design modifications would be determined during the final design and permitting process after a ROD is issued.

35. Install traffic signals on timers at ramps.

Number of Comments: 1

Response: This method is known as “ramp metering.” It is a low-cost measure designed to improve the efficiency of the transportation system. The magnitude of the structural and capacity deficiencies of the roadway network in the region require large-scale solutions, such as those presented in the Draft and Final SEIS. See response to comment number 32 for additional information on operational improvements. As noted in the response to comment number 25, TSM/TDM elements such as ramp metering would not address inadequate capacity, congestion, or geometric deficiencies. Notwithstanding, the Retained Build

Alternatives did not preclude TSM/TDM elements from being implemented in conjunction with a Build Alternative. While not a standalone alternative, TSM/TDM improvements could be implemented independently or included as part of a Preferred Alternative.

36. Interest in green initiatives (facilities, infrastructure, renewable energy).

Number of Comments: 1

Response: VDOT is committed to implementing and investing in the latest sustainability initiatives whenever feasible. Examples include wetland mitigation, stormwater management design, use of solar energy to power variable message signs, and other techniques. Specific opportunities to use green infrastructure and determination of final impacts would occur during the final design and permitting process after a ROD is issued.

37. Improvements are needed soon.

Number of Comments: 24

Response: After this Final SEIS is published and the Preferred Alternative is properly documented in the HRTPO LRTP, the Transportation Improvement Program, and the Statewide Transportation Improvement Program, VDOT can request a ROD from the FHWA to complete the NEPA process. Final design and construction would follow the issuance of the ROD once project funding has been identified. In its action to endorse a preferred alternative for the HRCS SEIS, the HRTPO laid out a timeline in which all of the region's priority projects could be completed. This timeline is included in a presentation available here: www.hrtpo.org/uploads/docs/102016TPO-Presentation%2017-HRCS-SEIS%20Update%20with%20HRTAC.pdf

38. I-64 needs more than 6 lanes.

Number of Comments: 9

Response: The HRBT DEIS (2012) evaluated a range of alternatives within the I-64 HRBT Study Area Corridor. The build alternatives in the HRBT DEIS included an 8-lane and a 10-lane facility along I-64 During the public review of the HRBT DEIS in 2012, there was a clear lack of public and political support for the level of impacts associated with the 8- and 10-lane build alternatives. Specifically, potential impacts to Hampton University, Hampton National Cemetery, and the high number of displacements were key issues identified by the public, elected officials, and University and Veterans Affairs officials. Given the lack of support, VDOT and FHWA agreed that improvements considered along the I-64 corridor in the HRCS SEIS would be confined largely to existing right of way. This resulted in the Preferred Alternative consisting of a six-lane facility along I-64 with one bridge-tunnel structure crossing Hampton Roads. This has allowed decision makers to balance the Purpose and Need of the project, environmental impacts, funding availability, and regional priorities. The SEIS provides preliminary impact estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. The impacts have been calculated using a worst-case scenario, or the largest potential footprint that may be required to construct the improvements, for the proposed six-lane facility on I-64. Additional efforts will be made to refine and reduce these impacts during the final design and permitting process after a ROD is issued.

39. Impact discussion in document insufficient.

Number of Comments: 3

Response: The Draft SEIS provides existing conditions and environmental consequences for each resource in the Study Area Corridors. The level of analysis and documentation was reviewed and approved by VDOT and FHWA and approved for public availability on July 25, 2016 indicating that the Draft SEIS meets all FHWA requirements for an Environmental Impact Statement. Further, the study was prepared in cooperation with 11 federal and local agencies, including the USACE and the USEPA. The Cooperating Agencies were consulted with, reviewed, and commented on elements of the Draft SEIS as they were developed. These agencies, along with the public, were provided the opportunity to comment on the Draft SEIS during the 45-day public comment period. All comments have been responded to in this Final SEIS. None of the comments received on the Draft SEIS indicated that the regulatory agencies with purview over the given resources found the analysis to be insufficient for the purposes of NEPA.

40. Is the I-564 Connector a tunnel or bridge?

Number of Comments: 1

Response: As proposed in the Draft SEIS, the I-564 Connector would be tunneled beneath the Elizabeth River in order to provide continued movement of freight and military vessels south via the Elizabeth River. Structural design parameters guided the design of new structures crossing Hampton Roads and were based on recommendations by the Port of Virginia and the Virginia Maritime Association for vertical clearances and channel width for shipping as provided during scoping. Since the publication of the Draft SEIS Alternative A has been identified as the Preferred Alternative. The I-564 Connector is not part of the Preferred Alternative.

41. Meeting materials inadequate / confusing.

Number of Comments: 4

Response: For the Location Public Hearings held in September 2016, VDOT provided a copy of the display boards, informational handout, and a narrated informational video about the study on the HRCS website 14 days prior to the Hearings. A handout was provided to each attendee explaining key elements of the study and alternatives considered. A narrated video describing the project was also played continuously during the hearings. The hearings were staffed by over 20 personnel from VDOT who were on hand to answer questions about the study and the materials presented. Stations were set up where the public could have one-on-one conversations with these personnel and ask questions related to a variety of topics including Purpose and Need, alternatives, right-of-way issues, environmental consequences, etc. Handouts included email/phone numbers for VDOT contacts. No requests were made for additional meetings or materials.

42. Meeting notification inadequate.

Number of Comments: 2

Response: In accordance with state code, which requires that all property owners within the study area corridor(s) for a Location Study be notified of a Location Public Hearing at least 30 days prior to the meeting, postcards were mailed to over 140,000 address 30 days before the hearing. Given the significance of the HRCS, this mailing exceeded state code requirements to notify all property owners

within the study area by notifying all properties within each zip code that intersects the study area corridors. In addition to the mailings, an email blast was sent to the project mailing list; a notification of the meeting was posted to VDOT's website and included in other social media outreach; and the meeting was advertised in local newspapers 30 days and 15 days prior to the hearing, per VDOT public involvement policies. Further, the overall document release schedule has been publicly available and shared through email blasts, community meetings, HRTPO briefings, and through the study website since the study began in June 2015.

43. Military connections are priority.

Number of Comments: 2

Response: The Preferred Alternative would enhance capacity along the I-64 Study Area Corridor, which is part of the Strategic Highway Network (STRAHNET), the network of highways that are important to the United States' strategic defense policy. I-64 carries a substantial amount of traffic to and from the Naval Base and provides mobility for Navy personnel. One of the stated needs for the study is to improve strategic military connectivity. The ability of the retained alternatives to meet this need is provided in **Chapter 2** of the SEIS. The US Navy was a Cooperating Agency for the study allowing them to review and comment on various components of the study during and after the development of the Draft SEIS. Since publication of the Draft SEIS, VDOT has coordinated with the USACE and the US Navy specifically to discuss the updated VDOT right of way files that were used to refine impact calculations; this coordination is summarized in **Chapter 6** of the Final SEIS. HRTPO, HRTAC, and CTB have committed to future study in the region to further address military connectivity.

44. Must design improvements to serve future needs.

Number of Comments: 6

Response: Improvements considered in the HRCS SEIS are designed to meet capacity needs along the study area corridors in 2040. The *HRCS Traffic and Transportation Technical Report (2016)* summarizes the traffic information gathered to inform the study. The study data projects traffic conditions to year 2040. The design year was determined in consultation with VDOT and FHWA; the interim year (2028) represents conditions in the anticipated opening year of the proposed improvements. The design year represents the year for which the adopted HRTPO land use forecasts (2034 at the time of the study), which are one of the key inputs to the travel demand model, can be used to produce reasonable forecasts. Since the identification of the Preferred Alternative, HRTPO has adopted the 2040 land use forecasts, which have been used to update forecasts and analysis in this Final SEIS.

45. Need new interstates.

Number of Comments: 5

Response: While the Interstate system is considered complete, the HRCS Draft SEIS considered alternatives that included improvements to existing interstates and those that also included new interstate-like facilities. The specific needs for the HRCS were developed based on a comprehensive review of previous studies along with the analysis of current data compiled for this study, including information collected through numerous meetings with federal, state and local agencies; cooperating and participating agencies; project stakeholders and the public. The Purpose of the HRCS is to relieve

congestion at the I-64 HRBT in a manner that improves accessibility, transit, emergency evacuation, and military and goods movement along the primary transportation corridors in the Hampton Roads region. The Preferred Alternative for the HRCS SEIS confines improvements to the I-64 corridor. In endorsing this alternative, the HRTPO outlined a timeline in which additional regional priority projects could be implemented outside the scope of the Hampton Roads Crossing Study. This timeline is included in a presentation available here: http://www.hrtpo.org/uploads/docs/102016TPO-Presentation%2017-HRCS-SEIS%20Update%20with%20HRTAC.pdf.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. VDOT, on behalf of FHWA, continues to coordinate with regulatory agencies to identify acceptable transportation improvements that could be made in the vicinity of the federal properties. Though these improvements are not included in the preferred alternative for the HRCS SEIS, they remain regional priorities. HRTPO has set aside funding to continue to study the crossing of the Elizabeth River and improvements to these other study area corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

46. Need other improvements (Fort Eustis Boulevard Interchange; metro system from Williamsburg to Chesapeake; subway system; change HOV hours; reroute trucks off Hampton Blvd; leave flyover in Ocean View; cross James River and connect to 460; zip car and bike share options; construct 100 mph version of hyperloop; cross York River at Williamsburg; improve 4th View interchange with connection to Tidewater Drive).

Number of Comments: 9

Response: The improvements suggested do not address the Purpose and Need of the HRCS. The specific needs for the HRCS were developed based on a comprehensive review of previous studies along with current traffic data compiled for this study, including information collected through numerous meetings with federal, state and local agencies; cooperating and participating agencies; project stakeholders and the public. The Purpose of the HRCS is to relieve congestion at the I-64 HRBT in a manner that improves accessibility, transit, emergency evacuation, and military and goods movement along the primary transportation corridors in the Hampton Roads region.

In its action to endorse a preferred alternative for the HRCS SEIS, the HRTPO laid out a timeline in which all of the region's priority projects could be completed. This timeline is included in a presentation available here:
http://www.hrtpo.org/uploads/docs/102016TPO-Presentation%2017-HRCS-SEIS%20Update%20with%20HRTAC.pdf

Alternative A (the Preferred Alternative) includes improvements to I-64, including the HRBT, between I-664 in Hampton and I-564 in Norfolk. HRTPO has set aside funding to continue to study the crossing of the Elizabeth River and improvements to these other study area corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

47. Noise barriers should not impair viewsheds.

Number of Comments: 2

Response: The noise assessment has been performed pursuant to 23 CFR 772: Procedures for Abatement of Highway Noise and Construction Noise and the VDOT *Highway Traffic Noise Impact Analysis Guidance Manual* (Version 7, July 2015). Construction of noise barriers would be considered where noise impacts are anticipated. Detailed noise barrier analysis was conducted for each alternative in the *HRCS Noise Analysis Technical Report (2016)*. Proposed noise barriers for the refined Preferred Alternative are shown in **Appendix B** of the Final SEIS. The *HRCS Noise Analysis Technical Report* identified several areas for which noise abatement is presently considered to be warranted in accordance with VDOT noise abatement policy. The noise analysis is a planning-level (preliminary) study that represents traffic noise impact evaluations and noise abatement assessments for preliminary design configurations. Traffic projections are preliminary and would be reevaluated during the final design noise analysis, accounting for final lane configuration and managed lanes that may be part of the design. A more detailed review will be completed during final design of the Preferred Alternative, after issuance of a ROD. If noise barriers are determined to be feasible and reasonable in final design, those benefitted by the barriers will be given an opportunity to decide whether they are in favor of construction of the barrier(s).

The Programmatic Agreement (**Appendix I**) stipulates that, should a sound barrier ultimately be placed adjacent to Hampton National Cemetery, VDOT will consult with the State Historic Preservation Officer (SHPO) and the U.S. Department of Veterans Affairs, National Cemetery Administration, on the aesthetic treatment of the barrier. VDOT also will provide the final design to the Virginia SHPO for concurrence that the barrier will not result in a diminishment of the integrity of the cemetery's historic setting or feeling.

48. Opposes dedicated transit lanes.

Number of Comments: 2

Response: As described in **Section 2.7** of the Final SEIS, dedicated transit lanes were considered in the Draft SEIS because they were included in the ROD issued in 2001. Given the limited capacity improvements associated with the Preferred Alternative, dedicated transit lanes are not part of that alternative. The Preferred Alternative would accommodate transit on the HRBT by providing additional capacity with a new general purpose lane in each direction over the HRBT, or with a new managed lane in each direction which would allow transit vehicles.

49. Opposed to Alt C.

Number of Comments: 3

Response: Alternative A has been identified as the Preferred Alternative.

50. Opposed to tolling.

Number of Comments: 11

Response: The final mechanisms for funding Alternative A, and whether or not the crossings would be tolled, has not yet been determined. HOT lanes are one of the options being considered. HOT lanes are HOV lanes that also allow lower occupancy vehicles to gain access to the lanes by paying a toll. HOT lanes optimize the number of people and vehicles that travel on the lanes, managing demand through a user fee.

To date, neither the final funding strategy nor a managed lane strategy for the Preferred Alternative have been determined. Should a management strategy, such as HOT or HOV lanes be selected, the final design would accommodate additional roadway elements related to the specific strategy, such as a four-foot wide buffer between the general purpose and managed lanes and lane entrances and exits. Tolling and funding will be addressed following issuance of a ROD. Several managed lane options are under consideration as part of the study, although the final determination has not yet been made by regional planning agencies (HRTPO and HRTAC).

51. Opposed to tolling; but if required, provide toll booths.

Number of Comments: 3

Response: The final mechanisms for funding Alternative A, and whether or not the crossings would be tolled, has not yet been determined. HOT lanes are one of the options being considered. HOT lanes are HOV lanes that also allow lower occupancy vehicles to gain access to the lanes by paying a toll. HOT lanes optimize the number of people and vehicles that travel on the lanes, managing demand through a user fee.

To date, neither the final funding strategy nor a managed lane strategy for the Preferred Alternative have been determined. Should a management strategy, such as HOT or HOV lanes be selected, the final design would accommodate additional roadway elements related to the specific strategy, such as a four-foot wide buffer between the general purpose and managed lanes and lane entrances and exits. Tolling and funding will be addressed following issuance of a ROD. Several managed lane options are under consideration as part of the study, although the final determination has not yet been made by regional planning agencies (HRTPO, HRTAC, and CTB).

For the purposes of impact analyses in the SEIS, it is assumed that tolling would consist of overhead gantries and open road tolling. The details as to if and how this would be accomplished would be determined during the final design and permitting process after a ROD is issued. It is anticipated that if the crossing is tolled, the toll would be applied to the managed lanes only and the general purpose lanes would remain free to use.

52. Opposes Public Private Partnership.

Number of Comments: 4

Response: Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP. Because the Preferred Alternative has been fully funded for construction in the region's LRTP, it is anticipated that a ROD would be issued for the entire Preferred Alternative. While this funding documents the fiscal constraint requirements of the LRTP and allows FHWA to issue a ROD for the project, final decisions on how the project would be procured and the source of the HRTAC funding would be made during the more detailed design phases that would follow the ROD.

53. Opposed to segments 13 and 14.

Number of Comments: 1

Response: Segments 13 and 14 are not part of the Preferred Alternative; they are included in Alternatives B, C and D.

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the Clean Water Act (CWA). As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

54. Opposed to I-664 Connector and / or I-564 Connector.

Number of Comments: 2

Response: The proposed I-664 Connector that would link to the MMMBT and the I-564 Connector are not part of the Preferred Alternative.

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

55. Opposed to third crossing/patriot's crossing.

Number of Comments: 4

Response: The I-564 and I-664 Connectors, together would create an additional connection over water between the MMMBT and the Norfolk area. These new connections are often referred to as the "Third Crossing" or "Patriot's Crossing". I-664 and I-564 and the related proposed connectors are not part of the Preferred Alternative.

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and

HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

56. Opposed to Cloverleaf Interchanges.

Number of Comments: 1

Response: No major modifications to existing interchanges are anticipated or proposed as part of the Preferred Alternative.

57. Suggest Specific Phased Implementation Strategy.

Number of Comments: 23

Response: Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. It is expected that the Preferred Alternative will be advanced as a single project.

58. Questions traffic analysis.

Number of Comments: 2

Response: The Draft SEIS relied on traffic data collected in the spring and fall of 2015, as well as the 2034 Hampton Roads Long Range Transportation Plan (LRTP) and the 2034 Hampton Roads travel demand model (the approved LRTP and travel demand model at the time the study was initiated). VDOT compared the traffic model used in the 2001 EIS and the 2015 SEIS, use of the Hampton Roads Regional Travel Demand Model, and parameters used for the SEIS effort: traffic volumes, speed, travel time, Vehicle Hours of Travel (VHT), Vehicle Miles Traveled (VMT), and delay.

FHWA does not specify the traffic modeling methodology to be used for NEPA documents, but does specify traffic evaluation methods for noise and air quality analyses. The traffic modeling methodology for the HRCS SEIS is consistent with that used for all FHWA EIS's completed in Virginia over the last 30 years. FHWA does not prescribe performance metrics for determining if elements of Purpose and Need are satisfied. 23 USC 109 requires FHWA ensure that highway projects "adequately serve the existing and planned future traffic of the highway in a manner that is conducive to safety, durability, and economy of maintenance" and that they "be designed and constructed in accordance with criteria best suited to accomplish [these] objectives…to conform to the particular needs of each locality." More details on how traffic elements were assessed by Alternative for their ability to meet the Purpose and Need are provided in the Response to Comments made by the City of Norfolk, (Page H-54 of this Appendix).

Development of traffic forecasts followed accepted procedures documented in the National Cooperative Highway Research Program (NCHRP) Publication 765; analyses were conducted using established procedures and analysis tools. Both the 2034 travel demand model and 2034 LRTP were the latest adopted regional planning tools and documents at the time of the study initiation. More information on the traffic analysis can be found in the *HRCS Traffic Technical Report.* Traffic information has been updated for the Preferred Alternative with the latest 2040 regional information.

59. Raise bridge heights.

Number of Comments: 2

Response: The existing HRBT does not meet current AASHTO or VDOT bridge height standards. Sea level rise has been considered in the Draft SEIS and Final SEIS under **Sections 3.6** and **3.8**. The 2009 AASHTO Guide Specifications for Bridges Vulnerable to Coastal Storms and VDOT Structure and Bridge Division standard practices have been used to inform the SEIS. The design and cost estimates included in the SEIS meet standards included in AASHTO 2009 Guide Specifications for Bridges Vulnerable to Coastal Storms and VDOT Structure and Bridge Division standard practice. A determination as to how these standards would be applied to the Preferred Alternative would be made during the final design phases, following the issuance of a ROD. Current structural design criteria can be found in Chapter 6 of the *HRCS Alternatives Technical Report*.

60. Recommends a non-local company construct project.

Number of Comments: 1

Response: Following the issuance of a ROD by FHWA, VDOT can advance with more detailed design and procurement activities.

61. Recommends studying flood barrier for the HRCS area.

Number of Comments: 1

Response: The improvements suggested are not considered reasonable given the documented Purpose and Need for the study and are outside the jurisdiction of the lead agencies to implement. The specific needs for the HRCS were developed based on a comprehensive review of previous studies along with the analysis of current data compiled for this study, including information collected through numerous meetings with federal, state and local agencies; cooperating and participating agencies; project stakeholders and the public. The Purpose of the HRCS is to relieve congestion at the I-64 HRBT in a manner that improves accessibility, transit, emergency evacuation, and military and goods movement along the primary transportation corridors in the Hampton Roads region. Constructing a flood barrier would not address the project's purpose and need.

62. Requests link to alternatives mapping / design details.

Number of Comments: 3

Response: The alternatives mapping from the Draft SEIS is located in **Appendix B** and can be found on the HRCS website:
http://www.hamptonroadscrossingstudy.org/documents/201608/appendix_b-_alternatives_mapping.pdf.

The alternatives mapping from the Final SEIS is located in **Appendix B** and can be found on the HRCS study website.

63. Slowing down in tunnels major issue.

Number of Comments: 9

Response: Congestion on the HRBT and I-64 approaches is caused by several factors. The current tunnel is geometrically deficient: insufficient tunnel height results in truck turnarounds and lack of shoulders in the tunnel results in a "perceived bottleneck" causing drivers to lower speeds. The current capacity of I-64 is also insufficient for the number of vehicles that the interstate carries. Increasing the capacity of the roadway, widening from four to six lanes, as included with the Preferred Alternative, would help to address these issues. Design level details and other actions outside the scope of this study (TSM/TDM), would further address these issues after a ROD is issued.

64. Study does not adequately address impacts to floodplain, specifically at the personal residence of the commenter (address retracted).

Number of Comments: 1

Response: The Preferred Alternative is not expected to increase flood elevations, the probability of flooding, or the potential for property loss and hazards. The HRBT pilings act to break and reduce the size of the waves rather than act as a wall, as noted in your letter. As waves approach your property when winds from the south push water north the new structure will act to dissipate waves even more, providing you increased protection from wave action. Any additional structures placed in the water will have no effect on the overall water elevation of the harbor; therefore, the flooding issues you are experiencing now will not be increased by the construction of the Preferred Alternative.

65. Supports high bridge option.

Number of Comments: 4

Response: Due to the high volume of commercial and naval ship traffic in the Study Area, each of the major water crossings evaluated in the SEIS has been designed with a combination bridge-tunnel. Two designated shipping lanes pass through the harbor and are federally maintained by the USACE: the Newport News Channel and the Norfolk Harbor Reach Channel. The bridge-tunnel design in the SEIS allows each harbor to maintain a channel that can accommodate the large container ships that pass through the Panama Canal, referred to as "Super Post Panamax" ships. Tunneling the entire length of the crossings is cost prohibitive; therefore, the combination bridge-tunnel design is used.

33 USC 408 (commonly referred to as "Section 408") allows for alteration or use of a USACE civil works project if the activity will not be detrimental to the public interest and will not impair the usefulness of the project. Section 408 is discussed in detail in **Section 3.8.1.2** of the Final SEIS. A high bridge option would pose greater permanent Section 408 issues than a tunnel and may not be a permittable option due to greater impacts to hydrodynamic characteristics and visual impact to nearby communities and historic properties than a tunnel alignment. A high bridge would introduce a height restriction over the shipping channel that does not exist today. Furthermore, a high bridge would require 500-foot to 800-foot tall towers that would be potential obstructions to aviation (HRBT *High Bridge Technical Memorandum*, July 2012, appended to HRBT *Alternatives Technical Report*, November 2012).

66. Supports HOT lanes.

Number of Comments: 4

Response: Managed lane options are under consideration as part of the study, although the final determination has not yet been made by the CTB. HOT lanes are one of the options being considered. HOT lanes are HOV lanes that also allow lower occupancy vehicles to gain access to the lanes by paying a toll. HOT lanes optimize the number of people and vehicles that travel on the lanes, managing demand through a user fee. The Preferred Alternative would not preclude the implementation of HOT lanes. For the purposes of this Final SEIS, a "worst case scenario" has been identified and discussed in the Worst-Case Traffic Analysis and Impact to Air Quality and Noise Analysis Memo (**Appendix G** of this Final SEIS).

In their comments on the Draft SEIS, the Department of Rail and Public Transportation (DRPT) provided recommendations for how bus rapid transit (BRT) could be accommodated in a Preferred Alternative. In its resolution of December 7, 2016, CTB indicated that the board would be briefed on and have the opportunity to endorse a managed lane concept should it be identified by the region (HRTPO and HRTAC) and the appropriate analysis and financial plans are in place. Such action would most likely occur after a ROD has been issued and VDOT can advance with more detailed design and procurement activities. As of the publication of this Final SEIS, a managed lane strategy for the Preferred Alternative, such as HOT or HOV lanes, has not yet been determined and the HRTPO LRTP does not rely on toll revenues that may be generated from a managed lane concept to construct the project. Should a management strategy be selected, it is anticipated that the managed lanes would accommodate transit such as BRT, as recommended in the DRPT November 16, 2015 letter to VDOT.

67. Supports HOV lanes.

Number of Comments: 3

Response: Managed lane options are under consideration as part of the study, although the final determination has not yet been made by the CTB. HOV lanes are one of the options being considered. Only vehicles with the required occupancy, typically two or more people in one vehicle carpooling, or transit vehicles, are allowed to access HOV lanes. HOV lanes optimize the number of people rather than vehicles that travel on the lane. An HOV lane has the ability to carry more people than general-purpose lanes. The Preferred Alternative would not preclude the implementation of HOV lanes. For the purposes of this Final SEIS, a "worst case scenario" has been identified and discussed in the Worst-Case Traffic Analysis and Impact to Air Quality and Noise Analysis Memo (**Appendix G** of this Final SEIS).

In their comments on the Draft SEIS, DRPT provided recommendations for how BRT could be accommodated in a Preferred Alternative. In its resolution of December 7, 2016, CTB indicated that the board would be briefed on and have the opportunity to endorse a managed lane concept should it be identified by the region (HRTPO and HRTAC) and the appropriate analysis and financial plans are in place. Such action would most likely occur after a ROD has been issued and VDOT can advance with more detailed design and procurement activities. As of the publication of this Final SEIS, a managed lane strategy for the Preferred Alternative, such as HOT or HOV lanes, has not yet been determined and the HRTPO LRTP does not rely on toll revenues that may be generated from a managed lane concept to construct the project. Should a management strategy be selected, it is anticipated that the managed lanes would accommodate transit such as BRT, as recommended in the DRPT November 16, 2015 letter to VDOT.

68. Supports 3-4-3 at HRBT.

Number of Comments: 4

Response: The 3-4-3 option would increase capacity on I-64 by providing three lanes per direction approaching the tunnel in Hampton, four lanes per direction on the HRBT, and three lanes in both directions south of the HRBT. This option was reviewed during the development of the Draft SEIS and is provided in Appendix D of the *HRCS Alternatives Technical Report*. This option would result in a 15 to 20 percent increase to the tunnel costs and a commensurate increase to the environmental impacts due to the additional tunnel and bridge widths. The 3-4-3 option also had safety and operational issues associated with it. For these reasons, the 3-4-3 option has not been included in the Preferred Alternative.

69. Supports bike/pedestrian facilities.

Number of Comments: 2

Response: Bicycle and pedestrian accommodations were studied in detail during the 2012 HRBT EIS and a Consideration of Pedestrian/Bicycle Facilities Technical Memo was prepared. The following is a summary of the information prepared for that Technical Memo updated for current standards.

There are currently no pedestrian or bicycle paths across Hampton Roads (VDOT, 2010). However, based on the CTB's policy on bicycle and pedestrian accommodation, all projects start with the assumption that some accommodation would be provided (VDOT, 2006). In order for an exception to be made, the provision of a potential accommodation must meet one of the following conditions:

1. Scarcity of population (both existing and future) indicate an absence of need for such accommodations;
2. Environmental or social impacts outweigh the need for these accommodations;
3. Safety would be compromised;
4. Total cost of bicycle and pedestrian accommodations would be excessively disproportionate to the need for the facility;
5. Purpose and scope of the specific project do not facilitate the provision of such accommodations (e.g., projects for the Rural Rustic Road Program); and
6. Bicycle and pedestrian travel is prohibited by state or federal law.

Virginia law allows for pedestrian/bicycle shared-use paths on highways, as long as they are barrier-separated from automobile traffic (VDOT, 2016n). Barrier-separated shared-use paths have been provided on large bridges, particularly in urban areas. However, there are no examples of shared-use paths in long tunnels in the United States. AASHTO recommends a width of 10 feet for shared-use paths. It is recommended that an additional two feet of shy distance be provided on paths adjacent to roadways to accommodate wind (especially on bridges) and vehicle impacts to the adjacent barrier. Therefore, a shared-use path should be at least 12 feet wide, the equivalent width of a roadway travel lane, exclusive of the barrier (AASHTO, 2013).

Because of the cost associated with construction a separated pedestrian/bicycle shared-use path across Hampton Roads; the environmental and social impacts associated with these accommodations, particularly at Hampton University, the Phoebus Historic District, and to adjacent residences; and the concerns associated with including a separated pedestrian/bicycle shared-use path in an approximately 7,400 feet long tunnel with grades that exceed ADA criteria, separated bicycle and pedestrian facilities were not included as part of the Preferred Alternative; however, this does not preclude pedestrian or bicycle improvements on other roadways.

70. Supports I-564C and I-664C.

Number of Comments: 13

Response: Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS (see response to comment number 76 for detail on the identification of the Preferred Alternative).

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill (I-664 / I-264 / I-664 / US 460) Interchange, which were included in Alternatives B, C, and D in the Draft SEIS. HRTPO has set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

71. Supports transit.

Number of Comments: 46

Response: With the exception of a few differences, Alternative C is the alternative that was presented in the 2001 ROD. Since it included transit-only lanes at that time, those transit-only lanes were maintained for this study. While only Alternative C specifically included transit-only lanes, each of the Build Alternatives retained in the Draft SEIS had the capacity to include transit (see Chapter 2 of the Draft SEIS). Under Alternative C, transit would be accommodated along I-664 (from I-64 to the I-664 Connector), the

I-664 Connector, the I-564 Connector, and I-564. Details on the transit options for the Final SEIS Preferred Alternative are included in **Section 2.7**.

Given the minimal reduction in vehicle trips that a dedicated transit option would achieve (based on the December 2015 DRPT study), and therefore the likely minimal impact on regional travel times for single occupant vehicles, a dedicated transit lane was not a specific element in Alternatives A, B, and D. However, including it in Alternative C allowed for the determination of additional direct impacts and cost associated with a transit-only lane so the decision makers could make an informed decision whether to include a transit-only lane in the other alternatives.

72. Supports transit (ferry).

Number of Comments: 2

Response: During the development of the HRBT DEIS in 2012, ferry ridership was evaluated for its effects on I-64 traffic specific to the area of the Hampton Roads Bridge-Tunnel. The results of these studies indicate that ferry ridership would remove between 600 and 1,100 vehicles per day from I-64. This reduction would not remove enough general purpose vehicle trips from I-64 to meet either the existing or design year 2040 capacity needs for traffic on I-64. Ferry service would not increase capacity, improve accessibility, address geometric deficiencies, enhance emergency evacuation, improve military connectivity, or increase access to ports. Details on why a ferry was not included for further analysis is included in Section 2.4 of the Draft SEIS.

73. Supports transit (rail / light rail).

Number of Comments: 13

Response: Rail (light or heavy) transit was considered but not retained for detailed study in the Draft SEIS as it would provide inadequate capacity/congestion relief and transportation reliability. Further, it would not improve access to port facilities or increase military connectivity. DRPT provided VDOT with ridership projections and a recommendation that light rail transit not be considered further. Details on accommodating transit in the Preferred Alternative are included in Section 2.4 of the Draft SEIS.

74. Supports maintenance and repair of existing facilities before constructing new ones.

Number of Comments: 5

Response: Maintenance and repair of existing facilities alone would not address the Purpose and Need of the study. Regardless, maintenance and repair of existing structures and facilities that are not being reconstructed as part of the study would be included in Virginia's Transportation Program. For a full listing of the projects and initiatives that are planned in the Commonwealth, please see the Six Year Improvement Program here: http://syip.virginiadot.org/Pages/allProjects.aspx. Maintenance and repair of existing facilities would be considered as part of a TSM/TDM alternative.

As noted in the response to comment number 25, TSM/TDM elements such as HOV operations would not address inadequate capacity, congestion, or geometric deficiencies. Notwithstanding, the Retained Build Alternatives did not preclude TSM/TDM elements from being implemented in conjunction with a Build Alternative. While not a standalone alternative, TSM/TDM improvements could be implemented independently or included as part of a Preferred Alternative.

75. Supports No-Build Alternative.

Number of Comments: 2

Response: The CEQ and NEPA require the consideration of a No-Build option in an EIS. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS (see response to comment number 76 for detail on the identification of the Preferred Alternative).

76. Supports Alternative A (Number of Comments: 53)

Supports Alternative B (Number of Comments: 7)

Supports Alternative C (Number of Comments: 29)

Supports Alternative C w/out Segments 13 and 14 (Number of Comments: 2)

Supports Alternative D (Number of Comments: 88)

Response: Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional

federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

77. Shoulders are unnecessary.

Number of Comments: 1

Response: Shoulders are a safety and design requirement by both state and federal agencies and provide a number of important functions. AASHTO states that well-designed and properly maintained shoulders are need on highways with an appreciable volume of traffic, such as freeways and urban highways. Their advantages include:

- Space is provided away from the traveled way for vehicle to stop because of mechanical difficulties, flat tires, or other emergencies.
- Space is provided for motorists to stop occasionally for road maps or for other reasons.
- The sense of openness created by shoulders of adequate width contributes to driving ease and reduced stress.
- Sight distance is improved in cut sections, thereby potentially improving safety.
- Some types of shoulders enhance highway aesthetics.
- Highway capacity is improved because uniform speed is encouraged.
- Space is provided for maintenance operations such as snow removal and storage.
- Lateral clearance is provided for signs and guardrails.
- Stormwater can be discharged farther from the traveled way, and seepage adjacent to the traveled way can be minimized. This may directly reduce pavement breakup.
- Structural support is given to the pavement (AASHTO, 2011)

Shoulder width dimensions have been used to inform the development of the LOD. The NEPA study evaluates all reasonable alternatives and presents the worst-case impact for the area within the determined LOD. The LOD is designed to take into consideration potential future modifications to the alignment, including, but not limited to future stormwater management facilities and the potential to operate managed lanes. The LOD represents a worst-case scenario in terms of potential impacts. The impacts provided in the SEIS are preliminary estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. Additional efforts will be made to refine and reduce these impacts during the final design and permitting process after a ROD is issued.

78. Suggests Hybrid Alternative.

Number of Comments: 6

Response: The Preferred Alternative could have been a combination of operationally independent sections from the different alternatives under consideration in order to balance cost, impacts, and the alternative's ability to meet the Purpose and Need, resulting in a hybrid alternative not evaluated as a stand-alone alternative in the Draft SEIS. The SEIS presents information for the build alternatives by alignment segment in **Appendix A**.

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Prior to the identification of Alternative A, suggested hybrid alternatives were reviewed to see if

they provided any appreciable advantage over the alternatives being considered. In balancing available funding and impacts, none of the hybrids provided an appreciable improvement over Alternative A.

79. Suggests straightening road / removing curves to improve sight distances.

Number of Comments: 1

Response: Along the portions of I-64 included in the Preferred Alternative, straightening the roadway and removing curves would result in substantial impacts to right-of-way, residential and commercial properties, historic properties, community facilities, and wetlands. Specifically, potential impacts to Hampton University, Hampton National Cemetery, and the high number of displacements were key issues identified by the public, elected officials, and University and Veterans Affairs officials. Given this public opposition, VDOT and FHWA agreed that improvements considered along the I-64 corridor in the HRCS SEIS would be confined largely to existing right of way. This has resulted in the Preferred Alternative consisting of a six-lane facility along I-64 with one bridge-tunnel structure crossing Hampton Roads. The SEIS provides preliminary impact estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. The impacts have been calculated using a worst-case scenario, or the largest potential footprint that may be required to construct the improvements, for the proposed six-lane facility on I-64. The final impacts would be determined during the final design and permitting process after a ROD is issued.

80. Use congestion toll pricing.

Number of Comments: 2

Response: A managed lane option that includes tolls could be implemented under the Preferred Alternative. Section 1512(a) of the Moving Ahead for Progress in the 21st Century Act (MAP-21) allows for the tolling of newly constructed lanes on existing toll-free Interstate highway as long as the facility maintains the same number of toll-free lanes after construction. Therefore, under a managed lane scenario the existing facilities would remain toll free and only the new capacity would be tolled. Tolls for managed lanes could be fixed price or variable based on congestion pricing. The final determination on toll pricing or any other managed lane option would be made after the NEPA process has been completed. The NEPA process does not provide the detailed level of information that would be developed as part of a Traffic and Revenue Study, which would be the basis for regional planning agencies (HRTPO, HRTAC, and CTB) to approve any managed lane option.

81. Utilize shoulder as lane on I-64.

Number of Comments: 1

Response: Utilizing an improved shoulder as a lane on I-64 was not analyzed as part of the HRCS SEIS. This strategy is typically considered during peak travel periods (i.e. rush hour) where the length of its use would be limited. When periods of congestion extend for longer periods of time throughout the day, as is the case along I-64 approaching the HRBT, this strategy would not be recommended as it would decrease safety. See response to comment number 77 for more information on state and federal agencies safety and design requirements and the number of important functions of shoulders.

APPENDIX H: RESPONSE TO AGENCY AND ELECTED OFFICIALS' COMMENTS

TABLE OF CONTENTS

National Cemetery Administration

From: Madderom, Glenn
To: Hodges, Mary Ellen N. (VDOT); Smizik, Scott (VDOT)
Cc: Cunningham, Caitlin (CFM); Elliott, Glenn (CFM); Schamel, Kathleen (CFM); Carcanague, Michael; Hill, Janice M.; Schattel, Jill; Pulak, Douglas D. (CFM); Engel, Vanessa A; de Leon, Joshua
Subject: VA/NCA review comments- HRCS Draft SEIS Hampton Roads Crossing Study - Hist Properties Consulting Parties
Date: Wednesday, August 17, 2016 2:04:50 PM

Ms. Hodges/Mr. Smizik;
Department of Veterans Affairs National Cemetery Administration (VA/NCA) hereby submits the following review comments for the Hampton Roads Crossing Study Draft Supplemental Environmental Impact Statement (HRCS SEIS) published on August 5, 2016;

VA/NCA Review Comment: VA/NCA does not fully agree with the VDOT analysis stating "*Draft SEIS does not project any impacts to Hampton National Cemetery as a result of these improvements*". VA/NCA believes the increased traffic flow occurring due to each of the Alternatives will produce adverse visual impact and increased noise impact to visitors and staff within historic Hampton National Cemetery. Additionally, the closer proximity of the active traffic lanes under each of the Alternatives could result in highway debris being thrown and/or snow removal being pushed onto nearby historic gravesites located within the national cemetery grounds. Accordingly, VA/NCA requests that a sound/visual barrier wall be included in the project to mitigate those adverse effects where this proposed intestate traffic improvement project will occur adjacent and in close proximity to the historic national cemetery property.

Thanks, Glenn
Glenn Madderom
Chief, Cemetery Development & Improvement Service
National Cemetery Administration
575 N. Pennsylvania St. Room 495
Indianapolis, IN 46204
Phone; 317-409-1634

From: Hodges, Mary Ellen N. (VDOT) [mailto:ME.Hodges@VDOT.Virginia.gov]
Sent: Thursday, August 11, 2016 4:33 PM
To: Brenda.K.Kerr@uscg.mil; Britta Ayers (bayers@nnva.gov); Cunningham, Caitlin (CFM); Cannady, Keith; Carter B. S. Furr (CBSFURR@att.net); Chuck Poland; Cristman, Clyde (DCR); Dr. Bill Thomas; Gary Rothfeld (Gary.Rothfeld@va.gov); Madderom, Glenn; Holma, Marc (DHR); Hunter D. Smith (Justin Newman) (jnewman@smithpackett.com); J. Brewer Moore (joanbrew@verizon.net); James R. Turner (director@phoebus.info); John Haynes (john.h.haynes@usace.army.mil); Josh Gillespie (heritage_assets@fmauthority.com); Luci Talbot Cochran (lcochran@hampton.gov); Mae Breckenridge-Haywood (maehaywood@msn.com); Mark Perreault (FortMonroeUpdate@yahoo.com); Martha F. Morris (thebuckroehistoricalsociety@aol.com); Matt Jagunic (matt_jagunic@nps.gov); Patrick R. Jennings (patrick_jennings@nps.gov); Peggy McPhillips (peggy.haile-mcphillips@norfolk.gov); Rob Reali (robert.s.reali@army.mil); Scott Mills (deputycitymanager@suffolkva.us); Shonita Faulkner; Terry E. Brown (Terry_E_Brown@nps.gov)
Cc: Ed.Sundra@dot.gov; Smizik, Scott (VDOT)
Subject: [EXTERNAL] Hampton Roads Crossing Study - Draft SEIS - Historic Properties Consulting Parties

HAMPTON ROADS CROSSING STUDY

Response:

For the purpose of determining, pursuant to Section 106 of the National Historic Preservation Act, whether there would be a change in traffic noise levels attributable to the project that would result in a diminishment of the historic setting and feeling of Hampton National Cemetery, VDOT examined the findings of the *HRCS Noise Analysis Technical Report* (2016: Table 4-2, CNE AT; Figure 4-1, Sheet 7) to see if noise levels after implementation of the project would be substantially higher than existing noise levels. An increase of 3 dB is typically the smallest change in noise levels that is perceptible to the human ear. The traffic noise study indicated that the project would raise the range of existing noise levels measured within the Common Noise Environment (CNE) area containing the Phoebus Section of Hampton National Cemetery by only 1 dB (Existing noise levels are 59-75 dBA Leq; predicted 2040 noise levels under Alternative A are 60-76 dBA Leq.). For the purposes of Section 106, VDOT determined this amount of increase not to be a substantial difference over existing noise levels. However, under FHWA and VDOT noise regulations, policy, and guidance, noise abatement is considered if existing noise levels approach within 1 decibel or exceed FHWA Noise Abatement Criteria, which in this CNE would be 67 (exterior) $L_{eq}(h)$[1]. Thus, the *HRCS Noise Analysis Technical Report* suggests a potential sound barrier for the Phoebus Section of Hampton National Cemetery and nearby single-family residences along westbound I-64 extending from the South Mallory Street/I-64 WB on-ramp to the I-64 WB/Woodland Road off-ramp.

To determine what effect the proposed noise wall might have on the historic setting and feeling of the Hampton National Cemetery, VDOT modeled what a noise wall would look like, in terms of mass and height, from seven different views from within the historic property using photographs taken on November 2, 2016. These views are shown in

National Cemetery Administration, cont.

Figures 15-22 of a letter dated November 22, 2016, in which VDOT recommended to the Virginia SHPO that, based on the results of the noise study and the visualizations, the proposed noise barrier and other highway improvements associated with Alternative A should have no adverse effect on the Hampton National Cemetery, provided the aesthetic features of the barrier (e.g., color, surface treatment) are designed to be compatible with the historic property.

The Virginia SHPO concurred with VDOT's conditioned no adverse effect finding for Hampton National Cemetery on December 29, 2016. Subsequently, FHWA, the Virginia SHPO, and VDOT executed a Section 106 Programmatic Agreement for the project to resolve any potential adverse effects on historic properties. The Programmatic Agreement stipulates that, should a sound barrier ultimately be placed adjacent to Hampton National Cemetery, VDOT will consult with the SHPO and the U.S. Department of Veterans Affairs, National Cemetery Administration, on the aesthetic treatment of the barrier. VDOT also will provide the final design to the Virginia SHPO for concurrence that the barrier will not result in a diminishment of the integrity of the cemetery's historic setting or feeling. If no noise barrier is installed on the westbound lane of I-64 in the vicinity of the Hampton National Cemetery, the Programmatic Agreement requires VDOT to consult with the U.S. Department of Veterans Affairs, National Cemetery Administration, and the Virginia SHPO to examine alternatives for reducing the view of the interstate from the cemetery and preventing highway litter from entering the cemetery. If one or more appropriate alternatives are identified, VDOT will execute a mutually agreeable memorandum with the U.S. Department of Veterans Affairs, National Cemetery Administration, outlining terms for implementation, and VDOT will provide the memorandum to the Virginia SHPO for concurrence that the terms will not result in a diminishment of the historic integrity of the Hampton National Cemetery.

Virginia Department of Rail and Public Transportation (VDRPT)

COMMONWEALTH of VIRGINIA

Jennifer L. Mitchell
Director

DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION
600 EAST MAIN STREET, SUITE 2102
RICHMOND, VA 23219-2416

(804) 786-4440
FAX (804) 225-3752
Virginia Relay Center
800-828-1120 (TDD)

September 15, 2016

Scott Smizik
Location Studies Project Manager
Virginia Department of Transportation
1401 E. Broad Street
Richmond, VA 23219

Re: Comments on Draft Supplemental Environmental Impact Statement (SEIS) for the Hampton Roads Crossing Study

Dear Mr. Smizik:

Thank you for providing the Virginia Department of Rail and Public Transportation (DRPT) with the opportunity to review the Draft Supplemental Environmental Impact Statement (SEIS) for the Hampton Roads Crossing Study (Study). DRPT offers the following comments for your consideration:

1. **Support for the Study Purpose and Need:** DRPT supports the mobility needs stated in the Draft SEIS and urges strong consideration for improved transit access across the Hampton Roads waterway. Given the nature and level of investment, accommodation of a reasonably attractive transit service will ensure that residents and visitors to the area have travel options.

2. **Preferential Treatment for Transit Services:** DRPT recommends that the capacity expansion in the Preferred Alternative be in the form of user/vehicle or price-restricted lanes. Such restrictions may incentivize transit usage and provide mobility options for low-income populations that commute across Hampton Roads waterway.

   DRPT also recommends that the preferred alternative accommodate some form of preferential treatment for transit services to ensure competitive transit travel times and greater transit reliability. Such preferential treatment may include usage of inside or

Response:

1. With the exception of a few differences, Alternative C is the alternative that was presented in the 2001 ROD. Since it included transit-only lanes at that time, those transit-only lanes were maintained for this study. While only Alternative C specifically included transit-only lanes, each of the Build Alternatives retained in the Draft SEIS had the capacity to include transit (see Chapter 2 of the Draft SEIS). Under Alternative C, transit would be accommodated along I-664 (from I-64 to the I-664 Connector), the I-664 Connector, the I-564 Connector, and I-564. The ability to provide transit only lanes on other corridors, including VA 164 and the VA 164 Connector, is limited due to right-of-way constraints. Details on the transit options for the Final SEIS Preferred Alternative are included in **Section 2.7**.

Given the minimal reduction in vehicle trips that a dedicated transit option would achieve (based on the December 2015 DRPT study), and therefore the likely minimal impact on regional travel times for single occupant vehicles, a dedicated transit lane was not a specific element in Alternatives A, B, and D. However, including it in Alternative C allowed for the determination of additional direct impacts and cost associated with a transit-only lane so the decision makers could make an informed decision whether to include a transit-only lane in the other alternatives.

2. Alternative A, as presented in the Draft SEIS did not include transit only lanes. In its resolution of December 7, 2016, CTB indicated that the board would be briefed on and have the opportunity to endorse a managed lane concept should it be identified by the region (HRTPO and HRTAC) and the appropriate analysis and financial plans are in place. As of the publication of this Final SEIS, a managed lane strategy for the Preferred Alternative, such as HOT or HOV lanes, has not yet been determined and the HRTPO LRTP does not rely on toll revenues to construct the project. Should a management strategy be selected, it is anticipated that the managed lanes

VDRPT, cont.

outside shoulders supported by necessary design elements such full-depth shoulder pavement, signage, and pavement markings.

3. **Transit Considerations while Establishing Logical Termini:** In Section 2.8, "Operationally Independent Sections" (p. 2-52), it is indicated that a Preferred Alternative may be implemented in phases for segments with logical termini. Please note that operationally independent sections for vehicular traffic may not necessarily be same as those for transit services. We request that you take transit use into consideration while establishing logical termini and determining phasing of the different segments.

If you have any questions, please contact Nick Britton at nick.britton@drpt.virginia.gov or (804) 786-7425.

Sincerely,

Jennifer Mitchell

Jennifer Mitchell

CC: Jen DeBruhl, DRPT
Jitender Ramchandani, DRPT
Nick Britton, DRPT

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www.drpt.virginia.gov

2

would accommodate transit such as BRT, as recommended in the DRPT November 16, 2015 letter to VDOT.

3. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

VDOT anticipates that improvements from the Preferred Alternative would be designed, funded, and constructed at the same time. Because Alternative A was identified as the Preferred Alternative and is fully funded for construction in the region's LRTP, it is anticipated that a ROD would be issued for the entire Preferred Alternative. More detailed phasing decisions for construction would be determined after the issuance of a ROD.

HRTPO- Freight Transportation Advisory Committee (FTAC)

HANDOUT

Agenda Item 11: HRCS – SEIS: Technical Analysis and Discussion

Freight Transportation Advisory Committee (FTAC): Resolution of Support Regarding the HRCS SEIS Alternatives

the heartbeat of HAMPTON ROADS TPO
TRANSPORTATION PLANNING ORGANIZATION

September 15, 2016

The HRTAC Freight Transportation Advisory Committee's resolution supporting either Alternative B or D is noted. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS. The CTB, informed by input from the public, HRTAC, HRTPO, and Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, found it to be the Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for

HRTPO- FTAC, cont.

HAMPTON ROADS TRANSPORTATION PLANNING ORGANIZATION
FREIGHT TRANSPORTATION ADVISORY COMMITTEE
FTAC RESOLUTION 2016-01

A RESOLUTION OF THE FREIGHT TRANSPORTATION ADVISORY COMMITTEE OF THE HAMPTON ROADS TRANSPORTATION PLANNING ORGANIZATION REGARDING THE HRCS SEIS ALTERNATIVES.

WHEREAS, the Virginia Department of Transportation (VDOT), in coordination with the Federal Highway Administration (FHWA), is undertaking the preparation of a Supplemental Environmental Impact Statement (SEIS) for the Hampton Roads Crossing Study (HRCS); and

WHEREAS, the SEIS re-eval uates the findings of the Final Environmental Impact Statement (FEIS) and the Record of Decision (ROD) that were approved by the FHWA in 2001; and

WHEREAS, the purpose of the HRCS SEIS is to relieve congestion at the 1-64 Hampton Roads Bridge-Tunnel (HRBT) in a manner that improves accessibility, transit, emergency evacuation, and military and goods movement along the primary transportation corridors in the Hampton Roads region, including the 1-64, 1-664, 1-564, and Route 164 corridors: and

WHEREAS, in 2014, the Hampton Roads Transportation Accountability Commission (HRTAC) identified the previously identified Preferred Alternative (CBA 9, aka Third Crossing; excluding the HRBT) in its list of priority projects and provided the proper funding for the study to be documented in the HRTPO Long Range Transportation Plan (LRTP), which prompted VDOT and FHWA to initiate the SEIS; and

WHEREAS, on January 12, 2016, FHWA, VDOT, and Federal cooperating agencies concurred on which alternatives would be retained for analysis in the Draft SEIS; and

WHEREAS, truck trips and regular vehicle trips generated and distributed to and from port terminals within Hampton Roads under the No Build alternative, that are distributed on water crossings account for approximately 8% of the trips, and

WHEREAS, as illustrated in the attachment, a large percentage of the freight traffic is destined from the Ports to and from the west and southwest; and

WHEREAS, as an advisory committee to the HRTPO Board, the HRTPO Freight Transportation Advisory Committee (FTAC) advises the HRTPO Board on regional freight transportation requirements, conducts public outreach activities that help HRTPO efforts to help raise awareness of the importance of freight transportation to the region's economy; and

WHEREAS, the FTAC recently completed the *Economic Assessment of Tolls on Freight Transportation in the Hampton Road Region* study of the Region's Freight gateways and intra-regional freight movement, which concluded that the cost of doing nothing was

CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

HRTPO- FTAC, cont.

significant in a No Build scenario and that it is better to build new capacity even with the consideration of tolls over doing nothing; and

WHEREAS, freight movement, from both day to day operations as well as business expansion opportunities contributes significantly to the region's economic vitality, and regional commerce is greatly improved by a reliable transportation network that is resilient and accommodates the physical requirements of freight and can provide alternative routes that are responsive to unplanned incidents.

NOW, THEREFORE, BE IT RESOLVED the FTAC advises that, given the significance of freight to the Hampton Roads economy, generating 530,800 jobs statewide, $88.4 billion in spending, and representing 10.1% of the Commonwealth's GDP, Alternative A, which proposes adding a new two lane tunnel to the HRBT that will provide a total of six lanes, and adding two additional lanes to I-64 in Norfolk that will provide a total of six lanes, does not adequately address the Purpose and Need relative to providing increased access to the Ports to enhance regional connectivity; and

BE IT FURTHER RESOLVED that Alternative C is not recommended because it does not make any improvements to the HRBT to address the Purpose and Need; and

BE IT FURTHER RESOLVED that Alternatives B, and D provide an additional harbor crossing that will improve regional connectivity, improved transportation reliability, resiliency, and emergency readiness; while improving freight movement; and

BE IT FURTHER RESOLVED the FTAC recommends the region carefully consider the sequence of construction of the proposed improvements as shown in the attached Operationally Independent Sections graphic to provide adequate capacity and a reliable network between the Southside and the Peninsula to minimize economic impacts during construction; and

BE IT FURTHER RESOLVED that based on the aforementioned freight generated traffic data and graphic, a large percentage of freight traffic from within and outside Hampton Roads is destined to and from the Ports and areas to the west/southwest of the region, and as such, Operationally Independent Segments VIII (Route 164 Connector), X (Route 164), and II (Route I-664 from Route 164 to Bower's Hill) along with improvement to the Bower's Hill interchange support the Purpose and Need relative to regional freight related commerce within Hampton Roads.

APPROVED and ADOPTED by the HRTPO Freight Transportation Advisory Committee at its meeting on the 1st day of September, 2016.

Delegate Christopher P. Stolle
Co-Chairman
HRTPO Freight Transportation Advisory Committee

Arthur W. Moye, Jr.
Co-Chairman
HRTPO Freight Transportation Advisory Committee

City of Newport News

CITY OF NEWPORT NEWS

McKINLEY L. PRICE, DDS
MAYOR

September 16, 2016

Mr. Charles Kilpatrick, P.E.
Commissioner of Highways
Virginia Department of Transportation
1401 E. Broad Street
Richmond, Virginia 23219

Dear Commissioner Kilpatrick:

I am contacting you regarding the Hampton Roads Crossing Study (HRCS) Supplemental Environmental Impact Statement (SEIS). As you are aware, the interstate system in Hampton Roads provides a vital link between the Peninsula and Southside. The nearing completion of the SEIS is a positive step towards improving the movement of people and goods throughout the region. Transit is a critical component for our future as a region and should be included in the locally preferred alternative for the Hampton Roads Crossing Study. I believe that a hybrid alternative that includes transit accommodations through dedicated managed lanes in all bridge tunnel components will provide the greatest benefit to Hampton Roads.

1

I request that a hybrid alternative, locally known as "Alternative E" be considered which includes the Alignment Segments 5C, 6C, 7C, 8, 9, 10C, 11C, and 12C as identified in the Draft SEIS Appendix A. This hybrid provides additional capacity for I-64 across the Hampton Roads Bridge Tunnel (HRBT) and for I-664 across the Monitor Merrimack Memorial Bridge Tunnel (MMMBT) as well as additional connectivity between these two major thoroughfares via the I-564 & I-664 connectors. The overall capacity increase of these three elements provides the opportunity to reduce congestion, provide reliable traffic flow across Hampton Roads, and provide improved transit movement. Further, Alternative E provides many of the travel time benefits of Alternative D at a lower cost and substantially reduced environmental impact.

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2400 Washington Avenue, Newport News, Virginia 23607

Response:

1. With the exception of a few differences, Alternative C is the alternative that was presented in the 2001 ROD. Since it included transit-only lanes at that time, those transit-only lanes were maintained for this study. While only Alternative C specifically included transit-only lanes, each of the Build Alternatives retained in the Draft SEIS had the capacity to include transit (see Chapter 2 of the Draft SEIS). Under Alternative C, transit would be accommodated along I-664 (from I-64 to the I-664 Connector), the I-664 Connector, the I-564 Connector, and I-564. Details on the transit options for the Final SEIS Preferred Alternative are included in **Section 2.7**.

Given the minimal reduction in vehicle trips that a dedicated transit option would achieve (based on the December 2015 DRPT study), and therefore the likely minimal impact on regional travel times for single occupant vehicles, a dedicated transit lane was not a specific element in Alternatives A, B, and D. However, including it in Alternative C allowed for the determination of additional direct impacts and cost associated with a transit-only lane so the decision makers could make an informed decision whether to include a transit-only lane in the other alternatives.

Alternative A, as presented in the Draft SEIS did not include transit only lanes. In its resolution of December 7, 2016, CTB indicated that the board would be briefed on and have the opportunity to endorse a managed lane concept should it be identified by the region (HRTPO and HRTAC) and the appropriate analysis and financial plans are in place. As of the publication of this Final SEIS, a managed lane strategy for the Preferred Alternative, such as HOT or HOV lanes, has not yet been determined and the HRTPO LRTP does not rely on toll revenues to construct the project. Should a management strategy be selected, it is anticipated that the managed lanes would accommodate transit such as BRT, as recommended in the DRPT November 16, 2015 letter to VDOT.

City of Newport News, cont.

Mr. Charles Kilpatrick, P.E.
September 16, 2016
Page Two

It is my understanding that Alignment Segments 1 & 13 have been determined to be the most environmentally impactful. By eliminating those segments, Alternative E appears to better positioned to secure a permit from the U.S. Army Corps of Engineers.

Thank you for your consideration in this matter, and I hope that VDOT will support our regional efforts to develop a comprehensive alternative for the Hampton Roads Crossing.

Very truly yours,

McKinley L. Price, DDS
Mayor

MLP/KBS/wjr

Attachment

cc: The Honorable City Council
City Manager
Mr. James Utterback, PMP, Hampton Roads District Administrator

2. The Preferred Alternative could have been a combination of operationally independent sections from the different alternatives under consideration in order to balance cost, impacts, and the alternative's ability to meet the Purpose and Need, resulting in a hybrid alternative not evaluated as a stand-alone alternative in the Draft SEIS. The SEIS presents information for the build alternatives by alignment segment in **Appendix A**.

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. The City of Newport News, as a member of both the HRTPO and HRTAC voted in support of Alternative A subsequent to their comment letter. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better

City of Newport News, cont.

than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

HRTPO and HRTAC unanimously endorsed Alternative A as their Preferred Alternative on October 20, 2016. VDOT subsequently updated their recommendation of a Preferred Alternative to Alternative A on November 14, 2016, and requested USACE's concurrence that Alternative A can be considered the preliminary LEDPA. USACE concurred on VDOT's recommendation for Alternative A as the Preferred Alternative on December 2, 2016. USACE based their concurrence on information in the Draft SEIS which demonstrated that Alternative A sufficiently meets the HRCS Purpose and Need and would have less environmental impacts than the other build alternatives in the Draft SEIS, including Alternative B. USACE also found no reason to disagree that Alternative A may be considered the preliminarily LEDPA.

3. Segments 1 and 13 are not included in the Preferred Alternative. As shown in **Appendix A** of the SEIS, these segments would result in a high impact to wetlands. This was noted in USACE letter of 9/19 that suggested C or D could not be it. Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft

City of Newport News, cont.

SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. VDOT, on behalf of FHWA, continues to coordinate with these agencies to identify acceptable transportation improvements that could be made in the vicinity of the federal properties. Though these improvements are not included in the Preferred Alternative for the HRCS SEIS, they remain regional priorities. HRTPO has set aside funding to continue to study the crossing of the Elizabeth River and improvements to these other study area corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

City of Norfolk, City Planning

THE CITY OF NORFOLK
CITY PLANNING

19 September 2016

Mr. Scott Smizik
Virginia Department of Transportation
Environmental Division
1401 East Broad Street
Richmond, Virginia 23219

RE: Hampton Roads Crossing Study

Dear Mr. Smizik:

As Chair of the Norfolk City Planning Commission I am writing in support of the selection of Alternative D as the locally preferred alternative in the Hampton Roads Crossing Study.

The Hampton Roads region has the unique opportunity to create a regional transportation network that advances the major transportation projects that the region has strived to build for at least 25 years. Alternative D is the only option that provides this opportunity.

This decision will have multi-generational impacts. Today the region faces extremely poor conditions that result in no travel reliability, increasing congestion, and a lack of accessibility and connectivity between the Peninsula and Southside. This situation not only impacts residents and commuters but our military readiness and connectivity, Port operations and tourism as well as economic development potential and the ability to evacuate citizens in an emergency.

Of the four alternatives that have been studied in the Hampton Roads Crossing Study one stands out as best meeting all the components of the defined purpose and need. The overriding aim of this study is to relieve congestion at the I-64 HRBT in a manner that improves accessibility, connectivity and reliability.

The other alternatives are all lacking in numerous ways. Alternative A clearly does not meet the need of this congestion relief. Alternative B includes some additional capacity above alternative A but does not serve the Peninsula to Southside travel market and in fact has a negative impact on the Peninsula because of lack of improvements to I-664 and the Monitor Merrimac Bridge Tunnel (MMMBT). Since it only contains half of new water crossing it will not have the needed effect to draw traffic to this alternative due to the increased travel time and miles. Alternative C does include a full water crossing connector between Norfolk and the MMMBT and it includes a transit component, which is also a part of the purpose and need but it fails to address the HRBT.

Alternative D is the only option that meets the goals of the study's Purpose and Need. By widening the HRBT by 2 lanes and building a new crossing connector from I-564 in Norfolk to I-664 our region will have greatly improved total crossing capacity. The goal must be met to

810 UNION STREET, SUITE 508 · NORFOLK, VIRGINIA · 23510 ·757-664-4752
www.norfolk.gov

Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from

City of Norfolk, City Planning, cont.

Mr. Scott Smizik
Page 2

address the increasing total crossing traffic demand. The increasing population and job growth will continue in this I-664 corridor. This alternative does not include a transit component but it should be addressed as this moves forward.

The decision on how to create a reliable, comprehensive transportation network will have lasting effects on our region. Alternative D allows the region to move forward in a well thought out manner to address our growing transportation needs. I hope that this is the alternative that moves forward and that finally our region can build the total transportation network that we have needed for so long.

Sincerely,

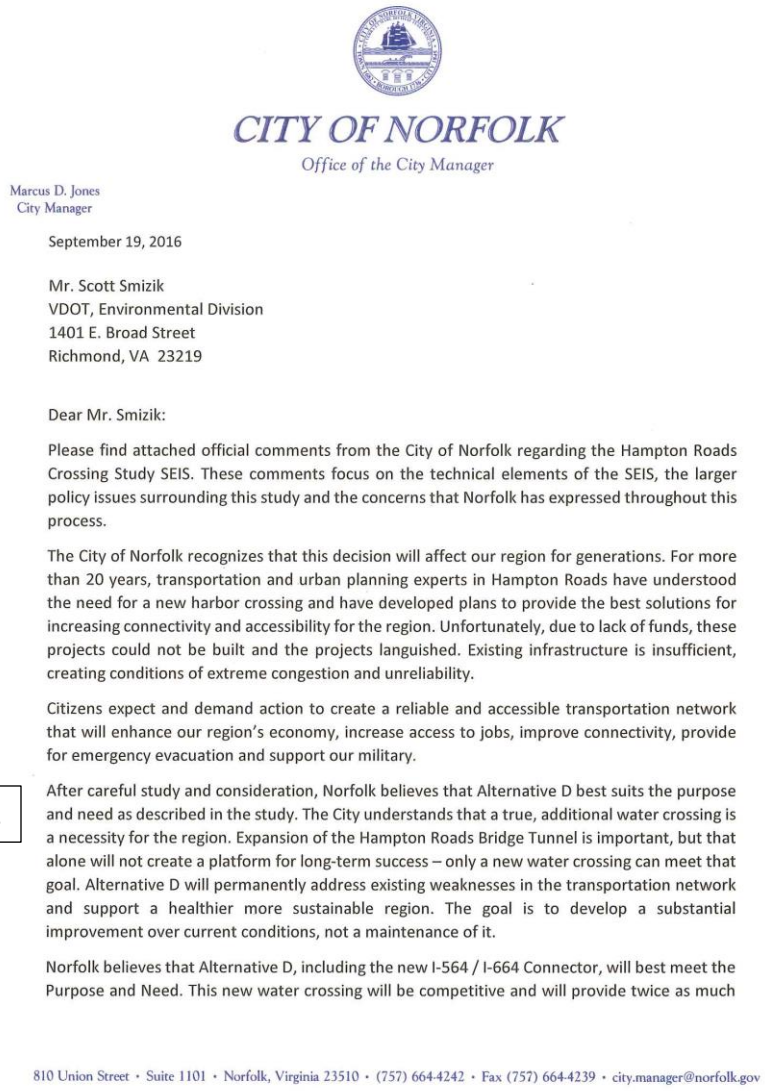
Earl P. Fraley, Jr.
Chair, Norfolk City Planning Commission

CC: Norfolk Mayor Kenneth Cooper Alexander
Norfolk City Manager Marcus Jones

the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. VDOT, on behalf of FHWA, continues to coordinate with these agencies to identify acceptable transportation improvements that could be made in the vicinity of the federal properties. Though these improvements are not included in the Preferred Alternative for the HRCS SEIS, they remain regional priorities. HRTPO has set aside funding to continue to study the crossing of the Elizabeth River and improvements to these other study area corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

City of Norfolk, Office of City Manager



CITY OF NORFOLK
Office of the City Manager

Marcus D. Jones
City Manager

September 19, 2016

Mr. Scott Smizik
VDOT, Environmental Division
1401 E. Broad Street
Richmond, VA 23219

Dear Mr. Smizik:

Please find attached official comments from the City of Norfolk regarding the Hampton Roads Crossing Study SEIS. These comments focus on the technical elements of the SEIS, the larger policy issues surrounding this study and the concerns that Norfolk has expressed throughout this process.

The City of Norfolk recognizes that this decision will affect our region for generations. For more than 20 years, transportation and urban planning experts in Hampton Roads have understood the need for a new harbor crossing and have developed plans to provide the best solutions for increasing connectivity and accessibility for the region. Unfortunately, due to lack of funds, these projects could not be built and the projects languished. Existing infrastructure is insufficient, creating conditions of extreme congestion and unreliability.

Citizens expect and demand action to create a reliable and accessible transportation network that will enhance our region's economy, increase access to jobs, improve connectivity, provide for emergency evacuation and support our military.

1

After careful study and consideration, Norfolk believes that Alternative D best suits the purpose and need as described in the study. The City understands that a true, additional water crossing is a necessity for the region. Expansion of the Hampton Roads Bridge Tunnel is important, but that alone will not create a platform for long-term success – only a new water crossing can meet that goal. Alternative D will permanently address existing weaknesses in the transportation network and support a healthier more sustainable region. The goal is to develop a substantial improvement over current conditions, not a maintenance of it.

Norfolk believes that Alternative D, including the new I-564 / I-664 Connector, will best meet the Purpose and Need. This new water crossing will be competitive and will provide twice as much

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Response:

1. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per

City of Norfolk, Office of City Manager, cont.

capacity as Alternatives A or B. This connectivity will improve reliability in a meaningful way, with substantial reductions in travel distance and time for sizable geographic areas both on the Peninsula (Newport News and Hampton) and on the Southside (Norfolk and Virginia Beach).

Approval of Alternative D will allow the region to prioritize the segments and build projects based on the benefit of the improvement, project readiness and funding available. This coordinated system of projects will unlock our region's potential and provide the travel lanes necessary to sustainably support future population growth and economic development. Hampton Roads is home to the largest Naval Base in the world, along with other major military installations. It is vulnerable to emergency evacuation threats and faces sustainability threats posed by sea-level rise. Alternative D provides the robust transportation network that will provide critical resiliency for the region in the 21st century.

2 A new proposal to limit expansion of the HRBT to 2 additional travel lanes within existing right of way has allowed Norfolk to fully support this project component.

3 Norfolk's comments include its arguments for why Alternatives A, B and C do not meet the purpose and need of the study and the city's explanation for its support for Alternative D as the superior alternative is detailed in the attached comments. The chart below shows that after careful analysis that Alternatives A, B and C are deficient in meeting the Purpose and Need of the study.

Alternatives Evaluation Matrix (DRAFT) – City of Norfolk

Need	A	B	C	D	D with Transit from C
Accommodate Travel Demand	Does not meet	Does not meet	Mostly Meets	Meets	Meets
Improve Transit Access	Does not meet	Does not meet	Meets	Does not meet	Meets
Increase Regional Accessibility	Does not meet	Does not meet	Mostly Meets	Meets	Meets
Address Geometric Deficiencies	Meets 70%	Meets 70%	Meets 30%	Meets	Meets
Improve Strategic Military Connectivity	Does not meet	Meets 50%	Meets	Meets	Meets
Enhance Emergency Evacuation	Meets 50%	Meets 50%	Meets 50%	Meets	Meets
Increase Access to Port Facilities	Does not meet	Meets 70%	Meets	Meets	Meets

direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

2. Comment noted.

3. FHWA and VDOT do not agree with the City's assessment regarding how a particular alternative meets the purpose and need. For example, whether an alternative improves transit access isn't a simple yes or no. Based on the City's assessment, only Alternative C with a dedicated transit lane addresses this component of the Purpose and Need. Others have commented that managed lanes would improve transit access. When the federal Cooperating Agencies concurred on the alternatives to be retained for analysis, they included Alternative A. If an alternative is retained for analysis in a NEPA document, it has to sufficiently meet the primary components of the Purpose and Need. As each concurring agency

City of Norfolk, Office of City Manager, cont.

It is our hope that all parties, including Norfolk, can discuss any proposed hybrid alternatives should that become necessary. We believe public comments should be carefully reviewed and the four alternatives thoroughly vetted before the region begins any such discussion.

4

However, if a discussion of hybrid proposals is necessary, Norfolk would like to propose an outline that meets the Purpose and Need of the study – one that connects the Southside and the Peninsula, will reduce traffic congestion on the HRBT and only increase travel distance by 4 miles.

5

Norfolk recommends that segments 9, 10, 11 and a modified 12 be considered as a hybrid alternative. That would mean the HRBT and the I-564 / I-664 Connector be built with modified infrastructure for the future connection to Craney Island. This hybrid would also provide an expedited route for the Naval Base and the Port, along with an additional evacuation route.

6

Lastly, because our region faces the chronic stress of sea level rise and recurrent flooding we must address this issue directly in this study. Any water crossing we build can be operationally impacted by this chronic stress, but this also offers an opportunity to provide an engineered solution to address these vulnerabilities. As this study advances to a Final EIS we cannot miss this opportunity – our future demands that we get it right now.

Thank you for your time and consideration.

Sincerely,

Marcus D. Jones
City Manager

presumably had its own reasoning and/or metrics to identify alternatives that should be retained for analysis, VDOT and FHWA have included a methodology and discussion in **Chapter 2** of the Draft and Final SEIS that discusses how each alternative meets each element of the Purpose and Need.

4. On September 27, 2016, VDOT recommended Alternative B to the USACE as the Preferred Alternative. This recommendation was informed by comments from the USACE on September 19, 2016 which stated "*If Alternatives A and B also meet the project purpose and need, have less adverse impacts [than Alternative C or D] on the aquatic ecosystem, and do not significantly impact other natural ecosystems, then USACE may determine that it can only permit one of these less damaging options as the LEDPA.*" From among Alternative A and Alternative B, VDOT considered Alternative B the least impactful alternative that fully addressed the purpose statement in the Draft SEIS.

HRTPO and HRTAC, which the City is a voting member of, unanimously endorsed Alternative A as their Preferred Alternative on October 20, 2016. VDOT subsequently updated their recommendation of a Preferred Alternative to Alternative A on November 14, 2016, and requested USACE's concurrence that Alternative A can be considered the preliminary LEDPA. USACE concurred on VDOT's recommendation for Alternative A as the Preferred Alternative on December 2, 2016. USACE based their concurrence on information in the Draft SEIS which demonstrated that Alternative A sufficiently meets the HRCS Purpose and Need and would have less environmental impacts than the other build alternatives in the Draft SEIS, including Alternative B. USACE also found no reason to disagree that Alternative A may be considered the preliminarily LEDPA.

City of Norfolk, Office of City Manager, cont.

City of Norfolk Comments on Hampton Roads Crossing Study Draft SEIS - September 19, 2016

1. INTRODUCTION

The decisions that will determine a regional freeway improvement program for "crossing Hampton Roads,"can result in sustainably unifying the Peninsula and the Southside as a strong regional entity. These decisions have multi-generational impacts for our City, Hampton Roads, the Commonwealth, and even our Homeland Security. They will touch hundreds of thousands of people. The City of Norfolk's position reflects a strong commitment to regional success. The information presented in this document by the City of Norfolk, in support of the NEPA evaluation process for "Hampton Roads Crossing" alternatives improvement concepts, addresses Draft SEIS Report issues and findings.

This is a comprehensive document that accomplishes the following objectives:

- Articulates concerns that the City has regarding the technical information produced for the Draft SEIS report. These are inclusive of: statements as to environmental impacts, positive or negative; and benefits of alternatives with regards to meeting future needs for the City and the region. These may involve "interpretation and clarification" of data that has been prepared in the study.
- Provides additional technical and non-technical knowledge and predictions to supplement the analysis performed and data provided in the Draft SEIS, in support of the decision-making process.
- States, with the support of knowledge and information both in the Draft SEIS and as we have developed and provided, the City's position and recommendation with regard to a preliminary LEDPA decision.

The document is organized in subject matter Chapters as follows:

2. MEETING PURPOSE AND NEED
   In this chapter we elaborate on the purpose and need for the transportation improvements as we believe are intended by Norfolk and its regional partners, and embodied in the study's brief statements.
3. THE STUDY PROCESS AND DRAFT SEIS REPORTS
   Limitations of the study process, contextual clarification of technical information and concerns regarding technical analysis results are explained.
4. CONTRIBUTING INVESTIGATION AND ANALYSIS
   Critically important and relevant information is provided that was not conducted within the scope of the study by VDOT.
5. LOGICAL COMPARATIVE EVALUATION
   Factors and processes for determining "meeting of purpose" and comparing the benefits of alternatives are addressed.
6. CONCLUSIONS

5. See response to City of Norfolk comment number 1.

6. Any proposed bridges would include a vertical clearance above water relative to NAVD of 18 feet, which includes 1 foot of clearance above the 100-year design wave crest elevation (elevation 12 feet relative to NAVD 88 plus 1 foot) per AASHTO 2009 Guide Specifications for Bridges Vulnerable to Coastal Storms, plus an assumed 5 feet for potential sea level rise over the next century, per VDOT Structure and Bridge Division standard practice. These clearances have been assumed in the design and cost estimates included in the SEIS.

City of Norfolk, Office of City Manager, cont.

City of Norfolk Comments on Hampton Roads Crossing Study Draft SEIS

7

2. MEETING PURPOSE AND NEED

Because of the regional scope of this project, the Purpose and Need carries a tremendous weight and responsibility. The more challenging the issues, the more difficult it can become to communicate the Purpose and Needs. Please note that the draft Purpose and Need statements were developed by VDOT without the participation of local agencies. After several local agencies (including Norfolk) were granted Cooperating Agency status, we and others did submit comments and concerns regarding the draft statements. There were no adjustments made. Many of the concerns we are expressing now were made at that time. In summary, a project of this import, size and magnitude must have the most expansive reviews possible with benefits and impacts clearly defined.

We have concerns that relate to the specific purpose and need statements in Chapter 1 of the report, but also concerns that are inferred by the process, or the application of the process. We will begin with a broader discussion of Purpose and Need that relates to those inferred items, and then address the statements specifically.

2.1. Comments on Purpose and Need Statements

It is important to have a clearly defined purpose and need statement and evaluation criteria must be appropriately defined. We took great objection to the approach used that did not define the evaluation process and commented as such during the study.

Many in our region believe that in the purpose statement, the words "in a manner that improves accessibility, transit, emergency evacuation, and military and goods movement …" are just as important as the words "relieve congestion at the I-64 HRBT", and that "congestion" relates to both recurring and non-recurring congestion. Those words are requirements and just as important as "relieving congestion at the HRBT." Relieving congestion at the HRBT alone, and for only a few years, will not fulfill the purpose.

The Need statements supporting the purpose statement did, in some cases, inadequately reflect the critical words in the purpose statement. The use of the words "improve, increase, and enhance", do not communicate an outcome and could suggest that even minor improvements could meet the needs. This could potentially set the stage for conflict as well as potentially poor decision making. Even improvements over no-build could reflect far worse conditions than today. Determining if environmental impacts are an acceptable trade-off for improvements will be difficult with an unclear definition of benefits.

With regard to accessibility, the Need statement fails completely. Limiting water crossings limits connectivity, not only capacity. Connectivity facilitates accessibility far more than does capacity, and capacity is addressed in the first need; accommodate travel demand. Accessibility is restricted when lack of connection, congestion, and poor reliability disrupt travel disutility. Key activities relying on access in our region include:

- Access to Jobs
- Intermodal freight movement
- Military operations

2

7. As this is an SEIS, the Purpose and Need was updated and built upon the FEIS from 2001. The Purpose and Need was vetted with the public at the first Citizen Information Meeting (CIM) held in summer 2015. It was provided to the Cooperating Agencies for review and comment and was adjusted based on those comments. It was then shared with the Participating Agencies, revised again, and presented to the Cooperating Agencies for final review before being incorporated into the Draft SEIS. Prior to these reviews, the federal Cooperating Agencies had concurred on the basic tenants of the Purpose and Need. The Purpose and Need exceeds FHWA requirements and was concurred upon by the Cooperating Agencies for the purposes of this study.

In developing the Coordination Plan and a path forward through which USACE could participate in the concurrence process, provide comment relative to LEDPA, and adopt the FHWA NEPA document for future permitting actions, it was determined that a purpose statement should be included in the HRCS SEIS. The statement was jointly crafted by USACE, FHWA, and VDOT to reflect the original and revised Purpose and Need for the HRCS.

With regards to the technical meaning of words like "accessibility" and "connectivity", it is acknowledged that these terms may have technical meanings in certain professions. The same may be said for a number of other terms used in the document. A NEPA document is written to be understood by the layperson and no technical terms are implied by their use in the SEIS.

City of Norfolk, Office of City Manager, cont.

- General activity access
- Local/regional movement of goods and services
- Tourism
- Access to Richmond, Virginia, and NoVa/DC
- Access to "regional" scale land uses (e.g., one-of-a-kind regional market businesses, major event venues, medical facilities, universities, etc.)

Resiliency, a long-term, critical need for our region, is not mentioned. In an area with significant nationally critical infrastructure assets, threatened by sea level rise, major transportation investments cannot ignore this critical need. Resiliency coincides with considerations of vulnerability, and only crossing between Newport News and Norfolk is a major concern.

3. THE STUDY PROCESS AND DRAFT SEIS REPORTS

This Chapter will detail our analysis of the technical work regarding transportation and benefits contained in the Draft SEIS and supporting documents.

3.1. Comments on the Depth and Limitations of Transportation Planning Analysis

3.1.1. Existing "Transportation Performance" Conditions

3.1.1.1. SEIS Section 1.4.2, Accommodate Travel Demand

8

The study did not thoroughly address determining "demand" traffic volumes on the severely oversaturated HRBT. This practice is not consistent with Highway Capacity Manual procedures, which indicate that performance analysis should be based on demand volume including volume that is queued upstream of a bottleneck. For example, when we look at the most severe condition of "under-represented" demand, it is typical in the PM peak period that queues form in excess of 5 miles on I-64W, upstream of the HRBT Tunnel. Using assumptions related to gross density on congested versus uncongested links, and observed queue lengths, we estimate that the PM peak-hour demand for the westbound HRBT exceeds the stated 2015 volume by somewhere between 500 and 1000 vph. This information was not addressed in the study and has potentially large ramifications in the analysis.

3.1.1.2. SEIS Section 1.4.4, Increase Regional Accessibility

9

Under this section's subheading, *Relieve Congestion*, the data that has been extracted from studies or reports does not accurately reflect the exceedingly poor conditions that people are experiencing. To augment the characterization of these conditions with data reported by the HRTPO, extracted from INRIX travel time data, the report could have included the following:

- The SEIS references that the HRTPO Congestion Management Process (CMP) has reported that the "HRBT Segment" of I-64 is the most congested freeway in the region (page 1-24). In that report congestion on freeways is reported as being severe if the peak period Travel Time Index (TTI) is greater than 1.3. The SEIS references that the data indicate a peak period TTI of 1.85 for the segment (peak-hour conditions would be considerably worse). That rating indicates that current peak-period average speed reduction is almost three times as great as

8. The 2015 volumes represent the hourly number of vehicles that pass in each direction at the location shown in the volume figures. The hourly volumes are the average of multiple days of observations on a typical Tuesday, Wednesday or Thursday, as is customary in traffic and planning studies. The volumes represent an average annual value for a typical weekday. The peak hour volumes are the highest observed volumes during the AM and PM peak periods.

Because traffic count stations can only measure the traffic volume that actually passes the data collection point, the traffic counts are a measure of throughput (actual number of observed vehicles) rather than demand (the total number of vehicles that desire to travel past the count station in an hour). In free-flowing conditions, throughput may be considered a measure of demand. In congested conditions, which occur on the HRBT during peak periods, the measured throughput is indeed likely less than the hourly demand. It should be noted that over the entire day, the observed throughput does match the daily traffic demand.

To remedy the difference between measured throughput and hourly demand, traffic data was collected throughout all Study Area Corridors. For the HRCS, a total of 182 ramp/mainline counts and 48 intersection turning movement counts were performed to develop the baseline daily and peak hour traffic volumes. These baseline data were analyzed to quantify current operating conditions and develop daily and peak hour forecasts for more than 40 interchanges and 59 intersections throughout the study area.

9. INRIX data was included in the *HRCS Traffic and Transportation Technical Report (TTTR)* to quantify existing congestion. INRIX data can be used to compute either at planning time index (PTI) or travel time index (TTI). The PTI reflects variability in travel time, while the TTI is an actual measure of the congestion experienced over the year, expressed as the

City of Norfolk, Office of City Manager, cont.

City of Norfolk Comments on Hampton Roads Crossing Study Draft SEIS

10

what is considered severe. The summary page from the CMP report is shown in Figure 3.1. The SEIS report's discussion of the TTI value seems misplaced as it occurs under a paragraph on "reliability". HRTPO uses the TTI, a measure of both recurring and non-recurring congestion combined, to define the congestion level, leading to the "worst segment" ranking already discussed. TTI is not, as seems to be inferred in this paragraph, a measure of reliability.

- The SEIS discussed "travel reliability" on page 1-25, and again, seems to incorrectly refer to TTI as the measure. The HRTPO report uses Planning Time Index (PTI) to measure reliability. The critical peak-period PTI values for this entire segment are in the range of 3.0, a condition well beyond a level considered "severe" (again, peak hour would be worse).
- HRTPO's "State of Transportation in Hampton Roads - 2015" included somewhat of a comparative analysis which puts some perspective on these congestion and reliability conditions. The comparison ranked certain congestion parameters including congestion and PTI, among 36 cities in a comparable size category. Figure 3.2 contains and comments on those portions of this comparison. The travel conditions for the I-64/HRBT corridor are likely some of the worst in the country.

11

The last paragraph on Page 1-24 addresses queue lengths in the I-64/HRBT corridor. Figure 3.3 helps to illustrate average conditions of queuing and speed performance using Google Maps.

12

Even though the term "accessibility" is in the title of this section, there is no assessment of accessibility. An accessibility analysis would show that areas in Newport News and northwestern Norfolk have poorer levels of geographic accessibility than most others in the region. And yet, these areas have some of the highest concentrations of employment in the region.

13

Also not addressed in the document, the condition that exists today for the travel market between the Peninsula and the Southside is one of very poor connectivity. With only one connection to Norfolk, the network is overloaded and unable to absorb faults or spikes. There are also proximal activities that require long travel distances compared to what is possible with a new crossing.

3.1.2. Other Approach Limitations

The approach to the study did not appear to attempt to forecast or meaningfully understand how each alternative would address a number of critical issues, including:

14

- Impacts on Reliability
- Safety benefits
- Evacuation benefits
- Intermodal operations benefits
- Military connectivity/access benefits

4

ratio between the uncongested travel time and average actual travel time. The *HRCS TTTR* provided the computed TTI. The high value shown for the TTI accurately documents the severe congestion experienced on the HRBT.

10. The findings in the SEIS concur with the finding that I-64/HRBT is the most congested roadway of all Study Area Corridors being studied. The paragraph discussing reliability and TTI has been revised to discuss each topic in separate paragraphs.

11. Although Google Traffic maps are useful to the general public, their raw data are not available to VDOT, and the analyses cannot be replicated for this study. The INRIX data analyzed for the study area are included in the *HRCS TTTR*. The INRIX analyses are consistent with the observations made by the City of Norfolk regarding queueing and travel time and reliability, including the Google Maps images.

12. The HRCS considered accessibility which measures improvements in access by increases in the distance that can be traveled within a given time period (i.e., enlarging the travel shed). The Preferred Alternative would improve accessibility by reducing travel times and increasing speeds on the Study Area Corridors. The VHT data included in the *HRCS TTTR* indicate that VHT decreases under all alternatives, thus increasing accessibility as it is considered in the Smart Scale process.

13. Implementation of the Preferred Alternative would not preclude improvements to other corridors and new crossings. Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill (I-664 / I-264 / I-664 / US 460) Interchange, which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also could affect the CIDMMA and surrounding Navy and Coast Guard properties.

City of Norfolk, Office of City Manager, cont.

City of Norfolk Comments on Hampton Roads Crossing Study Draft SEIS

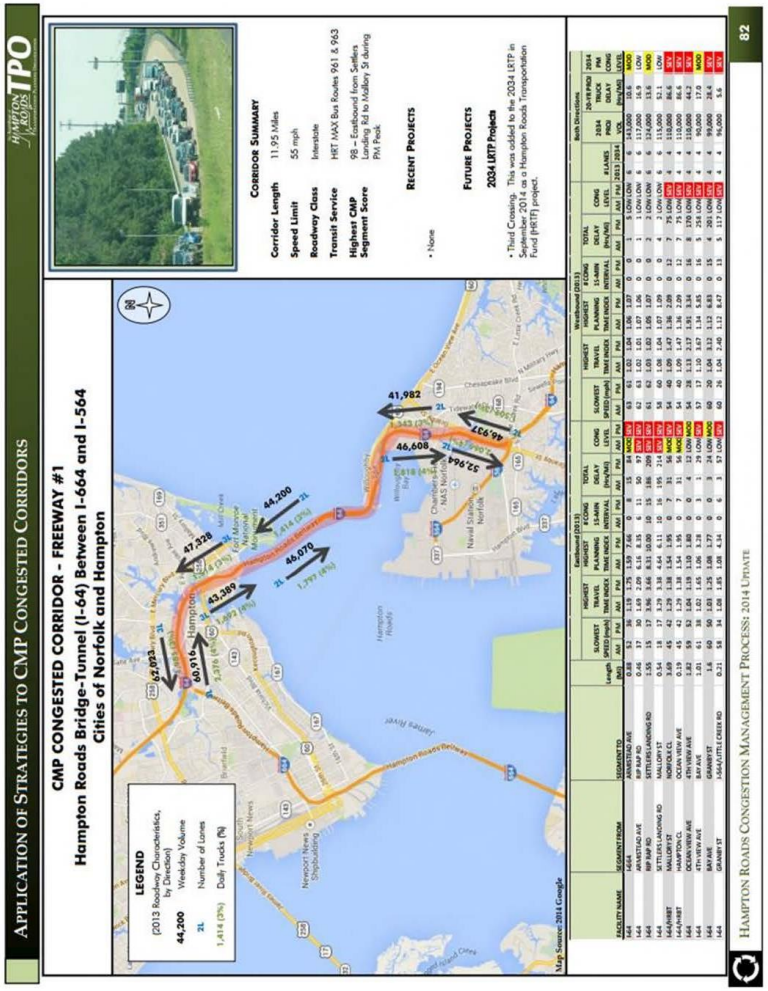

Figure 3.1 I-64/HRBT Corridor Performance from HRTPO CMP

Future plans for these locations are uncertain, and therefore potential impacts are not clear. VDOT, on behalf of FHWA, continues to coordinate with these agencies to identify acceptable transportation improvements that could be made in the vicinity of the federal properties. Though these improvements are not included in the Preferred Alternative for the HRCS SEIS, they remain regional priorities. HRTPO has set aside funding to continue to study the crossing of the Elizabeth River and improvements to these other study area corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

14. The HRCS SEIS is a NEPA study that evaluates the range of environmental impacts and reasonable alternatives, and is not exclusively a detailed operational analysis or forecast of all possible traffic scenarios. The HRCS was scoped and performed in accordance with FHWA guidance, coordination with Cooperating Agencies, and VDOT direction. The analysis in the SEIS is sufficient for assessing the benefits of each alternative as well as adverse impacts and estimated cost. Emergency evacuation and military connectivity were addressed as part of the Purpose and Need.

City of Norfolk, Office of City Manager, cont.

City of Norfolk Comments on Hampton Roads Crossing Study Draft SEIS

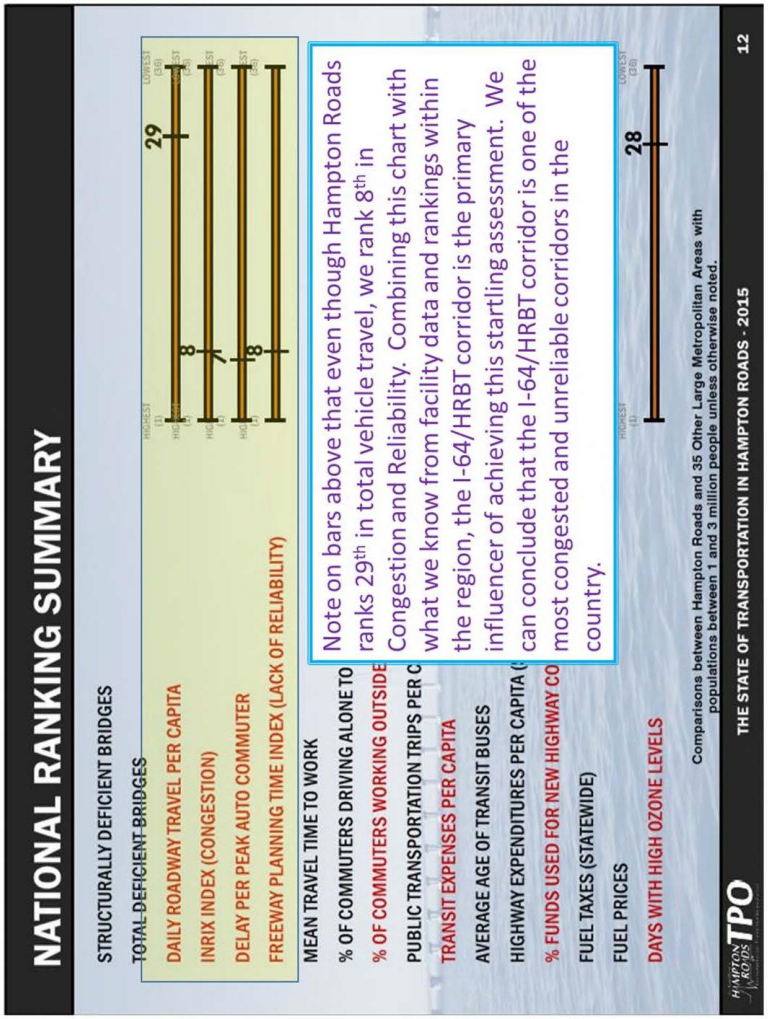

Figure 3.2 Congestion and Reliability Data

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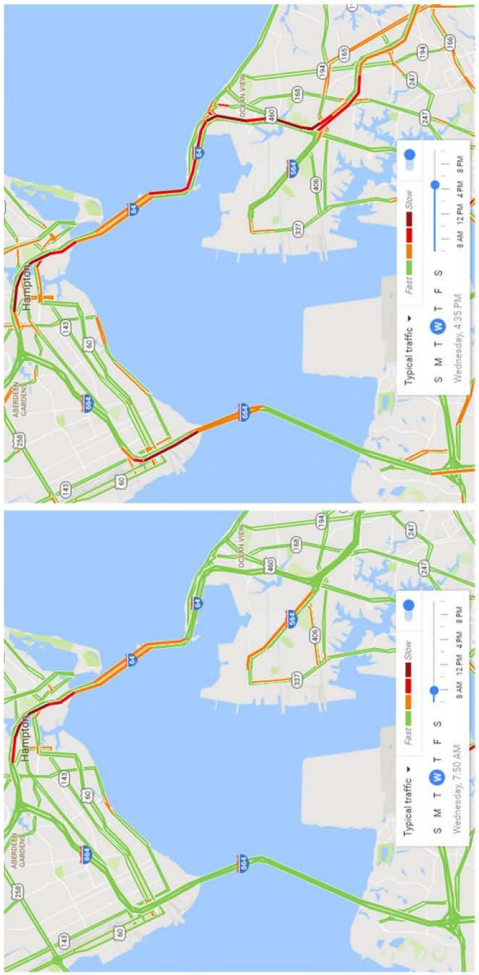

Source: Google Maps, 9/14/16

Figure 3.3 Existing (2016) Traffic Conditions on Crossing Segments

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3.2. Comments on Material in Traffic and Transportation Technical Report (TTTR)

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The TTTR was an extremely difficult document to review. The document does not provide a sufficient description of methodologies and background for understanding how the reported figures were developed, and hence, how they can and should be interpreted. There is concern over the ability for various agencies, local, state and federal, to draw reasonable and fair inferences from this report for the purposes of evaluating alternatives against purpose and need, and in terms of environmental impacts.

3.2.1.Section 2.4.2, Post-Processing -- 2015 Peak-hour traffic development

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The Draft SEIS, page 1-23, Relieve Congestion section, contains a statement indicating that for the key I-64/HRBT segment, "peak traffic severely exceeds existing capacity." In other words, the peak-hour traffic demand significantly exceeds existing capacity and results in the substantial queuing and delays that occur. This intolerable traffic condition at the I-64/HRBT is the primary driver behind the study, yet it appears that no attempt has been made to understand this demand/capacity relationship. This section of the report describes that the 2015 peak-hour traffic volumes we are seeing in the report are a culmination of a series of traffic volume data from counts, and a "balancing" routine that attempts to make traffic volumes on adjoining links "match" (a process which is not necessary). It is in this "balancing" that VDOT has informed us, in response to one of our previous comments on this subject, they have accounted for demand. The problem with this statement is that the resulting volumes cannot explain the queues and delays. Therefore, there are questions about having data that cannot explain the stated conditions, and no resolution of this conflict is sought.

The primary focus should have been on ensuring that the "base" data used could support the observed congestion conditions. Without that connection one would have to assume the demand volume is not correct, and that all ensuing calculation results that had some reliance on that data are also suspect. We estimated that the westbound HRBT demand volume exceeds the 2015 volume indicated by somewhere between 500 and 1000 vph. Since the PM peak-hour I-64W demand volume shown in the report is 3,155 vph, a figure actually slightly under the observed capacity of this link, it is absolutely necessary to believe that the demand volume must be substantially higher to cause the five-plus miles of queuing that occurs on a regular basis on I-64, plus additional queuing on approach links. We have used this critical segment, which causes severe difficulties in Norfolk, as the example, but suggest that the 2015 peak-hour demand volumes are similarly misrepresented on other congested approaches.

3.2.2.FORECASTING PROCESS, Post-Processing 2.4.2 -- 2040 Peak-Hour Volume Development

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This section refers to the use of a "k" factor for calculating peak-hour demand volumes based on their proportion of daily volume (presumed to be Average Weekday Traffic Volumes, AWDT, although the report uses the acronym ADT). It is not clear if there is an expectation that this process yields an "average" peak-hour volume, or a design-hour volume. According to the text the future AM and PM "k" factors are based on the 2015 "k" values. This raises a major concern since we have already raised the concern that 2015 peak-hour volumes reported in this study at the HRBT, and possibly others, that were used to calculate 2015 "k"

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15. The procedures used to develop the traffic forecasts and analyses were documented in Section 2 of the *HRCS TTTR* All analyses were conducted in accordance with accepted guidelines, including NCHRP 765. The *HRCS TTTR* acknowledges recent FHWA guidance regarding the use of Level of Service as a metric and use of alternative metrics to measure the performance of Alternatives compared to the No-Build scenario. The Purpose and Need Statement did not establish specific traffic objectives that should be achieved; rather, the impacts are based on the footprint of different facilities. In addition, VDOT prepared additional hot-spot traffic analyses which were presented during the May 23, 2016 Cooperating Agency meeting, which were subsequently incorporated into the SEIS.

16. As noted in detail in the response to City of Norfolk comment number 9, the hourly volumes at the HRBT are developed from a variety of sources, including count data at the HRBT and ramp and mainline counts upstream of the HRBT bottleneck where free-flow conditions generally prevail, even during most of the peak periods. By "holding" the volumes at locations with free-flow conditions and adding/subtracting traffic that enters/exits I-64 at downstream locations (including known bottlenecks), the calculated volume at the bottleneck is a better indicator of demand, rather than the observed throughput at the bottleneck. The data reduction procedures and estimates of the existing capacity of the HRBT (and other key roadway segments) have been found appropriate and defensible by FHWA and VDOT to support the SEIS. The development of balanced existing traffic provides for an accurate representation of existing conditions that provide the baseline for other study disciplines, in particular air and noise modeling.

17. The k-factor is defined as the ratio between hourly volume and daily volume, and usually is computed for the peak hour. A low k-factor indicates that a relatively low percentage of daily traffic occurs during the particular hour for which the k-factor is calculated, whereas a high k-factor indicates that peak hour traffic experiences a more pronounced spike

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values, appear to be incorrect. More particularly, they appear low, so the inference carried forward is that the 2040 peak-hour demand volume estimates would also be unreasonably low. Following these calculations, the operational analysis of conditions on the HRBT would under-represent likely levels of congestion.

To further illustrate this issue, the "k" from the 2015 data for the PM peak-hour on the HRBT would be 0.073. If the peak-hour demand volumes are assumed to be higher, to reasonably account for observed queuing, this value would be in the range of say 0.08 to 0.085, or 10 - 20% higher. The 2040 westbound PM peak-hour demand volume estimated for Alternative A is 4,710 vph. This volume would result in a volume/capacity ratio for this link of under 1.0 (uncongested)

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Looking at what we could expect for future conditions on the HRBT for Alternative A using a different, but logical approach, could go as follows. The 2015 daily volume for the HRBT is 91,000 vpd. The estimated Alternative A daily volume for 2040 is 137,700, an increase of 51%. Alternative A increases the capacity of the HRBT by 50%. Based on the estimated daily traffic growth and roughly equal capacity growth, one should conclude, that Alternative A would have similar very poor performance conditions as 2015.

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We should easily come to the conclusion, based on the daily traffic forecast, that 2040 conditions for westbound PM traffic on the I-64/HRBT segment would be similar to those experienced today. However, since we have a peak-hour demand estimate that suggests an uncongested experience, this should be cause for great concern regarding the soundness of the approach used for estimating future peak-hour traffic demands and Levels of Service. The use of mathematical procedures that arbitrarily develop numbers, rather than in an explanatory way, regardless of what NCHRP Reports they appear in, and that produce data that defies observed conditions, is not a reasonable approach to future conditions estimating, particularly for a study of this magnitude. We know that VDOT intended a "limited" level of performance analysis for this environmental study, compared to a conceptual/preliminary design analysis. The report did not include any guidance as to how the results of the analysis should be interpreted, nor are there any comparative evaluations based on this information where conclusions are drawn.

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What we can conclude from this exercise we should simply convert into a caveat for the peak-hour conditions analysis. Considering that this study put limited effort into fully understanding existing, or "baseline" conditions, to create a sound foundation for forecasting; considering that the daily volume forecasts are an odd mixture of travel demand model and growth factor estimations; and considering that the year of the forecasts represents conditions quite early in the life of these facilities; these analysis results seem to have little value other than as a "screening" tool to identify project segments that may have insufficient capacity in the future. It is probably reasonable to conclude that links identified as such would ultimately reach that condition in their life. We will use that interpretation later in this document.

during the particular hour relative to the daily volume. For urban freeway facilities, a k-factor of approximately 0.07 (7 percent) is a typical value.

For the HCRS, existing peak hour k-factors were computed by dividing the peak hour volume for each peak hour by the daily volume. These k-factors were used as starting point to estimate future peak hour volumes from projected future daily volumes. Future k-factors were reduced slightly if daily volumes were projected to increase to account for the effects of peak hour spreading (i.e., drivers choosing to travel earlier or later than they currently might to better take advantage of available roadway capacity). In discussions with FHWA, it was specifically suggested that peak hour spreading should be considered in the post-processing of the travel demand model output. All experience in the U.S. suggests that future k-factors should be lower than existing k-factors to account for peak hour spreading. Furthermore, the future conditions forecasts represent the constrained demand that is appropriate for air and noise analysis.

18. Comment noted. It is also noted that a 51% increase in traffic is a planning forecast based on land use and socioeconomic inputs provided by the localities. Land use decisions made by the localities going forward will continue to influence the percent increase in traffic.

19. As noted in Chapter 2 of the *HRCS TTTR*, the procedures were not developed arbitrarily but using accepted industry practices that FHWA and VDOT find appropriate and defensible to support the SEIS, including the procedures outlined in NCHRP publication 765.

20. The *HRCS TTTR* and Section 2.7 in the Draft SEIS provide full comparisons of the four alternatives. The intent of a NEPA study is to lead to informed decision making. An EIS is not written to support one alternative over another. In heavily developed areas, building what is needed to best address the identified purpose and need is not usually practical given the constraints that exist. Therefore, decision makers have

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3.2.3.Section 5.1, DESIGN YEAR 2040 FORECASTS AND ANALYSIS, SUMMARY

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The performance values presented in this section are reported based on two completely different methodologies, and this is not clearly explained, if at all. One methodology centers on the estimation of 2040 peak-hour demand volumes and subsequent performance analysis purportedly using Highway Capacity Manual (HCM) procedures (generally in Section 5.1 and 5.3). The other relies solely on TDM output from the 2034 model application (reported in Section 5.2). Further, each methodology has considerable weaknesses/concerns, and bases estimates not only on different "performance" methodologies, but on the basis of substantially different assumptions regarding estimated traffic volumes and roadway capacities.

In Section 5.1, Table 5-1, we can "extract" changes in how much traffic the model estimates "crossing the water", from alternative to alternative. Notably, compared to alternatives A and B, crossing traffic volumes increase in C and D. In fact, compared to Alternative B (chosen because C and D include the I-564/VA 164 connector component contained in B, which sets a "baseline"), C sees an increase of 15,000 daily trips, while D sees 19,000.

From Table 5-2 we can apply our "interpretation" of the HCM Level Of Service results, noting that any segment that has LOS F, is in fact extremely likely to have that condition during the life of the project. Given that, we can see that Alternative D is the only one that could provide uncongested performance. Alternative C is the next-best performing alternative. Further we can combine the ramifications of what these two tables present to a more meaningful conclusion: that Alternatives C and D outperform Alternatives A and B, and they do it while serving more trips. This is a clear statement regarding benefit to the I-64/HRBT travel market as a "comprehensive product", and addressing the purpose and need.

3.2.4.Sections 5.1 and 5.2, DESIGN YEAR 2040 FORECASTS AND ANALYSIS

3.2.4.1. HCM Analysis

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Figures 5-3 and 5-4 contain the detailed analysis results of the 2040 peak-hour, HCM-based "operational analysis". Table 5-3 summarizes segment travel time estimates produced from this analysis. This analysis did not follow the HCM recommended methodology for oversaturated freeway sections however, and as a result in many cases the values presented severely underestimate travel time (travel times should be higher, average speeds should be lower). As an example, the procedure produced estimates of current peak-hour travel time for the westbound direction of I-64 in the PM peak to be 16.6 minutes, and we know it to be around 30 or more. Then it estimates for the same movement, in the 2040 No-Build condition, 19.0 minutes. The HCM identifies that in order to estimate delays on oversaturated sections, a multi-period analysis that identifies capacity bottlenecks and calculates building and dissipating queues, is necessary. Although there is no text that explicitly states how the numbers were in fact calculated, one can only assume that this was not done. As a reminder, we feel the demand volumes have been frequently underestimated, which would also contribute to reporting better travel times than appropriate.

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to sometimes be willing to accept less than ideal improvements since they have to balance cost and impacts while meeting the Purpose and Need.

21. Detailed traffic analysis was developed for this study. The Draft SEIS relied on 182 ramp/mainline counts and 48 intersection turning movement counts in the spring and fall of 2015, as well as the 2034 Hampton Roads LRTP and the 2034 Hampton Roads travel demand model. Both 2034 travel demand model and 2034 LRTP were the latest adopted regional planning tools and documents at the time of the study initiation. Hot spot analyses were performed to evaluate the relative changes in travel time and delay of each alternative, in response to stakeholder concerns. The forecasts were developed using accepted practices documented in NCHRP publication 765. More information on the traffic analysis can be found in the *HRCS TTTR*. Traffic information has been updated for the Preferred Alternative with the latest 2040 regional Travel Demand Model.

22. Methods and results are consistent. The 2034 travel demand model output was specifically analyzed to respond to stakeholder requests (as discussed in May 2016). With regard to the difference in capacity estimates in the travel demand model vs. Highway Capacity Manual (HCM) procedures, it is customary to express capacity in vehicles per hour. In models where daily (weekday) highway assignment is used (and therefore the volume variable is expressed in vehicles per day), the hourly capacity estimates must be converted to daily representations. This conversion is most commonly done using factors that can be applied to convert the hourly capacity to effective daily capacity (or, conversely, to convert daily trips to hourly trips, which is equivalent mathematically). These factors consider that travel is not uniformly distributed throughout the day and that overnight travel demand is low. The conversion factors are therefore often in the range of 8 to 12, as opposed to 24, which would be the theoretical maximum for an hourly-to-daily factor.

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3.2.4.2. TDM Analysis

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In Section 5.2 a different set of travel time measures are reported. These are based on output from the TDM, attributed to the year 2034. The methodology employed in the TDM for predicting speeds on roadway segments is a gross procedure that also does not reflect the bottleneck/queuing dynamic that is the driving force behind delays, and it is not intended to produce appropriate travel time measures for corridor/facility level planning studies. This methodology will over predict average speeds on congested sections of freeway, and the amount of error will increase as the deficit of capacity increases. In addition the model does not recognize that the capacity of the bridge-tunnels is substantially less than other freeway links, and on that basis under-predicts congestion for those critical links. Second, calculation of peak-hour demand volumes includes an inferred "region-wide" "k" factor. In this case, that value is around 0.089 (remember that about 0.073 was calculated for existing, and we believe it is more like 0.08 – 0.085). The resulting volume-capacity ratios, which determine the predicted speeds, for the bridge-tunnel links, are based on both capacities and peak-hour demand volumes that are completely different from and inconsistent with the "localized" values.

3.2.4.3. Comparison of HCM Analysis and TDM Analysis

A comparison of travel time figures on a key I-64 segment is provided below to illustrate the report's methodological inconsistencies and draw attention to concerns. Most notably, the report states an estimate of No-Build travel time of 45 minutes westbound for 2034, and for the same direction, 20 minutes for 2040 (free-flow would be about 13 minutes). Also of note, the HCM 2040 results indicate that westbound traffic has a lower travel time than eastbound.

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A Comparison of HCM and TDM Based Travel Time Estimates for I-64 PM Peak (minutes)							
		Existing	No-Build	Alt A	Alt B	Alt C	Alt D
TDM 2034	*EB*	*20*	*26*	*18*	*18*	*19*	*15*
	WB	25	45	32	31	30	23
HCM 2040	*EB*	*17.7*	*20.7*	*18.5*	*18.3*	*18.3*	*17.0*
	WB	16.6	19.0	16.6	14.6	18.0	14.5

3.3. Comments on Material in Draft SEIS, Chapter 3, AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter of the SEIS includes, for many of the environmental impact categories addressed, some "assessment" of the consequences of the alternatives on the category. We disagree with many of these statements. We have previously submitted comments on these following release of the pre-draft SEIS.

The Indirect and Cumulative Effects process does not seem available to reflect the positive environmental consequences of alternatives. We believe that the alternatives that will

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These types of conversion factors continue to be needed in models where time periods for assignment greater than 1 hour in length are used.

23. The HCM analyses in the HRCS SEIS employed the Facilities analysis module, which does account for oversaturated roadway segments. The analyses present a relative comparison of the performance of each alternative.

24. FHWA and VDOT find the forecasting and analysis methodologies appropriate and defensible to support the SEIS, and they meet the requirements.

25. The TDM model explicitly lowers capacities on the bridge-tunnel crossing relative to freeway link capacity elsewhere along I-64 (and I-664). It is customary to express capacity in vehicles per hour. In models where daily (weekday) highway assignment is used (and therefore the volume variable is expressed in vehicles per day), the hourly capacity estimates must be converted to daily representations. This conversion is most commonly done using factors that can be applied to convert the hourly capacity to effective daily capacity (or, conversely, to convert daily trips to hourly trips, which is equivalent mathematically). These factors consider that travel is not uniformly distributed throughout the day and that overnight travel demand is low. The conversion factors are therefore often in the range of 8 to 12, as opposed to 24, which would be the theoretical maximum for an hourly-to-daily factor.

The Hampton Roads Travel Demand Model (HRTDM) selects the link capacity based on facility and area types. It is not common to manually specify the capacity for individual link. Instead, the travel demand model typically applies time penalties on sections of the network where a topographical barrier, such as a river, mountain range, or large open spaces in the transportation network exists. The need for these penalties

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is due to the lack of current research and precise quantification of the impact of large spatial separations between zones on travel behavior. However, bridge crossing penalties need to be within a reasonable limit. For a heavily congested bridge like the HRBT or MMMBT, which has few alternative bridges nearby, a higher penalty is more appropriate than smaller crossings with more alternative route options.

In summary, the river crossing time penalties are used to calibrate trip distribution models to match the observed travel patterns, because the gravity model alone does not do a good job of considering physical barriers.

The 4.2 min/mile time penalty was applied in the HRTDM to the facilities crossing James River from North to South in all model scenarios, including the existing conditions scenario, No Build scenario, and all Alternatives.

26. The forecasting methodology computed k-factors for each individual segment, ramp and turning movement in the roadway network, and did not apply a region-wide k-factor.

27. The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

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28 substantially improve accessibility for the core of the Hampton Roads region (C and D), would ultimately have indirect and cumulative effects in very positive ways for the region, particularly socially and economically, and could reduce regional natural resource impacts by facilitating more efficient land use patterns.

3.4. Comments on Draft SEIS Chapter 2: ALTERNATIVES

3.4.1.Section 2.2.2, Methods for Assessing Ability of Each Alternative to Meet Needs
No sound mechanism was put in place to use as the framework for evaluating alternatives for their ability to meet needs. Both the purpose and the needs contain words common to our industry and they are subject to interpretation, particularly when there are no accompanying evaluation criteria or stated desired outcomes. Section 2.2.2 does little to improve on this issue, and as we have noted in our Section 3.1.1, we question the manner in which the SEIS discusses the needs of Accommodate Travel Demand, and Increase Regional Accessibility. The table below identifies some concerns related to each identified need and in some cases, thoughts toward ways in which they could be better addressed.

Concerns with 2.2.2 Methods of Assessing Ability of Each Alternative to Meet Needs	
"The purpose of the HRCS is to relieve congestion at the I-64 HRBT in a manner that improves accessibility, transit, emergency evacuation, and military and goods movement along the primary transportation corridors in the Hampton Roads region, including the I-64, I-664, I-564, and Route 164 corridors."	
Need	**Concern**
Accommodate Travel Demand	Accommodate Travel Demand is at best nebulously defined, and only by inference from the statement "capacity is inadequate". The level of performance at which demand is accommodated is not discussed, nor is the definition of Demand. "Demand" as estimated by the model and further extrapolation (2034 to 2040) does not necessarily consider all of the benefits of improvements (e.g.- reliability), nor does it consider how changes in land-use as a result of a more robust network could change demand. And as we have mentioned, a year 2040 threshold for what may be a 20 – 30 year investment program, which does not serve its first vehicle until at least 2028, is not addressed – but we will confine the further comments here to simply addressing how the report has addressed its issue within its limited threshold context. Beyond what may be limitations in actually understanding potential demand, there are no easily discernible and consumable "measures" provided to compare alternatives, such as a volume-to-capacity ratio, the simplest and most telling measure. Some travel time estimates are provided, but as we have discussed those have not provided a reliable or solid framework, and there are tools that could not only provide more robust information, but also at a higher degree of confidence. Results in the report for specific facilities are grossly estimated. As such they may reflect a trend, but care should be taken in relying heavily on magnitudinal differences.
Improve Transit Access	Using the term "improve" leaves something to be desired, as it suggests any

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As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

28. The comment does not provide any definitive examples to respond to. The ICE analysis identifies positive and negative impacts related to each alternative as well as the potential for induced growth and/or infill development around existing or new interchanges. This analysis was based on a published and accepted methodologies including the NCDOT Guidance for Assessing Indirect and Cumulative Impacts of Transportation Projects in North Carolina, Vol. II: Practitioners Handbook (NCDOT, 2001).

29. The SEIS was prepared with the latest currently available land use forecasts for the latest horizon year (2034). The intent of the Purpose and Need statement is not to define the amount by which an Alternative

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31	improvement could meet a need. This could not be further from the truth. The specific locating of transit routes and stations is extremely critical to achieving worthwhile utility and ridership. For long-term successful transit utilization between the Peninsula and Southside, the ability to meet a "transit need" has to investigate routing, and connectivity to other existing or planned services.
Increase Regional Accessibility 32	Using the term "increase" leaves something to be desired, as it suggests any increase could meet a need. In addition, the SEIS report has failed to address the most important components of improving accessibility from a transportation network perspective: increasing connectivity that shortens travel distance for some trips and provides alternative routes that can mitigate reliability issues. The SEIS report says that the "measures" for this need are *capacity* and *congestion relief*. First, these are in essence the same thing – congestion relief is an outcome of capacity increase. Second, it is no more important than these two benefits of increased connectivity. Third, it is independently addressed as an evaluation item above – "Accommodate Travel Demand". Therefore this evaluation factor should really focus on increasing connectivity, for shortening trips and improving reliability. We will address the meaning of accessibility in detail in the next section of this document.
Address Geometric Deficiencies 33	To some extent geometric deficiencies can be addressed by reducing the exposure of those deficient elements to traffic, and by management techniques. Of course, removing them is preferable, but we should consider these factors as alternatives to costly modifications.
Improve Strategic Military Connectivity 34	Using the term "improve" leaves something to be desired, as it suggests any improvement could meet a need. The description of this item notes that an important part of this need relates to intra-military operations, but it also notes that personnel access (commuters) to the installations is of course critical to the success of their missions. In particular in Norfolk a matter of concern is the commuting population destined for Naval Station Norfolk and the other facilities in that northwest "cul-de-sac" corner of Norfolk. This heavy commuter traffic volume has substantial negative impacts to both interstate and surface street facilities in Norfolk, and it is important that those impacts be considered for determination of meeting need. Without a new connection nothing changes for the military.
Enhance Emergency Evacuation 35	Using the term "enhance" leaves something to be desired, as it suggests any enhancement could meet a need. First to be clear the need is for any emergency, not just a hurricane. While we hope they never occur, we have to be prepared for other events, both regional and more localized, that could create a demand for Southside-to-Peninsula evacuation, or vice-versa, demanding capacity in this corridor. We also have to consider inclusively the vulnerability of the evacuation routes themselves.
Increase Access to Port Facilities 36	Using the term "increase" leaves something to be desired, as it suggests any increase in access could meet a need. The need for VIT-related freight traffic is definitively weighted more heavily to connecting to US 58 to the west, via a more reliable and less impacting route than I-64/I-264 or Hampton Blvd. in Norfolk. Under existing conditions traveling from VIT to the north is so onerous that it is believed to affect the Port's market area. Improving this condition as well would certainly benefit the Port.

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should improve any particular condition or set a certain standard to be met. It identifies the purpose of the overall study, the needs for improvement, and is used as a mean to compare the alternatives under consideration. Each retained alternative was assessed for its ability to provide improvements to important sections of the roadway network that would accommodate future travel demand.

30. VDOT compared the traffic model used in the 2001 EIS and the 2015 SEIS, use of the Hampton Roads Regional Travel Demand Model, and parameters used for the SEIS effort: traffic volumes, speed, travel time, VHT, VMT, and delay.

FHWA does not specify the traffic modeling methodology to be used for NEPA documents, but does specifically address traffic evaluation methods for noise and air quality analyses. The traffic modeling methodology for the HRCS SEIS is consistent with that used for all FHWA EIS's completed in Virginia over the last 30 years. FHWA does not typically prescribe performance metrics for determining if elements of Purpose and Need are satisfied. Given the environmental constraints that exist in many of the study corridors, FHWA did not want to unduly limit the number of alternatives for consideration by eliminating from consideration alternatives that did not meet arbitrarily established metrics. The means by which the need elements were met are described in **Section 2.6** of the Final SEIS. This manner of alternatives evaluation has been found acceptable by FHWA, VDOT, and all of the Federal Cooperating Agencies that may be in a position to adopt the analyses conducted for future actions.

The Preferred Alternative has been identified using a broad range of factors. As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS. The CTB, informed by input from the public, HRTAC, HRTPO, and Study's Federal Cooperating Agencies, found

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3.4.2.Section 2.6, ALTERNATIVES RETAINED FOR DETAILED STUDY

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Our comments are related to the "Ability to Meet Needs" sections for each Alternative. We note that for each alternative, in this section, there is a statement related to each of the identified needs, presumably regarding the Alternative's ability to meet that need. We find it difficult in many cases to find the connection between the statement and the need, or to what level the need is met. In this document, we are providing information of our own in that regard. Some aspects of the alternatives' performance with respect to meeting a need may be related to traffic performance estimates, some of which are summarized in this SEIS Chapter in 2.7. This information is pulled from the Traffic and Transportation Technical Report, and we have previously addressed that information in this document in our Section 3.2. We have prepared the table below to communicate our interpretation of this Section's statements, with regard to whether, or to what extent, needs are met. We have added a "fifth" alternative, "D with Transit from C", in order to provide an alternative that meets all of the needs.

HRCS Draft SEIS Alternatives Evaluation Matrix – City of Norfolk					
Need	**A**	**B**	**C**	**D**	**D with Transit from C**
Accommodate Travel Demand	Does not meet	Does not meet	Mostly Meets	Meets	Meets
Improve Transit Access	Does not meet	Does not meet	Meets	Does not meet	Meets
Increase Regional Accessibility	Does not meet	Does not meet	Mostly Meets	Meets	Meets
Address Geometric Deficiencies	Meets 70%	Meets 70%	Meets 30%	Meets	Meets
Improve Strategic Military Connectivity	Does not meet	Meets 50%	Meets	Meets	Meets
Enhance Emergency Evacuation	Meets 50%	Meets 50%	Meets 50%	Meets	Meets
Increase Access to Port Facilities	Does not meet	Meets 70%	Meets	Meets	Meets

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Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, found it to be the Preferred Alternative.

31. Each retained alternative was assessed for its ability to improve transit access across Hampton Roads either by improving transit capacity or access to transit.

The location and frequency of transit routes are determined by others. Those with that responsibility may adjust routes based on improvements that are approved.

32. Each retained alternative was assessed for its ability to increase capacity to existing facilities or add new access to and from regional activity centers using roadways on new location. The means by which this need element was met are described in **Section 2.6** of the Final SEIS. This manner of alternatives evaluation has been found acceptable by FHWA, VDOT, and all Federal Cooperating Agencies that may be in a position to adopt the analyses conducted for future actions.

33. It is not clear what the City means by 'management techniques'. Two key issues are representative of the geometric deficiencies of existing facilities in the Study Area Corridors. Each retained alternative was assessed for its ability to provide shoulder widths that meet current design standards and for its ability to provide vertical clearance in the tunnels that meet current design standards. The means by which this need element was met are described in **Section 2.6** of the Final SEIS.

34. Each retained alternative was assessed for its ability to improve strategic military connectivity by providing adequate capacity, and increased reliability for the STRAHNET network by improving access to facilities. The means by which this need element was met are described in **Section 2.6** of the Final SEIS.

City of Norfolk, Office of City Manager, cont.

City of Norfolk Comments on Hampton Roads Crossing Study Draft SEIS

4. CONTRIBUTING INVESTIGATION AND ANALYSIS

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The framework for considering the value of these potential improvements should be hundreds of square miles, not a few, and decades of time, not less than 20 years. Our comments indicate that there are limitations of the analysis and conclusions regarding the "performance" of alternatives. The information in this chapter is to supplement the evaluation process.

Elaborating on "Long-Term" success, the investments and decisions in regard to environmental impacts must be viewed regionally, not by specific corridors. Considerations made must manage the risks associated with change; such as economic changes at the state, national and global levels as well as the influence of anticipated sea level rise. Mega-projects are not validated only on the basis of a 20-year-or-less life. As previously noted, much of the traffic data contained in the SEIS reflects conditions in 2034, long before the complete system of recommended projects could be built.

The remainder of this section provides new or expanded information regarding several important criteria for considering the value of the alternatives.

4.1. Travel Markets – the Framework for Considering the Value of Alternatives

4.1.1.Travel Markets

There are very definable travel markets for interaction between the "Peninsula" and the "Southside". The nature of the problem that drives this study is that I-64 and the HRBT segment crossing the Hampton Roads harbor create the infrastructure defining a travel market. However, the travel market is so strong that the infrastructure provided is insufficient, creating conditions of extreme congestion and unreliability. The urban travel market needs, irrespective of the facility, exists simply due to proximity and synergy. Additionally, there is an intra/interstate demand market that uses the same infrastructure. That the need far exceeds the capacity that the HRBT/I-64 segment can provide is the root problem that needs to be addressed.

The study purpose includes another travel market provided by the MMMBT/I-664 connection between the Peninsula and Southside, also crossing the Hampton Roads harbor. This travel market has not yet exceeded that infrastructure capacity, but is expected to as the region grows. These two travel markets are illustrated in Figure 4.1.

4.1.2.Existing and Future Land Use

If high travel demand on these travel markets is expected, these travel markets must include an inventory of substantial complementary land use. 30% of regional land use is located on the Peninsula; including major military employers, universities and Newport News Shipbuilding. The I-64/HRBT travel market contains the dominant industrial, business, military and historical land uses and harbor resources that drive our regional economy. Three-quarters of our employment occupies this travel market as well. Much of this employment is linked to the geography and is critical to the region and state's economy. Figure 4.2 illustrates these

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Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill (I-664 / I-264 / I-664 / US 460) Interchange, which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also could affect the CIDMMA and surrounding Navy and Coast Guard properties. Future plans for these locations are uncertain, and therefore potential impacts are not clear. VDOT, on behalf of FHWA, continues to coordinate with these agencies to identify acceptable transportation improvements that could be made in the vicinity of the federal properties. Though these improvements are not included in the Preferred Alternative for the HRCS SEIS, they remain regional priorities. HRTPO has set aside funding to continue to study the crossing of the Elizabeth River and improvements to these other study area corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

35. Each retained alternative was assessed for its ability to enhance emergency evacuation capacity along existing evacuation routes or by adding new routes. During the development of the study, the focus of the evacuation section was shifted from hurricanes to overall emergency evacuations which are a great concern in Hampton Roads. Typographical errors that resulted in references to "hurricane" have been replaced with with "emergency"in the Final SEIS. The means by which this need element was met are described in **Section 2.6** of the Final SEIS.

36. Each retained alternative was assessed for its ability to accommodate increased truck traffic from the Port of Virginia expansion while addressing congestion and the need to improve capacity to and from the ports. The SEIS does not propose that one port facility is more critical or important than another. The means by which this need element was met are described in **Section 2.6** of the Final SEIS.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were

City of Norfolk, Office of City Manager, cont.

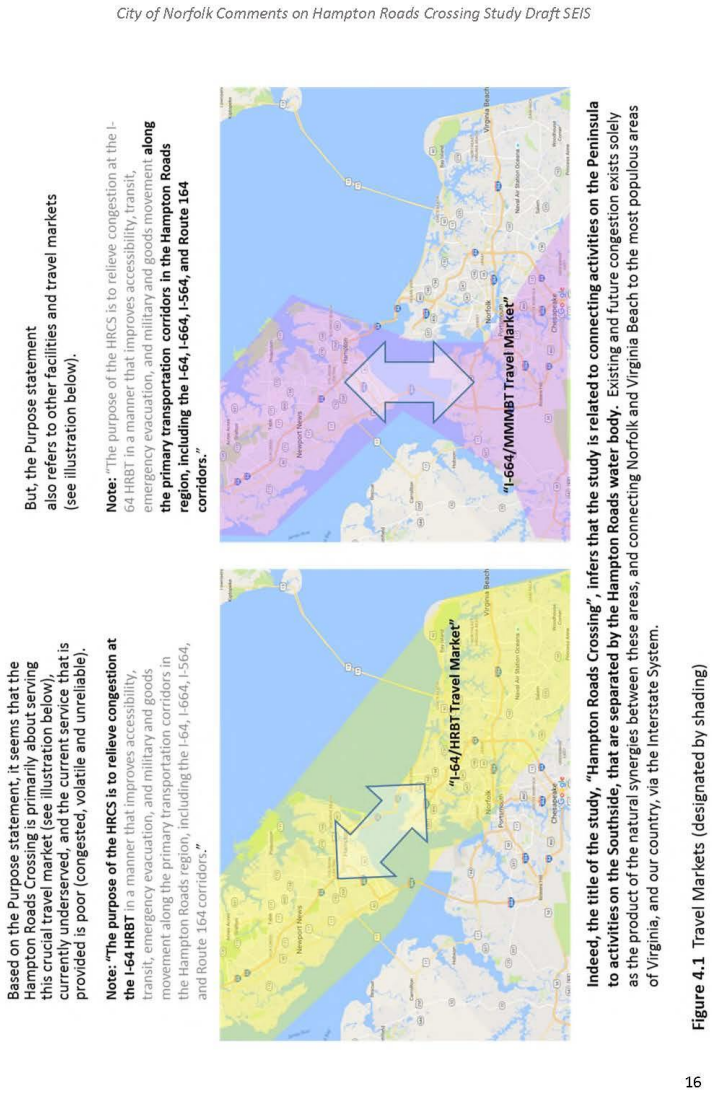

Figure 4.1 Travel Markets (designated by shading)

included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

37. See the response to City of Norfolk comment number 3 regarding FHWA and VDOT's position on this matrix. As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS. The CTB, informed by input from the public, HRTAC, HRTPO, and Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, found it to be the Preferred Alternative.

FHWA does not prescribe performance metrics for determining if elements of Purpose and Need are satisfied. This manner of alternatives evaluation has been found acceptable by FHWA, VDOT, and all of the Federal Cooperating Agencies that may be in a position to adopt the analyses conducted for future actions.

38. The endeavor described in Section 4 of the comments would be better addressed under the purview of the metropolitan transportation planning process. The current 2040 LRTP was adopted in June 2016 by the HRTPO, and the Preferred Alternative is consistent with the LRTP and the decisions made by the localities comprising the HRTPO. The information in this section is beyond the level needed for performing the analysis in the SEIS. The alternatives identified in the SEIS provide a sufficient range of potential solutions for meeting the purpose and need of the study, and for evaluating the potential impacts associated

City of Norfolk, Office of City Manager, cont.

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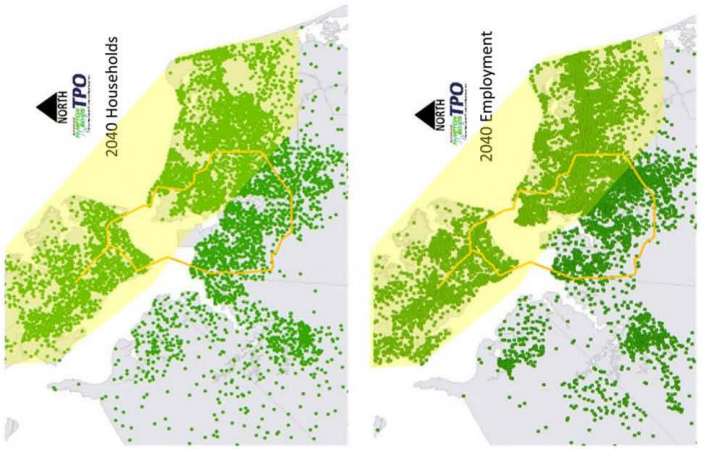

Figure 4.2 Regional Land Use Patterns

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with addressing the needs. The intent of the SEIS is not to perform an exhaustive review of all the potential arguments for and against various alternatives. Rather, it is meant to provide a concise review of the key issues to a sufficient level for making informed decisions, and for clearly documenting the known environmental impacts of the alternatives.

All substantive public comments have been taken into consideration by the decision makers in identifying the Preferred Alternative. All of the localities that comprise the HRTPO and HRTAC (the entity funding the improvements coming out of the HRCS) unanimously endorsed Alternative A.

City of Norfolk, Office of City Manager, cont.

patterns. Expectations are that these patterns will continue in the future even as estimates of development growth expect a higher rate in the more sparsely developed western Southside.

4.1.3. The Concern – Serving the Travel Markets

The goal of this study is to provide solutions that serve the key travel markets, particularly the I-64/HRBT travel market. The ultimate goal is not to address only a symptom of the problem; congestion at the I-64 HRBT.

While reviewing the information in this document, it is important to keep in mind the needs of accommodating travel demand, increasing regional accessibility, and improving transit access, in the context of relating to these travel markets.

4.2. Accessibility Analysis

The meaning of the term "accessibility" has been previously discussed. The two key strategies for improving accessibility are reducing travel time by reducing travel distance and improving trip-making reliability. In our Existing Conditions discussion (3.1.1) it is documented that the existing network does not provide a "typical" level of network connectivity between the areas of Newport News and Norfolk. Therefore, the resulting travel routes between areas that are in close proximity become rather long. It is also documented that travel reliability between these areas (per data for I-64/HRBT) is extremely poor. In this section we have provided quantitative evidence of the problem and the evaluation of alternatives.

4.2.1. Network Connectivity

New roadway alignments that provide new network connections, when those connections provide a new travel path that reduces travel time between two areas, have a direct impact on improving accessibility. The magnitude of the improvement depends on the amount of travel time reduction and the area (and activities) benefitted by the improvement. Three of the four Build Alternatives include new network connectivity. Alternative A provides no new connectivity. Alternative B provides a new connection between I-564 and VA 164. This connection provides a modest decrease in travel distance for a small market comprising the Naval Station/Port area in Norfolk and a suburban area around western VA 164. Within this market the travel time improvement is more pronounced since part of the route it supersedes is a congested surface arterial (Hampton Blvd.). Alternatives C and D contain the I-564/VA 164 Connector, plus the I-564/I-664 Connector. The I-564/I-664 Connector provides substantial travel distance and time reductions for sizable geographic areas on the Peninsula (Newport News and Hampton) and on the Southside (Norfolk and Virginia Beach). Notably these geographic areas are home to high activity concentrations. Figures 4.3 and 4.4 illustrate the direct accessibility improvement impacts of the I-564/I-664 Connector. There are travel distance improvements of 9+ miles between high-intensity activity centers in Newport News and Norfolk, with gradually smaller reductions covering a large area, including most of Newport News, Norfolk, and northern Virginia Beach.

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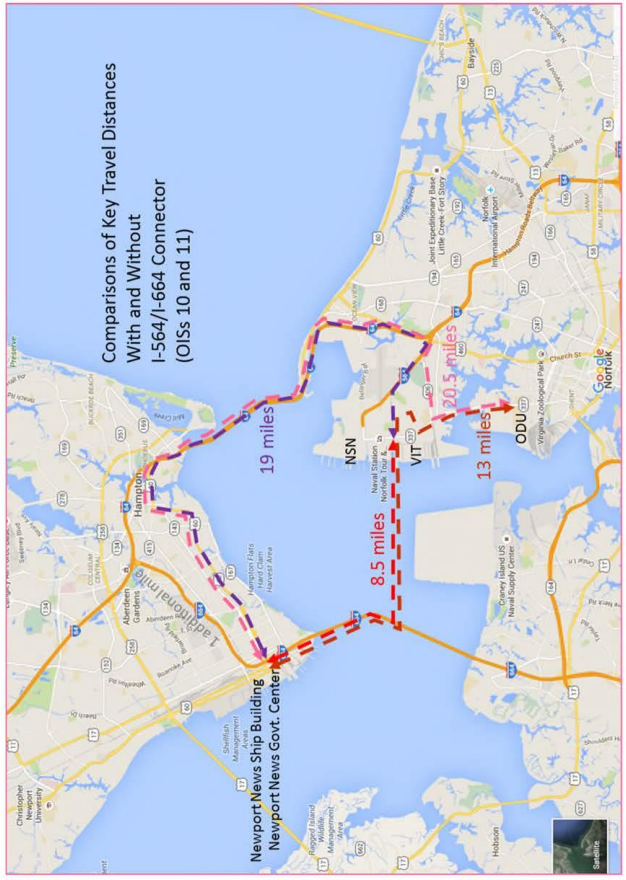

Figure 4.3 Travel Distance Comparison Examples

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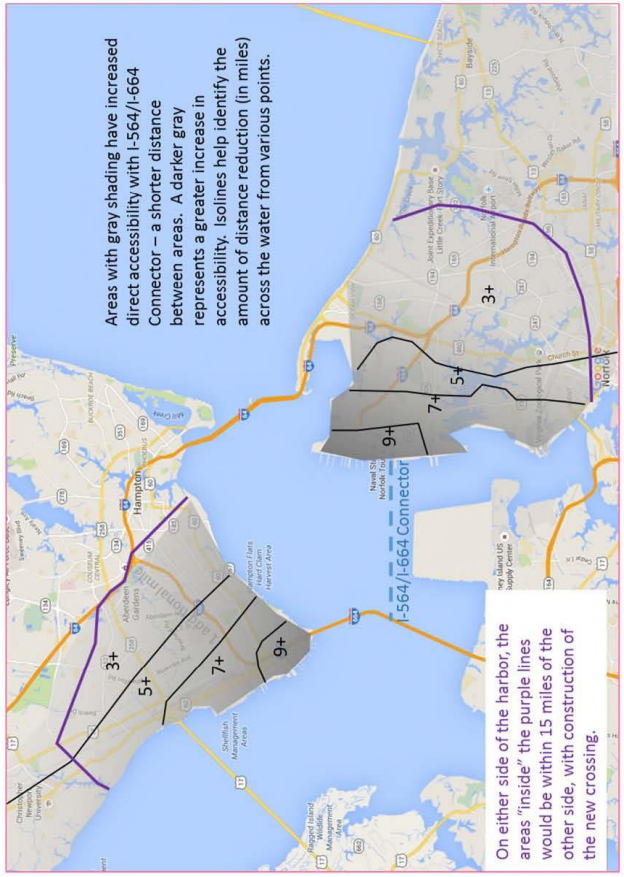

Figure 4.4 Travel Distance Improvements with I-564/I-664 Connector

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4.2.2. Reliability

Improved connectivity in a network is also a valuable asset for addressing non-recurring events that have an effect on reliability, by providing reasonable alternate travel routes. Reliability is a major focus area for FHWA, VDOT and HRTPO planning. Reliability is arguably the most significant issue for the Peninsula-Southside travel market (the poor existing conditions were highlighted in Section 3.1.1 Existing Conditions). VTrans2040 notes reliability as a key to achieving Economic Competitiveness and Prosperity, one of its Vision Plan's five goals. Poor reliability is considered a factor in reducing accessibility, particularly access to jobs (or in reverse, a business's access to workers). It also shrinks the potential market area for many businesses.

The overwhelming factor influencing the poor reliability of Peninsula-Southside travel (particularly the "HRBT" travel market) is the lack of a reasonable alternate route when extreme congested conditions occur, which is quite often. In peak travel periods the alternate route to the HRBT is characterized by an additional travel time of 30 – 60 minutes. These routes use facilities that are vulnerable to non-recurring congestion, and therefore have an added measure of risk. The addition of the I-564/I-664 Connector in Alternatives C and D has a dramatic impact on this condition. As illustrated in Figure 4.5, the new route can provide an alternative to a "through" I-64 trip that adds only 4 miles (4 minutes in uncongested conditions) to the trip. Alternative B by virtue of the I-564/VA 164 Connector would provide a reliability improvement for a small market area on the Southside, between northwestern Norfolk and the VA 164 area, and a slightly improved condition over Alternative A for the Peninsula-Southside market by virtue of additional capacity for the long alternate route that uses the MMMBT.

Figure 4.6 captures the essence of reliability performance improvement outcomes that can be anticipated for each alternative. For reliability of travel in the Peninsula-Southside market, Alternatives A and B will not improve reliability in a meaningful way. The combination of limited additional capacity and no reasonable alternative route embodied in these alternatives has a small impact compared to the solution necessary for a meaningful improvement; more capacity and an alternative route. These solutions are contained in Alternatives C and D. Reliability improvement advances exponentially for these alternatives. Alternative D outperforms Alternative C by virtue of two additional lanes of capacity, added to the HRBT route, which is still expected to have the highest demand in the future.

4.2.3. Total Accessibility

The total impact of the alternatives to accessibility is a function of total capacity, route distances/travel times (proximity), and reliability. The addition of the I-564/I-664 Connector into an alternative has a dramatic effect on improving accessibility, particularly that related to the Peninsula-Southside interaction (trip opportunities that need to cross Hampton Roads). Further, Alternatives A and B provide improvements that are insignificant, while Alternatives C and D provide highly significant improvements in accessibility.

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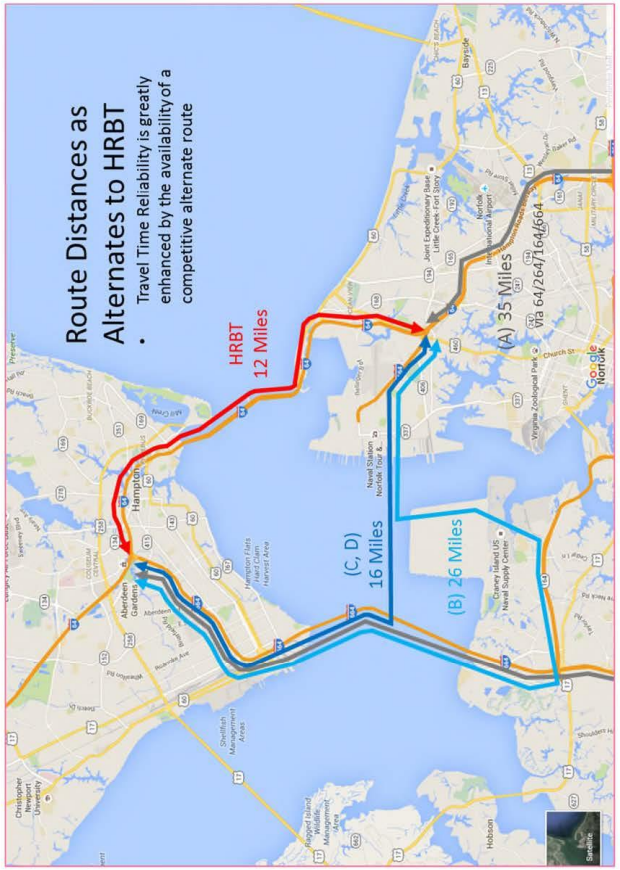

Figure 4.5 Distances of Alternate Routes

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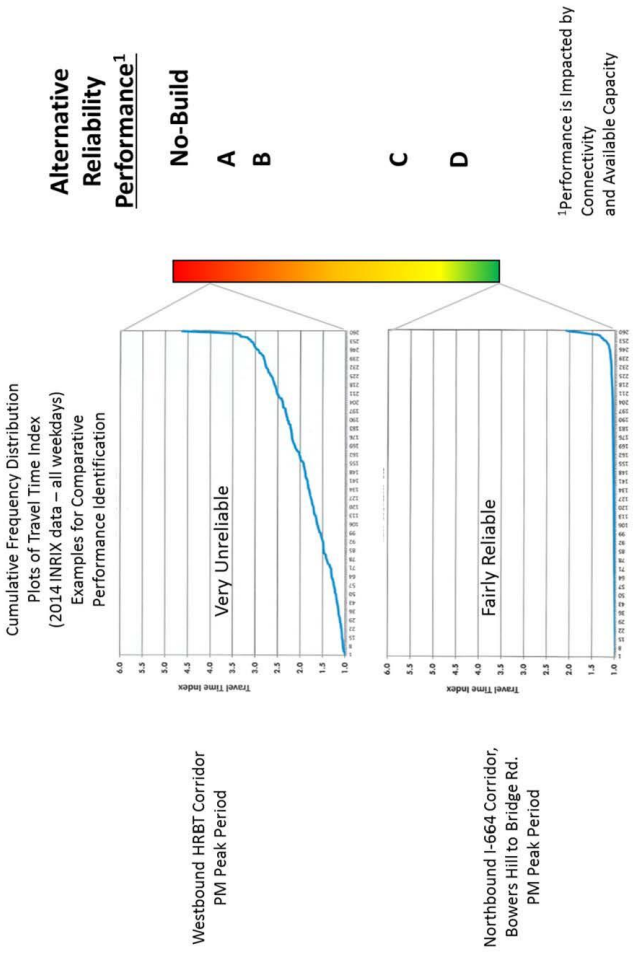

Figure 4.6 Relative Reliability Impacts of Alternatives

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The geographic areas where we have greatly improved travel accessibility contain some of the highest densities of jobs and other activities in the region, as well as synergistic business activities. Access to jobs from many residences, including residences in Environmental Justice communities (SEIS section 3.2.5), is greatly increased. Figure 4.7 contains an illustration of areas with Environmental Justice communities derived from analysis conducted by the HRTPO. Activities included in the areas of greatest accessibility improvement (proximity and reliability) include Downtown Newport News, Newport News Shipbuilding, Naval Station Norfolk, Virginia International Terminals, Old Dominion University, and Sentara Norfolk General Hospital.

4.3. Transit

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The SEIS Purpose statement includes the phrase "in a manner that improves accessibility, transit...". Regional Transit Planning, whether originating with HRT, the HRTPO or DRPT, has consistently stated that improvements to crossing the Hampton Roads harbor should not be constructed without the inclusion of a high-performance transit component (or permitting such a component, such as special-use lanes that could accommodate BRT service).

There are connecting pieces that should be considered as part of this planning now that can connect transit in the future. A "direct as possible" connection between the downtown Newport News area, and the Naval Station Norfolk area, is a critical component of these plans and would result in a legitimate alternative to personal vehicle travel.

DRPT prepared an analysis – "Transit Patronage Forecasting for Hampton Roads Crossing Study SEIS", and sent a letter on November 16, 2015 to VDOT summarizing its recommendations. Chief among these was that further exploration of LRT was not warranted, but that they did support high-frequency BRT in a fixed guideway or a preferential lane (e.g.- HOV, HOT, managed). Most importantly, their letter stated "The alternative selected at the conclusion of the HRCS SEIS should include dedicated transit facilities".

4.4. Emergency Evacuation and Management

The discussion of Emergency Evacuation and Management in the SEIS was very limited. Several key issues associated with the application of probability and risk assessment to such considerations, and to the issue of post-event rescue and recovery are not addressed. This lack of adequate study in the draft report is a concern to Norfolk, a city that is committed to resiliency.

4.5. Livability

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Lack of access to Naval Station Norfolk (NSN) and Virginia International Terminals (VIT), and surrounding area, as well as congestion on I-64 and the HRBT, create several livability issues for Norfolk residents, related to neighborhood traffic congestion and truck traffic. This area has two access routes, I-64/I-564, and Hampton Blvd. Due to the lack of any connection from this area to the west (a water crossing), Hampton Blvd. is subject to heavy volumes of "through" traffic from its southern end near the Elizabeth River, to the NSN area. Hampton Blvd. traverses through the historic community of Ghent, and is very constrained in this area – in some sections no more than a

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39. With the exception of a few differences, Alternative C is the alternative that was presented in the 2001 ROD. Since it included transit-only lanes at that time, those transit-only lanes were maintained for this study. While only Alternative C specifically included transit-only lanes, each of the Build Alternatives retained in the Draft SEIS had the capacity to include transit (see Chapter 2 of the Draft SEIS). Under Alternative C, transit would be accommodated along I-664 (from I-64 to the I-664 Connector), the I-664 Connector, the I-564 Connector, and I-564. Details on the transit options for the Final SEIS Preferred Alternative are included in **Section 2.7**.

Given the minimal reduction in vehicle trips that a dedicated transit option would achieve (based on the December 2015 DRPT study), and therefore the likely minimal impact on regional travel times for single occupant vehicles, a dedicated transit lane was not a specific element in Alternatives A, B, and D. However, including it in Alternative C allowed for the determination of additional direct impacts and cost associated with a transit-only lane so the decision makers could make an informed decision whether to include a transit-only lane in the other alternatives.

40. Norfolk communities mentioned in this comment would be expected to see benefits under all Alternatives. Additional capacity provided on I-64, I-664 and/or VA 164 would likely discourage traffic from continuing to use local roadways as travel time savings for non-local trips can be achieved by traveling on these major Study Area roadways instead. The northern end of Hampton Boulevard would be accessible from I-564, while major accessibility improvements for the southern end of Hampton Boulevard/Ghent neighborhood can be expected with the investment exceeding $1 Billion in the Midtown/Downtown tunnel projects and associated efforts to improve circulation on these streets.

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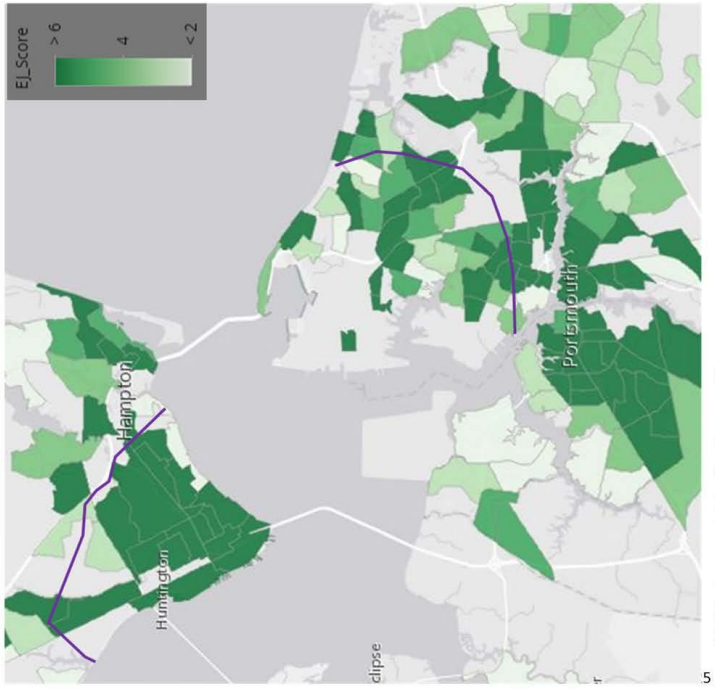

Cumulative Benefits

Environmental Justice Communities would benefit from improved accessibility

Map generated using HRTPO Environmental Justice Methodology Tool. 10 Categories

Figure 4.7 Environmental Justice Communities

City of Norfolk, Office of City Manager, cont.

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4-lane undivided roadway. This is a dense, historic community with a high demand for walking and biking. Further north, Hampton Blvd. goes through the campus of Old Dominion University, where large volumes of pedestrians crossing significantly reduce the capacity of the roadway. These roadway sections experience congestion in the peak periods, and there are no options for providing additional roadway capacity in this corridor. The parallel facility, Colley Ave., must carry a significant traffic load as a result, yet this street, given its land use context, should primarily serve local traffic, pedestrians and cyclists. There has been an expectation for 20 years that a third crossing would be the solution that would alleviate these undesirable traffic congestion and neighborhood intrusion problems. Results from the 2034 model traffic assignments show that significant traffic reductions would be realized on these facilities if a new crossing were built.

The West Ocean View and Willoughby Spit communities are negatively impacted by the traffic queuing on I-64 in the PM peak period of congestion (3 – 4 hours daily). Traffic seeking access to I-64 queues onto the surface streets severely hampering access to neighborhoods and the entire peninsula of Willoughby Spit, which has only one access. It seems that the only answer to resolving these difficult neighborhood impacts is a long-term solution that will minimize congestion and provide an alternate route, so the incidents don't result in hours-long disturbances to these neighborhoods that can occur even during off-peak times.

4.6. Resiliency

41

Norfolk is a leader in the region in addressing resiliency issues, particularly related to sea-level rise. We believe that the needs of this study should be closely tied to resiliency issues as well. The HRTPO and other agencies have recently prepared studies identifying vulnerabilities related to transportation connections. When accessing Norfolk Naval Station and the Port, these studies have identified vulnerabilities to more frequent flooding events that would close Hampton Blvd., the only primary access route to these facilities from the south and west in addition to I-64.

Having only one route connecting the Peninsula to Norfolk and Virginia Beach is a major vulnerability issue, particularly given that route's location over Hampton Roads near the open waters of Chesapeake Bay. A loss of use of this critical infrastructure, with no reasonable alternative, would cause an economic catastrophe for our region and have major negative ramifications on military readiness.

Strengthening regional connectivity, inclusive of Strategic Highway Network (STRAHNET) to enhance resiliency and reduce vulnerability, should be a priority for the HRCS.

4.7. Economic Impact

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The VTrans2040 Vision, Goal A, is Economic Competitiveness and Prosperity. Its supporting objectives include reducing congestion and freight bottlenecks, and improving reliability. The challenge facing the Peninsula – Southside travel market has a significant impact on factors that can increase the costs of doing business, negatively impacting business markets. It can also reduce the competitiveness of the Hampton Roads region in attracting new businesses to grow and diversify our economy. We believe that these impacts could be estimated to be in the many billions of

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41. Sea level rise is the primary potential change discussed in the SEIS. **Chapter 3.6** discusses a 2008 US Department of Transportation Center for Climate Change and Environmental Forecasting study, *The Potential Impacts of Global Sea Level Rise on Transportation Infrastructure,* was designed to produce high level estimates of the net effect of sea level rise and storm surge on the transportation network. The study evaluated nine scenarios of sea level rise between 6 and 59 centimeters. For each scenario, regularly inundated areas and at-risk areas for the transportation system were estimated. Based on the analysis, the majority of the HRCS study area corridors fall outside of the potentially regularly inundated and at-risk areas due to sea level rise and storm surge for all scenarios. However, two portions of the corridors fall within regularly inundated areas under the higher sea level rise scenarios: I-64 (in Hampton) and the VA 164 Connector (along the eastern edge of CIDMMA).

The design and cost estimates included in the SEIS meet standards included in AASHTO 2009 Guide Specifications for Bridges Vulnerable to Coastal Storms and VDOT Structure and Bridge Division standard practice. A determination as to how these standards would be applied to the Preferred Alternative would be made during the final design phases, following the issuance of a ROD. Any proposed bridges would include a vertical clearance above water relative to NAVD of 18 feet, which includes 1 foot of clearance above the 100-year design wave crest elevation (elevation 12 feet relative to NAVD 88 plus 1 foot) per, plus an assumed 5 feet for potential sea level rise over the next century.

42. The socioeconomic impacts of the study have been assessed and are included in **Section 3.2 and 3.15** of the Final SEIS.

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dollars. This is the driving force behind the needs for these projects, and the need to provide robust solutions.

5. **LOGICAL COMPARATIVE EVALUATION AND PRIORITIZATION**

The goal of this exercise is to reach a Preliminary LEDPA, or Preferred Alternative, decision. Norfolk's focus has been on what's needed to address our City's, and our Region's long-term transportation needs. The sheer size of the study area and range of improvement alternatives in terms of geographic scope and number of lane miles of roadway, bridges and tunnels has created an unusual challenge. The Purpose statement incorporates 30 miles of existing roadway alignment in different corridors. The alternatives include up to 10 miles of new roadway alignment, including new bridge-tunnel sections. The difference in size and scope of the various alternatives also creates a challenge to compare them.

Our analysis has used two structured strategies to allow us to reach the conclusions that support the decision, described below.

5.1. Matrix Comparison

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A common form of comparing alternatives is preparing a matrix of alternatives and criteria, often accompanied by a scoring of the criteria. In Section 3.4.2 of this document we have already produced a form of this, oriented not toward scoring, but toward meeting Purpose and Need. We have added a "fifth" alternative, "D with Transit from C", in order to provide an alternative that meets all of the needs. It is repeated below.

HRCS Draft SEIS Alternatives Evaluation Matrix – City of Norfolk					
Need	**A**	**B**	**C**	**D**	**D with Transit from C**
Accommodate Travel Demand	Does not meet	Does not meet	Mostly Meets	Meets	Meets
Improve Transit Access	Does not meet	Does not meet	Meets	Does not meet	Meets
Increase Regional Accessibility	Does not meet	Does not meet	Mostly Meets	Meets	Meets
Address Geometric Deficiencies	Meets 70%	Meets 70%	Meets 30%	Meets	Meets
Improve Strategic Military Connectivity	Does not meet	Meets 50%	Meets	Meets	Meets
Enhance Emergency Evacuation	Meets 50%	Meets 50%	Meets 50%	Meets	Meets
Increase Access to Port Facilities	Does not meet	Meets 70%	Meets	Meets	Meets

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43. See the response to City of Norfolk comment number 3 regarding FHWA and VDOT's position on the matrix. The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS. The CTB, informed by input from the public, HRTAC, HRTPO, and Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, found it to be the Preferred Alternative.

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This method has the advantage of "side-by-side" comparison of all alternatives. What it lacks is a "value" component, where the values of positive transportation and environmental outcomes are weighed against negative environmental outcomes, costs, or other "practicability" factors. It also leaves questions as to which needs are more important, and how much "meeting of needs" is enough.

5.2. Process of Elimination Followed by Value-Adding Build-Up

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Another approach may fit the "LEDPA" concept better, and in the case of the construct of this study with its Operationally Independent Segments, shed some light on possible "hybrid" solutions, or the prioritization of segments for implementation. In this process, a "minimum" level of meeting the needs of the study should be developed so that alternatives that cannot meet that requirement are eliminated from further consideration. Defining a "minimum" requires prioritizing the needs in some way and considering what components are required to meet them. The information provided in this document addresses this problem.

Serving the I-64/HRBT travel market is the highest priority. It is the market with the highest demand, and is the most negatively impacted by existing deficiencies. The deficiencies, from a lack of accessibility that the travel market suffers are driven by a lack of capacity and connectivity. We believe that the second priority must be improving strategic military connectivity by strengthening STRAHNET locally to improve utility and redundancy. The importance of the military to this region and our nation is well-known. We believe the third priority must be increasing intermodal access to our Port facilities. These three priorities are (and always have been since the early days of the original MIS and EIS work), minimum requirements. There is a common thread that connects all of these needs – a lack of regional network connectivity. And, all three connectivity needs can be addressed by one connectivity improvement, the I-564/I664 Connector.

The I-564/I664 Connector also improves accessibility and travel distances for a substantial portion of the I-64/HRBT travel market, as well as forming an effective "composite" corridor connection for I-64 "through" traffic. It also addresses the primary need to enhance capacity for that market. And, it provides additional emergency management and evacuation capacity and redundancy, reduces traffic on the HRBT and therefore exposure to its geometric deficiencies, for trucks in particular. Also, it provides a competitive route for express bus service to Newport News and Norfolk high density employment centers.

By examining the most prioritized needs and underlying deficiencies, we have found that there is one critical thread to meeting those needs that also supports all of the remaining needs - the I-564/I-664 Connector. There are no other segments that meet these needs. By applying this strategic analysis-decision process, we have determined that the I-564/I-664 Connector must be a part of any alternative that could be considered to meet the Purpose and Need. To realize a minimum need for accommodating the travel demand of the I-64/HRBT travel market (to at least the same degree as the proposed Alternative A), we need to add capacity between the I-564/I-664 Connector interchange with I-664, and the 6-lane (existing) section of I-664 in Newport News, which is a distance of approximately four miles.

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44. The scope and methodology of the SEIS was found appropriate by FHWA and VDOT. The LEDPA determination is made by the USACE based upon the information provided in the detailed NEPA study.

On September 27, 2016, VDOT recommended Alternative B to the USACE as the Preferred Alternative. This recommendation was informed by comments from the USACE on September 19, 2016 which stated "*If Alternatives A and B also meet the project purpose and need, have less adverse impacts [than Alternative C or D] on the aquatic ecosystem, and do not significantly impact other natural ecosystems, then USACE may determine that it can only permit one of these less damaging options as the LEDPA.*" From among Alternative A and Alternative B, VDOT considered Alternative B the least impactful alternative that fully addressed the purpose statement in the Draft SEIS.

HRTPO and HRTAC unanimously endorsed Alternative A as their Preferred Alternative on October 20, 2016. VDOT subsequently updated their recommendation of a Preferred Alternative to Alternative A on November 14, 2016, and requested USACE's concurrence that Alternative A can be considered the preliminary LEDPA. USACE concurred on VDOT's recommendation for Alternative A as the Preferred Alternative on December 2, 2016. USACE based their concurrence on information in the Draft SEIS which demonstrated that Alternative A sufficiently meets the HRCS Purpose and Need and would have less environmental impacts than the other build alternatives in the Draft SEIS, including Alternative B. USACE also found no reason to disagree that Alternative A may be considered the preliminarily LEDPA.

There was no attempt to prioritize the needs as suggested because it is unlikely that agreement could be reached by all of the parties that would have been involved in that effort.

City of Norfolk, Office of City Manager, cont.

With this minimum improvement defined, we can look at the alternatives as defined and see if we can narrow the search, or we can begin the process of utilizing the Operationally Independent Segment "model", to build a hybrid. We conclude from this approach that both Alternatives A and B do not meet the need and should be removed from further consideration. Alternatives C and D provide these improvements that meet the Purpose and Need of the study.

Alternatives C and D are similar for numerous segments. They both contain the widening of I-664 from Newport News to Bowers Hill. The analysis indicates that these segments add value, that all segments will eventually need capacity enhancements. The primary differences between C and D involve the "transit lanes" that are in C, not D; and the widening of the I-64/HRBT segment that is in D, not C. Discussion has occurred during the course of the study regarding what "transit need" is most appropriate. As we have noted in our analysis, there has been a "determination" that BRT would be the preferable mass-transit technology (DRPT, November 2015), that it could be served within a "managed lane", and that a managed lane scenario would be more beneficial than a dedicated transit lane.

In Alternative D, the widening of the HRBT, in conjunction with the other "crossing" capacity enhancements provided by the I-564/I-664 Connector and MMMBT, provides three benefits.

- In this alternative, with two crossings of Hampton Roads providing an effective "composite" connection for I-64, each route does have a sub-market, and each sub-market and route does have its own reliability and safety issues. Widening the HRBT allows its sub-market, for example serving Hampton, reduced congestion and improved reliability.
- The widening would provide additional total accessibility for the "composite" crossing and travel market utility reducing congestion and reliability, including significant support for hurricane evacuation.
- Third, it would address geometric deficiencies in that corridor, one of the identified needs of the study.

The "different" components between Alternatives C and D each add value. Both the transit component and the widening of the HRBT, in addition to the common segments of C and D, are valuable and important.

City of Norfolk, Office of City Manager, cont.

City of Norfolk Comments on Hampton Roads Crossing Study Draft SEIS

6. CONCLUSIONS

The conclusions that we draw are influenced by the many factors that have been discussed in Chapters 2 through 5 in this document. These include the following:

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- A proper framework for evaluating alternatives, beginning with a proper understanding of the Purpose and Needs of this desired project,
- A deep understanding of the technical processes employed in the study to produce "transportation performance analysis" figures, their strengths and weaknesses, and what we should, and should not, glean from those results,
- A belief that the scope of analysis for determining project benefits, or put more broadly, determination of an alternative's ability to ultimately meet purpose and need, contained in the SEIS analysis, was too narrow to be the sole basis for these major regional investments,
- "Added Value" analysis that we have performed and provided, that concentrates on principle-based criteria and issues, as well as local knowledge, not addressed by the study.

As noted in Section 4.3.3, the total impact of the alternatives to accessibility is a function of total capacity, route distances/travel times (proximity), and reliability. We believe that in the purpose statement, the words "in a manner that improves accessibility…" are just as important as the words "relieve congestion at the I-64 HRBT", and that "congestion" relates to both recurring and non-recurring congestion. Most people living or working in this region believe that today's conditions are completely intolerable, and that "improving" conditions means improving to a condition better than what exists today. Additionally, the improvement should have lasting impacts and address our future transportation needs. Said a different way, building a project that simply maintains, or only slightly improves the conditions of today, does not meet the intent of the project.

As noted in Chapter 5, objective and logical comparison of alternatives clearly concludes that Alternatives A and B cannot provide the desired accessibility (capacity, connectivity and reliability) improvements for the Peninsula-Southside interaction travel markets. They only provide temporary relief for a few years at the most. Further, only widening the I-64/HRBT Corridor would be a treacherous time for the region – the travel performance impacts of such construction activities, with no alternate route available, could have significant negative impacts on businesses, residents and the local economy. Alternatives A and B fall far short of being "practicable".

Any alternative that includes the I-564/I-664 Connector with an accommodating I-664 improvement best meets the Purpose and Need. It is the implementation of this new route, that is both competitive and in some cases trip-shortening, and provides at least twice as much capacity for the primary travel market as A or B, and makes a meaningful difference for our region. It is a necessity, not a luxury. Analysis results from the SEIS report for Levels Of Service substantiate this conclusion. Without the I-564/I-664 Connector and improvements to the MMMBT, both the HRBT and MMMBT corridors remain at LOS F, at capacity deficit levels that reflect severe congestion, and poor reliability continues to plague the critical travel market.

As has been noted in Section 4.4, a transit component is considered vital for our future, and is being planned for, by all key parties. It is a key part of Norfolk's long-term resiliency strategy. The widening of

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45. FHWA and VDOT appreciate the efforts that the City of Norfolk have gone through to demonstrate the effectiveness of Alternatives C and D in meeting the Purpose and Need of the project and in particular, the components of the Purpose and Need as they have interpreted them. However, the effectiveness of Alternatives C and D or the advantage they provide over Alternatives A and B has not been in question. This is to be expected given the magnitude and length of the improvements associated with Alternatives C and D. If the Purpose and Need was the only factor that decision makers had to consider, then the decision would be straight forward. Unfortunately, the City's analysis does not take into consideration the environmental effects of these alternatives or the federal laws governing those effects that constrain decision makers. Likewise, the analysis does not address the cost of these alternatives, the availability of funding or other regional priorities, which are other factors that decision makers must consider. When taking into account all of these factors, the HRTPO and all of its member jurisdictions supported Alternative A because it allowed them to continue to fund other regional priority projects. Notwithstanding, selection of Alternative A does not preclude other needed improvements considered in the HRCS from being developed and advanced at a later date as evidenced by the HRTPO's decision to continue to study the technical and financial feasibility of a new Elizabeth River Crossing.

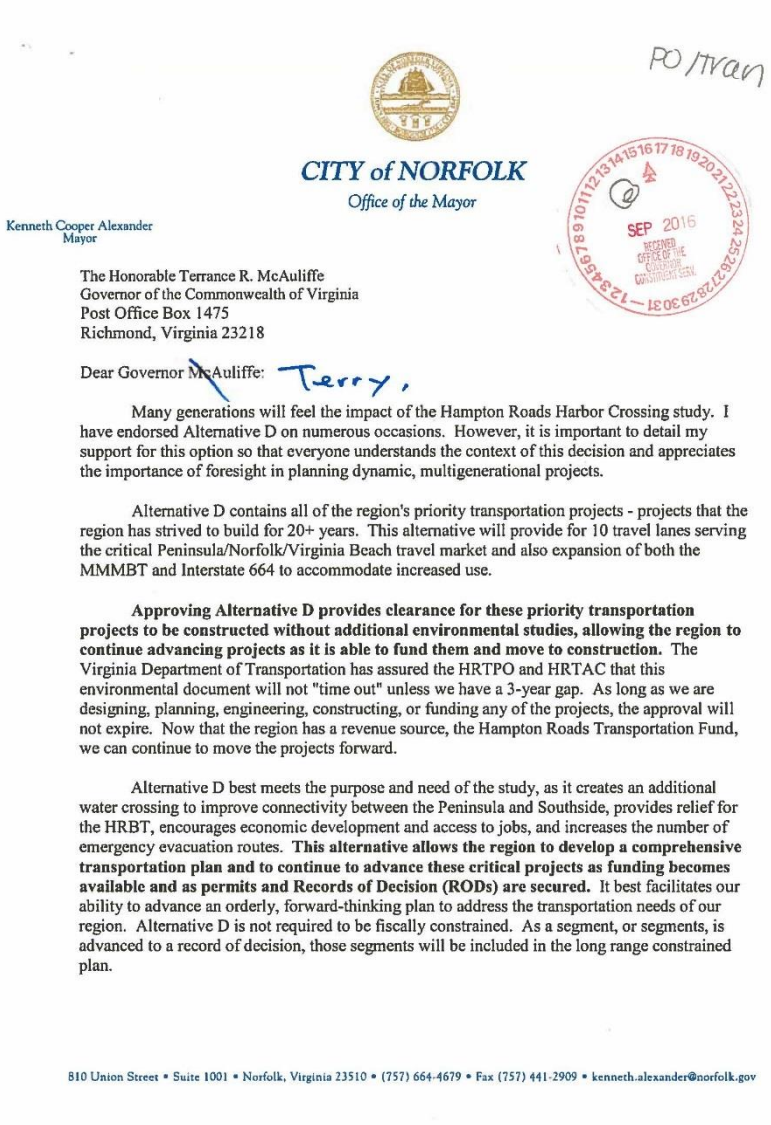
City of Norfolk, Office of City Manager, cont.

I-664 to the south is necessary to avoid LOS F conditions. The I-564/VA 164 Connector supports continued expansion of the Commonwealth's port facilities and freight network. The expansion of the HRBT to six lanes is needed to facilitate reliable service in the I-64 sub-corridor, and to complete the ultimate cross-harbor network that can ensure the highest level of Peninsula-Southside accessibility that can facilitate the strong and resilient region we are striving to create.

The Hampton Roads region has multiple transportation system related needs that not do not exist in all urban areas. This region supports the largest Navy Base in the world, along with other major military installations and operations; our vulnerability to emergency evacuation threats as well as rescue and recovery activities post-event; and we are facing the sustainability threats posed by sea-level rise. Alternative D also provides the robust transportation network that will provide critical resiliency for our region in the 21st century.

We conclude that we, and we believe the region, Commonwealth and federal government, should support Alternative D with accommodations for a transit component like BRT.

City of Norfolk, Office of the Mayor



PO /Ivan

CITY of NORFOLK
Office of the Mayor

Kenneth Cooper Alexander
Mayor

SEP 2016
RECEIVED
OFFICE OF THE
GOVERNOR
COMMONWEALTH

The Honorable Terrance R. McAuliffe
Governor of the Commonwealth of Virginia
Post Office Box 1475
Richmond, Virginia 23218

Dear Governor McAuliffe: Terry,

Many generations will feel the impact of the Hampton Roads Harbor Crossing study. I have endorsed Alternative D on numerous occasions. However, it is important to detail my support for this option so that everyone understands the context of this decision and appreciates the importance of foresight in planning dynamic, multigenerational projects.

Alternative D contains all of the region's priority transportation projects - projects that the region has strived to build for 20+ years. This alternative will provide for 10 travel lanes serving the critical Peninsula/Norfolk/Virginia Beach travel market and also expansion of both the MMMBT and Interstate 664 to accommodate increased use.

Approving Alternative D provides clearance for these priority transportation projects to be constructed without additional environmental studies, allowing the region to continue advancing projects as it is able to fund them and move to construction. The Virginia Department of Transportation has assured the HRTPO and HRTAC that this environmental document will not "time out" unless we have a 3-year gap. As long as we are designing, planning, engineering, constructing, or funding any of the projects, the approval will not expire. Now that the region has a revenue source, the Hampton Roads Transportation Fund, we can continue to move the projects forward.

Alternative D best meets the purpose and need of the study, as it creates an additional water crossing to improve connectivity between the Peninsula and Southside, provides relief for the HRBT, encourages economic development and access to jobs, and increases the number of emergency evacuation routes. **This alternative allows the region to develop a comprehensive transportation plan and to continue to advance these critical projects as funding becomes available and as permits and Records of Decision (RODs) are secured.** It best facilitates our ability to advance an orderly, forward-thinking plan to address the transportation needs of our region. Alternative D is not required to be fiscally constrained. As a segment, or segments, is advanced to a record of decision, those segments will be included in the long range constrained plan.

810 Union Street • Suite 1001 • Norfolk, Virginia 23510 • (757) 664-4679 • Fax (757) 441-2909 • kenneth.alexander@norfolk.gov

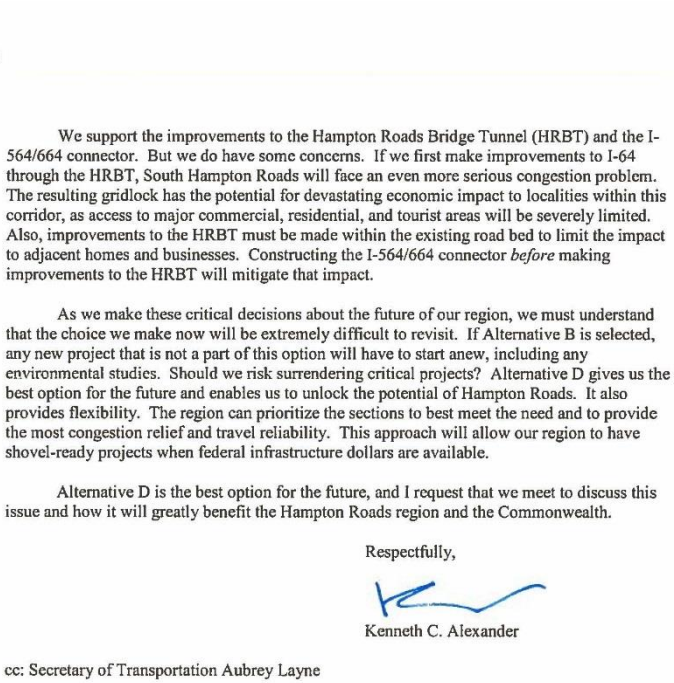
Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from

City of Norfolk, Office of the Mayor, cont.



We support the improvements to the Hampton Roads Bridge Tunnel (HRBT) and the I-564/664 connector. But we do have some concerns. If we first make improvements to I-64 through the HRBT, South Hampton Roads will face an even more serious congestion problem. The resulting gridlock has the potential for devastating economic impact to localities within this corridor, as access to major commercial, residential, and tourist areas will be severely limited. Also, improvements to the HRBT must be made within the existing road bed to limit the impact to adjacent homes and businesses. Constructing the I-564/664 connector *before* making improvements to the HRBT will mitigate that impact.

As we make these critical decisions about the future of our region, we must understand that the choice we make now will be extremely difficult to revisit. If Alternative B is selected, any new project that is not a part of this option will have to start anew, including any environmental studies. Should we risk surrendering critical projects? Alternative D gives us the best option for the future and enables us to unlock the potential of Hampton Roads. It also provides flexibility. The region can prioritize the sections to best meet the need and to provide the most congestion relief and travel reliability. This approach will allow our region to have shovel-ready projects when federal infrastructure dollars are available.

Alternative D is the best option for the future, and I request that we meet to discuss this issue and how it will greatly benefit the Hampton Roads region and the Commonwealth.

Respectfully,

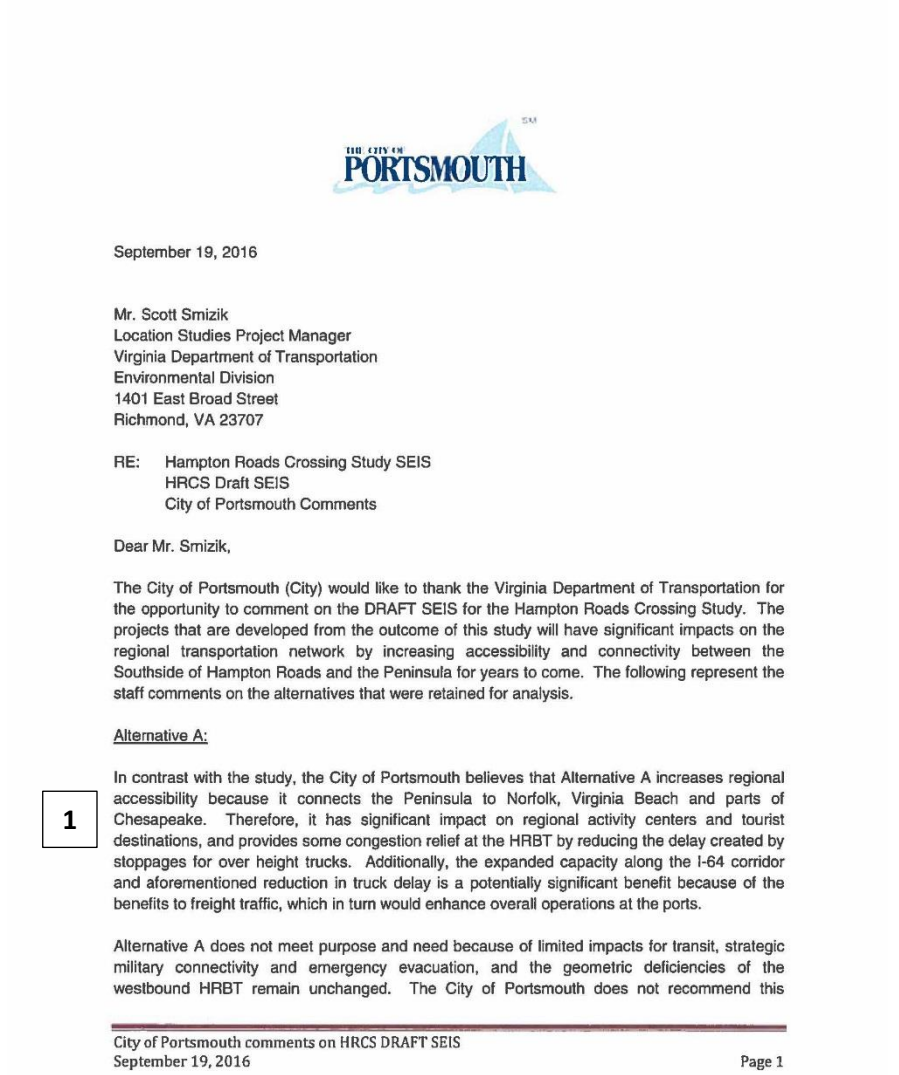
Kenneth C. Alexander

cc: Secretary of Transportation Aubrey Layne

the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

City of Portsmouth



THE CITY OF PORTSMOUTH

September 19, 2016

Mr. Scott Smizik
Location Studies Project Manager
Virginia Department of Transportation
Environmental Division
1401 East Broad Street
Richmond, VA 23707

RE: Hampton Roads Crossing Study SEIS
HRCS Draft SEIS
City of Portsmouth Comments

Dear Mr. Smizik,

The City of Portsmouth (City) would like to thank the Virginia Department of Transportation for the opportunity to comment on the DRAFT SEIS for the Hampton Roads Crossing Study. The projects that are developed from the outcome of this study will have significant impacts on the regional transportation network by increasing accessibility and connectivity between the Southside of Hampton Roads and the Peninsula for years to come. The following represent the staff comments on the alternatives that were retained for analysis.

Alternative A:

1 In contrast with the study, the City of Portsmouth believes that Alternative A increases regional accessibility because it connects the Peninsula to Norfolk, Virginia Beach and parts of Chesapeake. Therefore, it has significant impact on regional activity centers and tourist destinations, and provides some congestion relief at the HRBT by reducing the delay created by stoppages for over height trucks. Additionally, the expanded capacity along the I-64 corridor and aforementioned reduction in truck delay is a potentially significant benefit because of the benefits to freight traffic, which in turn would enhance overall operations at the ports.

Alternative A does not meet purpose and need because of limited impacts for transit, strategic military connectivity and emergency evacuation, and the geometric deficiencies of the westbound HRBT remain unchanged. The City of Portsmouth does not recommend this

City of Portsmouth comments on HRCS DRAFT SEIS
September 19, 2016 Page 1

Response:

1. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost.

City of Portsmouth, cont.

alternative because it does not address sufficient needs for the majority of the transportation network in the study area.

Alternative B:

If a 100-ft clearance is required at certain parts of the channel, then the proposed evacuation route will be subject to wind restrictions which will reduce speeds and result in congestion over the harbor. The new interchange for the proposed Craney Island Connector with VA 164 should be studied more in detail to determine the impacts to the existing adjacent interchanges and traffic flow with respect to truck movements in the corridor.

The City of Portsmouth rejects Alternative B (and any other Alternative and/or project) that delivers traffic from I-564 and other parts north to VA 164 to use this significant roadway within the City as a "cut through" to other parts of region. The expansion at Craney Island is not anticipated until 2040, and this project should not be built prior to the proposed port facility being ready to open. The connection at I-664 without any proposed expansion will also add to the periods of congestion at MMBT and at Bowers Hill. I-664 should not receive additional traffic without expansion.

The Craney Island Connector began as project by the Port of Virginia (VPA) when State funds for road projects and transportation funding sources where in dire straits. Due to plans for the future expansion and a proposed port facility at Craney Island, VPA s kept this project alive in numerous studies and presentations over the past 10 years. However, the Port of Virginia has recently indicated that this project was not their project. The regional long-range transportation (LRTP) was adjusted to indicate this project as a study only, as a result of this change in position. Adding this project back into the LRTP would leave the LRTP fiscally unconstrained in violation of federal requirements. Note that the project displays for this study note the following: "assumed location of future interchange to be constructed by the Port of Virginia." It remains unclear which State entity will be ultimately responsible for this project.

2 The existing traffic on VA 164 experiences congestion at various periods daily. VA 164 is part of the STRAHNET road network. The City of Portsmouth has previously expressed concerns about the study limits in this corridor. The City continues to have concerns about the traffic impacts to this roadway, the overall local network that VA 164 is associated with, and the local roads adjacent to it as they are residential in nature. This road is not an interstate, and it is not designed to interstate standards. Therefore, it should not be treated like an interstate in this study.

3 Additionally, there are unquantified impacts to the City of Portsmouth Landfill and significant environmental impacts. The City has valued partners in the US Coast Guard, US Army Corps of Engineers and US Navy, who have facilities within the proposed limits of disturbance. There are operational, security and safety concerns that must be addressed with the proposed roadway alignments. The City of Portsmouth will support our partners and their concerns.

The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

2. VA 164 is a STRAHNET Connector. Improvements to the VA 164 are not included in the Preferred Alternative. Had VA 164 been included in the Preferred Alternative more detailed traffic analysis may have been performed as part of detailed design. Though these improvements are not included in the Preferred Alternative for the HRCS SEIS, they will be the subject of separate studies.

3. No federal properties belonging to any of these agencies would be impacted by the Preferred Alternative. See response to City of Portsmouth comment number 1.

City of Portsmouth, cont.

Alternative C:

The same concerns about the evacuation route from Alternative B apply to this alternative. Also, this alternative does not meet the purpose and need which specifically indicates congestion relief at the HRBT as a primary goal. Alternative C does not include improvements for this facility.

4

The City of Portsmouth rejects Alternative C for the same reasons stated previously in objecting to Alternative B and because it does not meet the purpose and need. This alternative is more objectionable as there are no improvements to VA 164, which will result in significant congestion between the proposed VA 164 interchange and the VA-164/I-664 interchange.

Alternative D:

Alternative D meets the purpose and need for the HRCS SEIS. However, the concerns with the Craney Island Connector and VA 164 as aforementioned still remain. The City of Portsmouth emphasizes that the sequence of construction for these projects must be carefully considered so as not to create additional stress on existing transportation networks. Thus, the City would like to reiterate the critical nature of VA 164 to the City of Portsmouth transportation network. It is our opinion, as stated in prior correspondence, that the study area only examines a small portion of the impact corridor for VA 164. Additionally, the Craney Island Connector has significant environmental and federal/military operational, security and safety issues.

5

Concerning the implementation of HOT and HOV lanes in the study, if the expanded lanes are designated as managed lanes, do these improvements actually add capacity and relieve congestion? If so to what extent, and is there a tipping point? If it cannot be determined with certainty that these projects as presented will provide congestion relief, then use of HRTAC and Smart Scale funding becomes questionable.

6

Once again, as a cooperating agency, the City of Portsmouth would like to thank VDOT for the opportunity to comment on this important study and looks forward to working with VDOT on these regional transportation issues.. If you have questions, please contact me via email at wright@portsmouthva.gov.

Sincerely,

James Wright, P.E., CSM
City Engineer

Cc: Tony Gibson, HRTAC Program Manager, Hampton Roads District
Robert Baldwin, Planning Director
Sherri Neil, Director of Intergovernmental Affairs

City of Portsmouth comments on HRCS DRAFT SEIS
September 19, 2016 Page 3

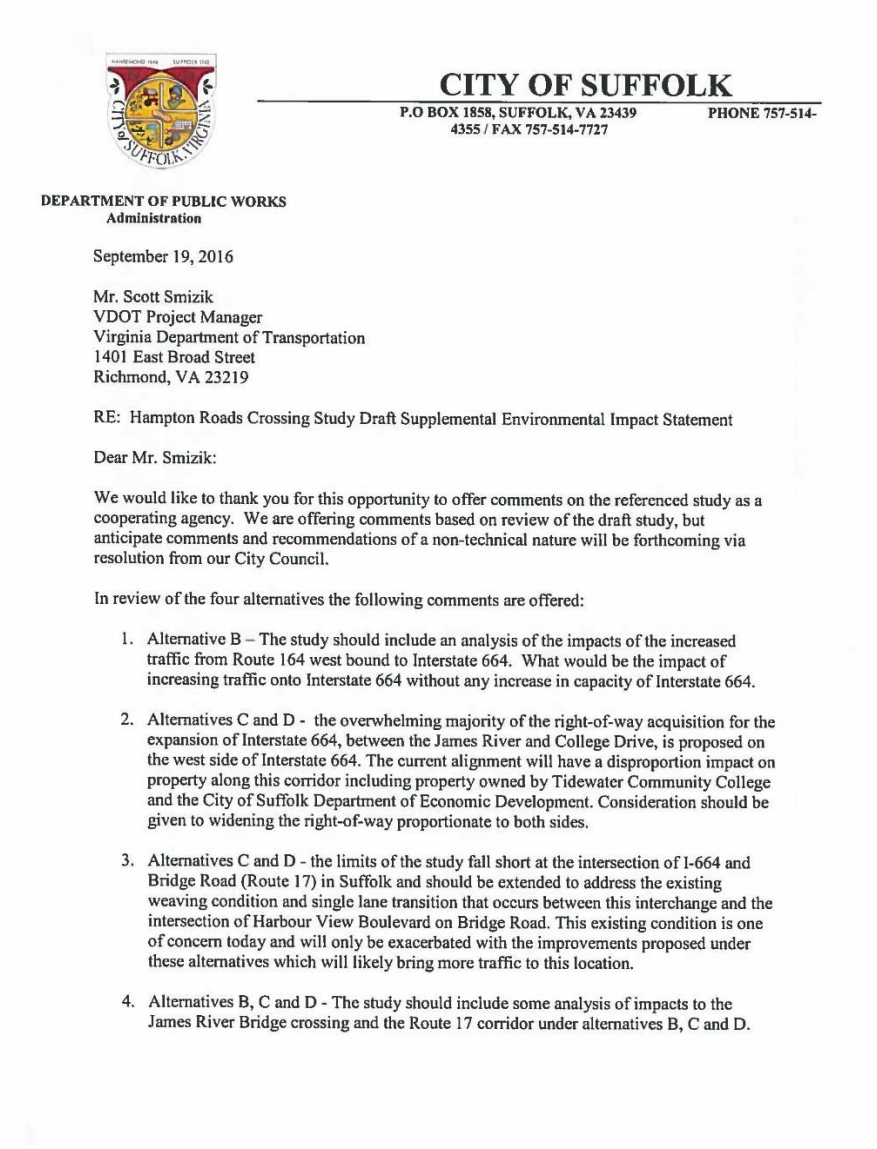
4. See response to City of Portsmouth comment number 1.

5. See response to City of Portsmouth comment number 1.

6. Several managed lane options are under consideration as part of the study, although the final determination has not yet been made by the CTB. HOT lanes are one of the options being considered. HOT lanes are HOV lanes that also allow lower occupancy vehicles to gain access to the lanes by paying a toll. HOT lanes optimize the number of people and vehicles that travel on the lanes, managing demand through a user fee. The Preferred Alternative would not preclude the implementation of HOT lanes.

Managed lanes provide congestion relief by implementing minimum vehicle occupancy requirements during peak periods, thus increasing the people-carrying capacity of the roadway. HOT lanes are typically implemented to maintain free-flowing traffic through a corridor, which minimizes delay and improves reliability.

City of Suffolk, Department of Public Works



CITY OF SUFFOLK
P.O BOX 1858, SUFFOLK, VA 23439 PHONE 757-514-4355 / FAX 757-514-7727

DEPARTMENT OF PUBLIC WORKS
Administration

September 19, 2016

Mr. Scott Smizik
VDOT Project Manager
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

RE: Hampton Roads Crossing Study Draft Supplemental Environmental Impact Statement

Dear Mr. Smizik:

We would like to thank you for this opportunity to offer comments on the referenced study as a cooperating agency. We are offering comments based on review of the draft study, but anticipate comments and recommendations of a non-technical nature will be forthcoming via resolution from our City Council.

In review of the four alternatives the following comments are offered:

1. Alternative B – The study should include an analysis of the impacts of the increased traffic from Route 164 west bound to Interstate 664. What would be the impact of increasing traffic onto Interstate 664 without any increase in capacity of Interstate 664.

2. Alternatives C and D - the overwhelming majority of the right-of-way acquisition for the expansion of Interstate 664, between the James River and College Drive, is proposed on the west side of Interstate 664. The current alignment will have a disproportion impact on property along this corridor including property owned by Tidewater Community College and the City of Suffolk Department of Economic Development. Consideration should be given to widening the right-of-way proportionate to both sides.

3. Alternatives C and D - the limits of the study fall short at the intersection of I-664 and Bridge Road (Route 17) in Suffolk and should be extended to address the existing weaving condition and single lane transition that occurs between this interchange and the intersection of Harbour View Boulevard on Bridge Road. This existing condition is one of concern today and will only be exacerbated with the improvements proposed under these alternatives which will likely bring more traffic to this location.

4. Alternatives B, C and D - The study should include some analysis of impacts to the James River Bridge crossing and the Route 17 corridor under alternatives B, C and D.

Response:

1. Alternative B impacts to traffic on VA 164 and I-664 are included in the *HRCS TTTR*. Had Alternative B been identified as the Preferred Alternative, additional analysis of traffic analysis may have been completed as part of the Final SEIS.

2. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

Had Alternative C, D, or a hybrid that incorporated I-664 been identified as the Preferred Alternative, additional engineering refinements may have occurred and documented in the Final SEIS.

3. Detailed interchange improvements were not included in the Draft SEIS. The Preferred Alternative (Alternative A) does not include any proposed improvements along I-664. Had Alternative C, D, or a hybrid that incorporated I-664 been identified as the Preferred Alternative, additional engineering refinements may have occurred and documented in the Final SEIS.

4. Improvements to the James River crossing and VA 17 corridor were not studied in detail in the Draft SEIS as they were not included in the Study Area Corridors. During the development of the Draft SEIS, no comments were received requesting that these roadways be included in the Study

City of Suffolk, Department of Public Works, cont.

This will be especially critical should tolling become a likely funding source for the improvements.

5. Alternatives C and D - figures 15C and 15D of Appendix B: Alternative Mapping seems to depict traffic in opposing directions on a single lane loop for Alternatives C and D. One of the directional arrows appears to be pointing in the wrong direction.

6. Alternative C and D – Add provisions for a centerline railway within the appropriate segment of Interstate 664. The City of Suffolk is traversed by three railroads that serve the port facilities of Hampton Roads. As the ports continue to expand, increased rail traffic has had and will continue to have a great impact on mobility and safety in Suffolk.

   Several studies assessing the effects of increased rail traffic have been performed for the City over the last several years. While the studies provide both short term and long term recommendations for addressing individual at-grade crossings, we believe realignment of the Commonwealth rail line through Suffolk offers the most cost effective and long term solution for addressing three of our most problematic at-grade crossings.

   By providing for a rail corridor within the I-664 right of way from the Pughesville Road Interchange to the Bower's Hill Interchange, existing crossings at Nansemond Parkway, Shoulders Hill Road and the Nansemond Parkway/Wilroy Road intersection could be eliminated. As you are aware, because of VDOT's forward thinking during the design of the Western Freeway expansion several years ago, similar rail realignment was successfully implemented with the centerline rail project along that corridor. It is our hope that VDOT would once again provide similar right of way and design considerations that would accommodate this possible rail realignment in the future.

7. We appreciate your willingness to attend the City Council Work Session on September 21, 2016. Additional comments may be forthcoming based upon input from our City Council after the presentation.

Again, the City of Suffolk appreciates this opportunity to provide comment on this critical transportation study and looks forward to further participation in completion of the study.

Sincerely,

Eric T. Nielsen, Jr., P.E.
Director of Public Works

Pc: Patrick G. Roberts, City Manager
Scott Mills, Deputy City Manager
Sherry B. Earley, P.E., Public Works Engineering Manager

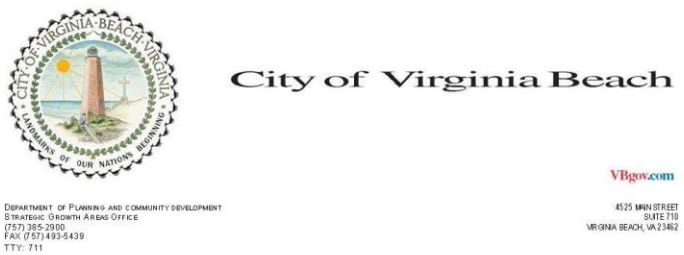
Area Corridors. The Preferred Alternative does not include any proposed improvements in this area.

5. This error is corrected in **Appendix B** of the Final SEIS.

6. Since publication of the Draft SEIS, Alternative A has been identified as the Preferred Alternative. Had Alternative C, D, or a hybrid that incorporated I-664 been identified as the Preferred Alternative, additional engineering refinements may have occurred and documented in the Final SEIS.

7. A copy of the presentation made to the City Council, as well as similar presentations made to other localities, are available on the study web site: http://www.hamptonroadscrossingstudy.org/meetings/meeting_presentations.asp.

City of Virginia Beach



City of Virginia Beach

VBgov.com

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
STRATEGIC GROWTH AREAS OFFICE
(757) 385-2900
FAX (757) 493-5439
TTY: 711

2425 MAIN STREET
SUITE 718
VIRGINIA BEACH, VA 23462

September 19, 2016

Scott Smizik, VDOT Project Manager
1401 E. Broad Street
Richmond, VA 23219

Also VIA Email: HRCSSEIS@VDOT.Virginia.gov

RE: Hampton Roads Crossing Study Supplemental Environmental Impact Statement – City of Virginia Beach Review Comments

Dear Mr. Smizik:

This letter is in response to the request for comments and as part of the City of Virginia Beach's ("the City") role as a Cooperating Agency for the Hampton Roads Crossing (HRCS) Supplemental Environmental Impact Statement (SEIS). The City of Virginia Beach will be communicating its Preferred Alternative for the HRCS SEIS to the Commonwealth Transportation Board (CTB) after the City Council establishes its position by resolution, which is currently anticipated to be in the October 2016 timeframe. The City appreciates Virginia Department of Transportation (VDOT) staff briefing Virginia Beach City Council on August 23, 2016 to explain the project and upcoming milestones.

For the purposes of evaluating how the HRCS SEIS addresses the stated Purpose of Need (below), the City of Virginia Beach staff supports the attached analysis that the Hampton Roads Transportation Planning Organization (HRTPO) recently performed and presented to the HRTPO Board on September 15, 2016. City staff supports the HRTPO staff analysis because the segments proposed with all four Build-alternatives would be physically located within several of the HRTPO localities (not including Virginia Beach) and have benefits of varying degree to the region. In addition, City staff contributed to the compendium of reports that comprise the adopted Hampton Roads 2040 Long Range Transportation Plan, which data, analysis and recommendations contribute to evaluating the HRCS SEIS, which has the following Purpose and Need:

Response:
Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the

City of Virginia Beach, cont.

Mr. Scott Smizik
Hampton Roads Crossing Study Supplemental Environmental Impact Statement
City of Virginia Beach Review Comments
September 19, 2016

- Accommodate travel demand – capacity is inadequate on the study area alignments, contributing to congestion at the HRBT;
- Improve transit access – there is a lack of transit access across the Hampton Roads waterway;
- Increase regional accessibility – limited number of water crossings and inadequate highway capacity and severe congestion decrease accessibility;
- Address geometric deficiencies – insufficient vertical and horizontal clearance at the HRBT contribute to congestion;
- Enhance emergency evacuation capability – increase capacity for emergency evacuation, particularly at the HRBT;
- Improve strategic military connectivity – congestion impedes military movement and missions; and,
- Increase access to port facilities – inadequate access to interstate highway travel in the study area impacts regional commerce.

In particular, the HRTPO staff analysis related to the performance measures of Travel Time, Volume-to-Capacity Ratios, and Cost-Effectiveness as applied to the four Build-alternatives is especially useful.

Considering that analysis, City staff finds that Alternative A nor Alternative C meets the purpose and need of the HRCS SEIS and should be deleted from consideration for the general reasons.

In particular, Alternative A does not include the segments that would address the following aspects of the Purpose and Need:

- Increase regional accessibility – limited number of water crossings and inadequate highway capacity and severe congestion decrease accessibility;
- Improve strategic military connectivity – congestion impedes military movement and missions; and,
- Increase access to port facilities – inadequate access to interstate highway travel in the study area impacts regional commerce.

Likewise, City staff finds that Alternative C does not address the need to improve the Hampton Roads Bridge Tunnel and, in effect, does not address the following aspects of the Purpose and Need:

- Accommodate travel demand – capacity is inadequate on the study area alignments, contributing to congestion at the HRBT;
- Increase regional accessibility – limited number of water crossings and inadequate highway capacity and severe congestion decrease accessibility;
- Address geometric deficiencies – insufficient vertical and horizontal clearance at the HRBT contribute to congestion;
- Enhance emergency evacuation capability – increase capacity for emergency evacuation, particularly at the HRBT;

2

Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

City of Virginia Beach, cont.

Mr. Scott Smizik
Hampton Roads Crossing Study Supplemental Environmental Impact Statement
City of Virginia Beach Review Comments
September 19, 2016

- Improve strategic military connectivity – congestion impedes military movement and missions; and,

Also, while the majority of growth in the region for the forecasted year of 2040 is anticipated to occur in the southwest area, based on the adopted Hampton Roads 2040 Long Range Transportation Plan and its compendium of reports, the majority of population (44%) and majority of employment (52%) is projected to still be within the southeastern part of the Hampton Roads region by the forecast year 2040. Likewise, the next highest population and employment projections, at 29% and 30% respectively, are on the Peninsula, in the northwest part of the region.

Based on the Hampton Roads 2040 Long Range Transportation Plan's areas of projected growth as well as forecasted population and employment, and based on accompanying Technical Analysis by the HRTPO staff, all segments that are contemplated as part of the Build-alternatives should be advanced. As such, Alternative D is the Build-alternative that meets the Purpose and Need the most. In addition, Alternative B includes segments that are most likely to be able to be fiscally constrained in the Hampton Roads 2040 Long Range Transportation Plan while also advancing Alternative D as meeting the intent of the Hampton Roads of Hampton Roads Regional Transportation Vision Plan the most.

In terms of addressing the aspect of the Purpose and Need to: Improve transit access – there is a lack of transit access across the Hampton Roads waterway; it is recommended that additional transit modeling would occur once the preferred alternative is identified. The modeling will help determine whether this occurs through dedicated transit lanes or in lanes open to other vehicles.

Also, it is City staff's understanding that the all Build-alternatives retained for analysis in the SEIS will be designed to accommodate general purpose lanes, High Occupancy Vehicle (HOV) lanes, High Occupancy Toll (HOT) lanes, or lanes tolled/managed in other ways. If the preferred alternative includes a specific toll or management scenario, it would be documented and analyzed in the Final SEIS. It is City staff's further understanding that a final decision on tolling is not required to be identified for the preferred alternative or to complete the NEPA process. Such a decision could be made after the study is complete and more detailed engineering and traffic studies are complete.

As previously state, the City of Virginia Beach will be communicating its Preferred Alternative for the HRCS SEIS to the Commonwealth Transportation Board (CTB) after the City Council receives the analysis of the HRCS SEIS by HRTPO staff. The recommended Preferred Alternative will be communicated to the CTB prior to their consideration of the Least Environmentally Damaging Practicable Alternative (LEDPA).

3

City of Virginia Beach, cont.

Mr. Scott Smizik
Hampton Roads Crossing Study Supplemental Environmental Impact Statement
City of Virginia Beach Review Comments
September 19, 2016

If you have any questions regarding this feedback, please feel free to contact me directly at (757) 385-2907 or bsolis@vbgov.com.

Respectfully,

Brian S. Solis, AICP, LEED Green Associate
Transportation and Transit Planning Manager

Attachments: HRCS SEIS HRTPO Technical Analysis

cc: David L. Hansen, City Manager
Tom Leahy III, P.E., Deputy City Manager
Robert Matthias, Assistant to the City Manager
J. Barry Frankenfield, Director of Planning and Community Development
Kathy Warren, Strategic Growth Areas Manager
Phil Davenport, Director of Public Works
John Fowler, P.E., City Engineer
Phil Pullen, P.E., Transportation Program Manager
Robert Gey, P.E., Traffic Engineer

4

Department of Historic Resources

COMMONWEALTH of VIRGINIA

Department of Historic Resources

Molly Joseph Ward
Secretary of Natural Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

19 September 2016

Ms Mary Ellen Hodges
Virginia Department of Transportation
Environmental Division
1401 East Broad Street
Richmond, Virginia 23219

Re: Draft Supplemental Environmental Impact Statement for Hampton Roads Crossing Study
Cities of Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, Suffolk, Virginia Beach, and Isle of Wight County
DHR File # 2015-0783

Dear Ms Hodges:

The Department of Historic Resources (DHR) has received for our review and comment the draft Supplemental Environmental Impact Statement (SEIS) for the Hampton Roads Crossing Study (HRCS) Final Environmental Impact Statement (FEIS). The SEIS identifies five alternatives under consideration, one of which is a No-Build Alternative while four (Alternatives A, B, C, and D) are Build Alternatives.

While DHR believes that all the Build Alternatives have the potential to impact historic properties listed in or eligible for the National Register of Historic Places, it appears that Alternative A would have the least impacts since it does not constitute any new roadway construction on new alignment as do the other three build alternatives do, and Alternative A is the modest in its scope compared to the other possibilities. This does not mean that Alternative A would not present significant historic preservation challenges. For instance, this alternative proposes to widen I-64 from four travel lanes to six travel lanes near Fort Monroe and Hampton University, both of which are National Historic Landmarks. Additionally, the existing bridge across Hampton Roads, which is immediately adjacent to Fort Wool, a property listed in the National Register of Historic Places, will be widened from four lanes to six lanes.

Please continue to consult with DHR on the development of a preferred alternative for this project.

If you have any questions regarding our comments, please contact me at (804) 482-6090.

Sincerely,

Marc Holma, Architectural Historian
Review and Compliance Division

Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

Response:

The Draft and Final SEISs both carefully consider impacts to cultural resources, including historic architecture and archaeological sites, pursuant to Section 106 of the National Historic Preservation Act of 1966, as well as Section 4(f) of the Department of Transportation Act.

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

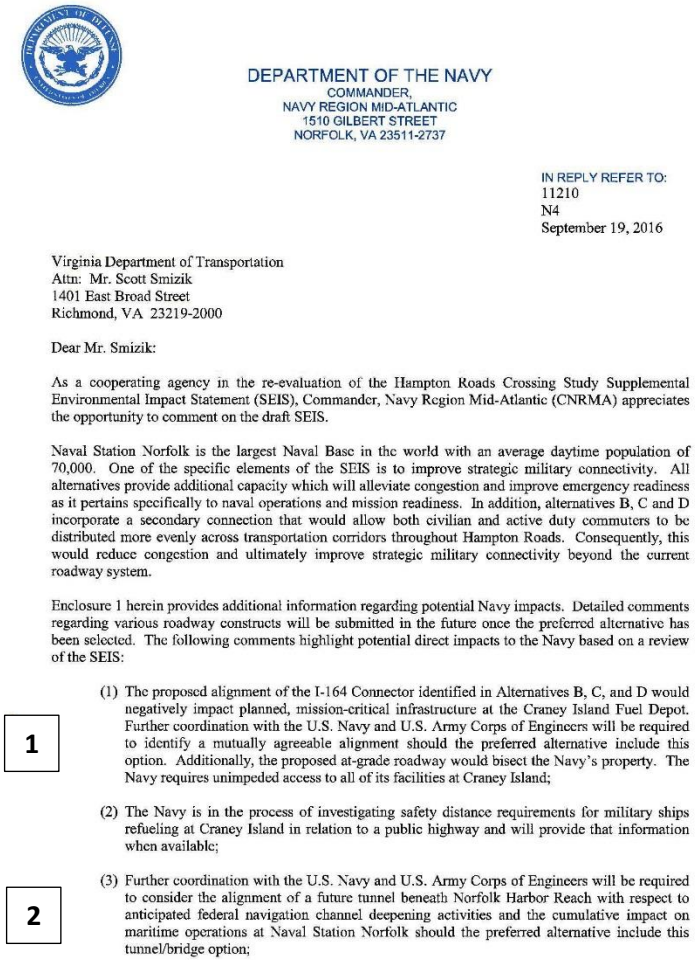
Alternative A proposes widening I-64 to six lanes; however, the majority of these improvements will occur within existing VDOT right-of-way and would not require right-of-way acquisition from the Hampton University Historic District, Hampton University National Historic Landmark, and Fort Wool. Fort Monroe National Historic Landmark and Fort Wool are located on the east side of the HRBT. Any new structure necessary to provide additional capacity to the HRBT under Alternative A would be constructed either between the existing east- and westbound HRBT structures or just west of the existing eastbound structure.

On December 29, 2016, the director of the Department of Historic Resources, who serves as the Virginia SHPO, concurred with VDOT's determinations that the project would have either no effect, no adverse effect, or a conditioned no adverse effect on each of the 20 above-ground historic properties located within the area of potential effects (APE) for Alternative A. Subsequently, FHWA, the Virginia SHPO, and VDOT executed a Section 106 Programmatic Agreement that stipulates the

Department of Historic Resources, cont.

actions VDOT will take to resolve any potential adverse effects of the project. The PA is included in **Appendix I** of the Final SEIS. VDOT will continue to coordinate with the Department of Historic Resources under the terms of the Programmatic Agreement as the study moves forward as required by the PA.

Department of the Navy



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

(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;

2

(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;

Response:

1. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the US EPA, the FTA, the US NOAA the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in

Department of the Navy, cont.

3

(4) Potential impacts to maritime and air operations at Naval Station Norfolk must be accounted for during the design/construction phases and avoided and/or minimized during construction. The Navy is specifically concerned about mission impacts resulting from the use of cranes during construction along the I-64 corridor within the Chambers Field approach/departure corridor. Further coordination will be required to address this issue; and,

4

(5) Navy is in support of a full movement interchange that provides access to the Navy, Norfolk International Terminals, and the public. The proposed location of the land-based interchange for the I-564 Connector west of Hampton Boulevard identified in Alternatives B, C, and D is not feasible due to the relocation of Gate 6 at Naval Station Norfolk which is currently under construction. The Navy requests that the Virginia Department of Transportation (VDOT) evaluate UPC 59175, I-564 Air Terminal Interchange, which is east of Hampton Boulevard and identified in the 2040 Regional Long Range Transportation Plan.

The Navy will continue to work with the VDOT, Federal Highway Administration and the Hampton Roads Transportation Planning Organization to address transportation issues in the Hampton Roads area. If you require clarification or additional detail regarding potential Navy impacts, please contact Ms. Rhonda Murray by telephone at (757) 341-0232 or by e-mail at rhonda.p.murray@navy.mil.

M. R. MOORE
Captain, U. S. Navy
Chief of Staff

Encl: (1) Table of Comments

Copy to:
Federal Highway Administration
Hampton Roads Transportation Planning Organization
City of Norfolk
City of Portsmouth
Commander, U.S. Fleet Forces Command
Commanding Officer, Naval Station Norfolk
US Army Corps of Engineers, Norfolk District

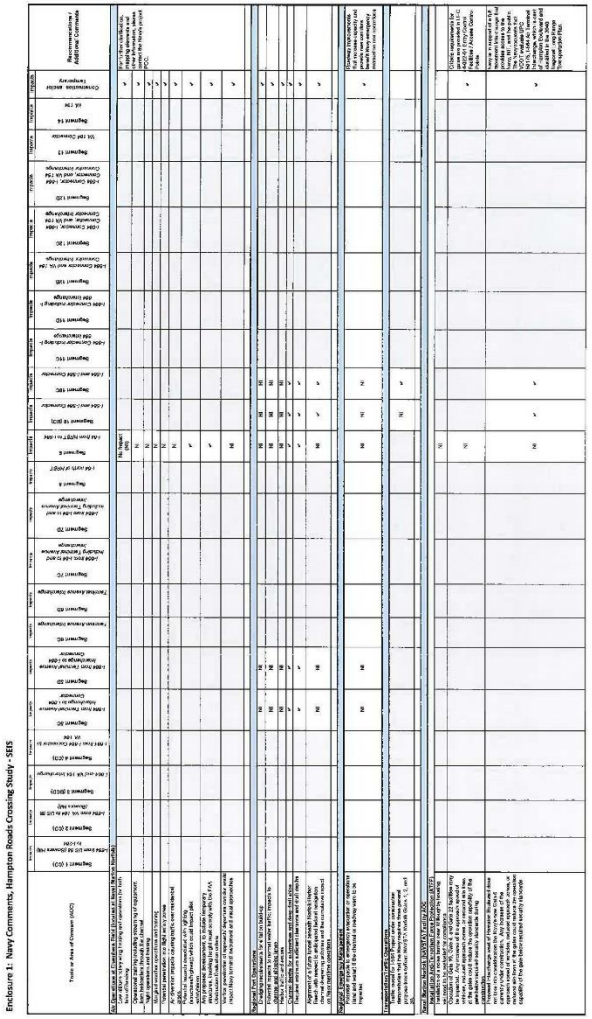
substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

The detailed plans for the Craney Island Eastward Expansion are not available and have not been used in determining the alternatives for the HRCS SEIS. The VA 164 Connector alignment was based upon right-of-way included in a Feasibility Study and Environmental Impact Statement for an eastward expansion of the CIDMMA prepared by USACE in 2006 (as discussed in Section 8.5.1 in the *HRCS Alternatives Technical Report)*. The Preferred Alternative does not include the VA 164 Connector.

2. Two designated shipping lanes pass through the harbor and are federally maintained by the USACE: the Newport News Channel and

Department of the Navy, cont.

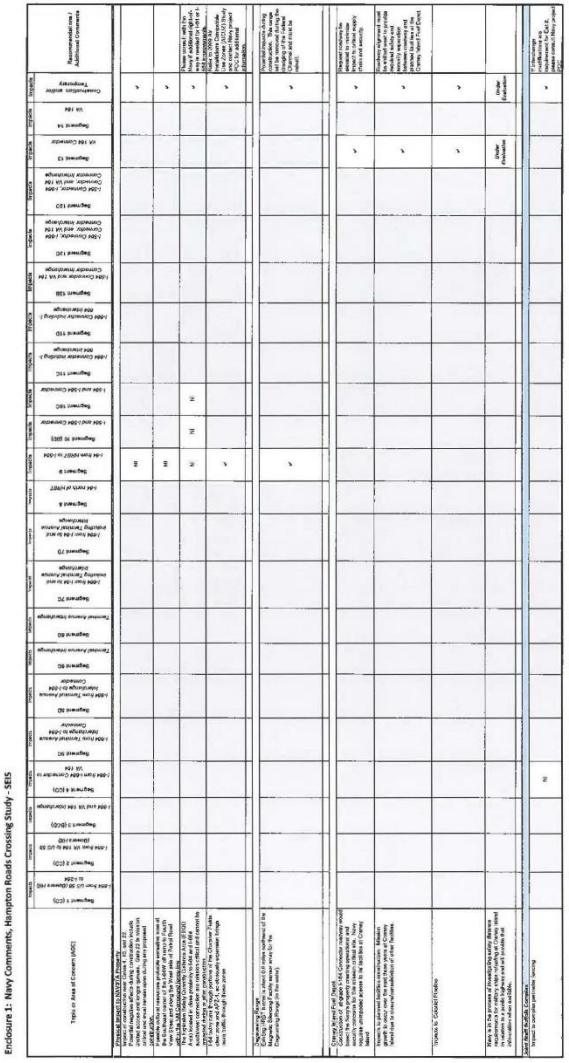


the Norfolk Harbor Reach Channel. The Virginia Maritime Association provided feedback in July 2015 indicating that the new tunnels should be designed to be at least 55 feet in depth. The bridge-tunnel design in the SEIS allows each harbor to maintain a channel that can accommodate the large container ships that pass through the Panama Canal, referred to as "Super Post Panamax" ships.

3. During the public review of the HRBT DEIS in 2012, there was a clear lack of public and political support for the level of impacts associated with the 8- and 10-lane build alternatives. Specifically, potential impacts to Hampton University, Hampton National Cemetery, and the high number of displacements were key issues identified by the public, elected officials, and University and Veterans Affairs officials. Given the lack of support, VDOT and FHWA agreed that improvements considered along the I-64 corridor in the HRCS SEIS would be confined largely to existing right of way. This resulted in the Preferred Alternative consisting of a six-lane facility along I-64 with one bridge-tunnel structure crossing Hampton Roads. The SEIS provides preliminary impact estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. The impacts have been calculated using a worst-case scenario, or the largest potential footprint that may be required to construct the improvements, for the proposed six-lane facility on I-64. Additional efforts will be made to refine and reduce these impacts during the final design and permitting process after a ROD is issued.

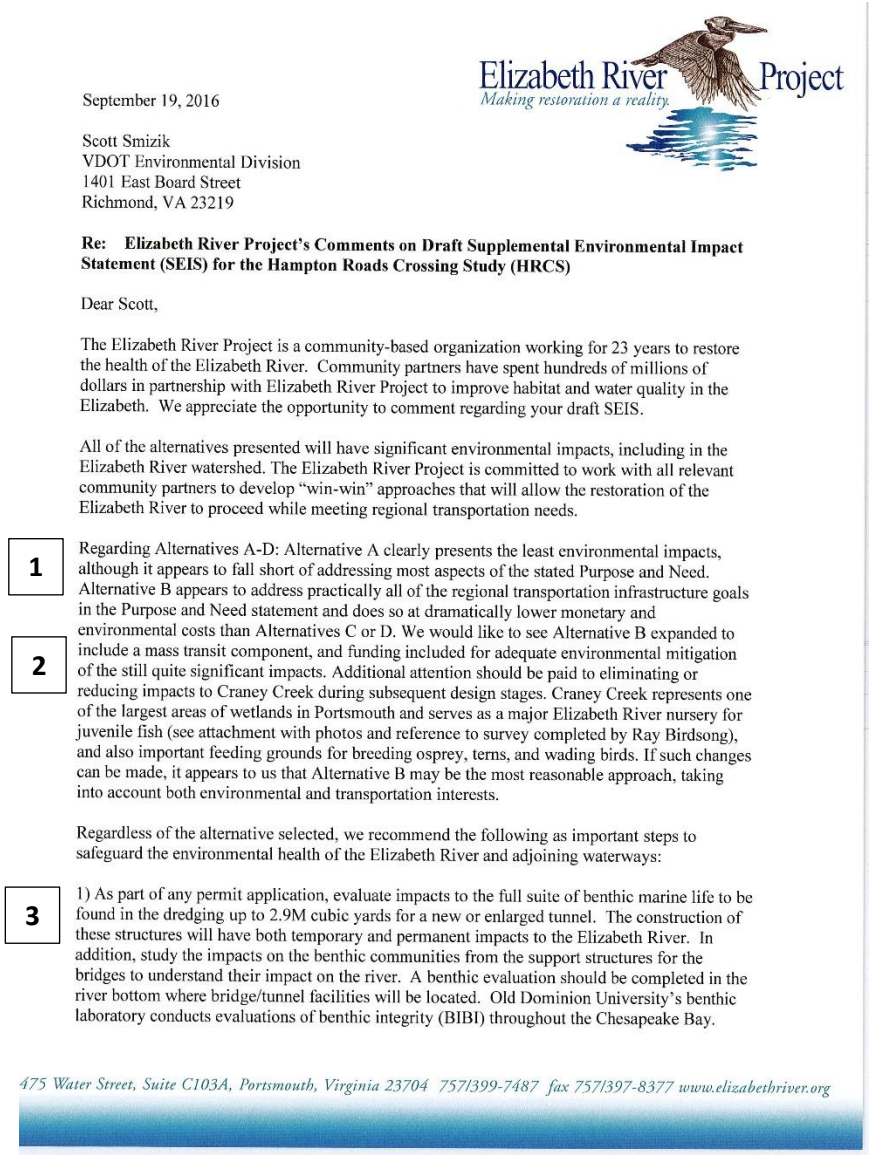
4. The interchange at NIT is not included in the Preferred Alternative. Improvements to this interchange will be the subject of separate studies. Though these improvements and the Air Terminal Interchange are not included in the Preferred Alternative for the HRCS SEIS, they remain regional priorities and identified in the 2040 LRTP. These future decisions will be the subject of separate studies.

Department of the Navy, cont.



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

Elizabeth River Project



Elizabeth River Project
Making restoration a reality.

September 19, 2016

Scott Smizik
VDOT Environmental Division
1401 East Board Street
Richmond, VA 23219

Re: Elizabeth River Project's Comments on Draft Supplemental Environmental Impact Statement (SEIS) for the Hampton Roads Crossing Study (HRCS)

Dear Scott,

The Elizabeth River Project is a community-based organization working for 23 years to restore the health of the Elizabeth River. Community partners have spent hundreds of millions of dollars in partnership with Elizabeth River Project to improve habitat and water quality in the Elizabeth. We appreciate the opportunity to comment regarding your draft SEIS.

All of the alternatives presented will have significant environmental impacts, including in the Elizabeth River watershed. The Elizabeth River Project is committed to work with all relevant community partners to develop "win-win" approaches that will allow the restoration of the Elizabeth River to proceed while meeting regional transportation needs.

1 Regarding Alternatives A-D: Alternative A clearly presents the least environmental impacts, although it appears to fall short of addressing most aspects of the stated Purpose and Need. Alternative B appears to address practically all of the regional transportation infrastructure goals in the Purpose and Need statement and does so at dramatically lower monetary and environmental costs than Alternatives C or D. We would like to see Alternative B expanded to

2 include a mass transit component, and funding included for adequate environmental mitigation of the still quite significant impacts. Additional attention should be paid to eliminating or reducing impacts to Craney Creek during subsequent design stages. Craney Creek represents one of the largest areas of wetlands in Portsmouth and serves as a major Elizabeth River nursery for juvenile fish (see attachment with photos and reference to survey completed by Ray Birdsong), and also important feeding grounds for breeding osprey, terns, and wading birds. If such changes can be made, it appears to us that Alternative B may be the most reasonable approach, taking into account both environmental and transportation interests.

Regardless of the alternative selected, we recommend the following as important steps to safeguard the environmental health of the Elizabeth River and adjoining waterways:

3 1) As part of any permit application, evaluate impacts to the full suite of benthic marine life to be found in the dredging up to 2.9M cubic yards for a new or enlarged tunnel. The construction of these structures will have both temporary and permanent impacts to the Elizabeth River. In addition, study the impacts on the benthic communities from the support structures for the bridges to understand their impact on the river. A benthic evaluation should be completed in the river bottom where bridge/tunnel facilities will be located. Old Dominion University's benthic laboratory conducts evaluations of benthic integrity (BIBI) throughout the Chesapeake Bay.

475 Water Street, Suite C103A, Portsmouth, Virginia 23704 757/399-7487 fax 757/397-8377 www.elizabethriver.org

Response:

1. On September 27, 2016, VDOT recommended Alternative B to the USACE as the Preferred Alternative. This recommendation was informed by comments from the USACE on September 19, 2016 which stated "*If Alternatives A and B also meet the project purpose and need, have less adverse impacts [than Alternative C or D] on the aquatic ecosystem, and do not significantly impact other natural ecosystems, then USACE may determine that it can only permit one of these less damaging options as the LEDPA.*" From among Alternative A and Alternative B, VDOT considered Alternative B the least impactful alternative that fully addressed the purpose statement in the Draft SEIS.

HRTPO and HRTAC unanimously endorsed Alternative A as their Preferred Alternative on October 20, 2016. VDOT subsequently updated their recommendation of a Preferred Alternative to Alternative A on November 14, 2016, and requested USACE's concurrence that Alternative A can be considered the preliminary LEDPA. USACE concurred on VDOT's recommendation for Alternative A as the Preferred Alternative on December 2, 2016. USACE based their concurrence on information in the Draft SEIS which demonstrated that Alternative A sufficiently meets the HRCS Purpose and Need and would have less environmental impacts than the other build alternatives in the Draft SEIS, including Alternative B. USACE also found no reason to disagree that Alternative A may be considered the preliminarily LEDPA.

2. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as

Elizabeth River Project, cont.

Such evaluations will be important to understand resources potentially affected by this project. It should be noted that the mouth of the Elizabeth River typically has shown some of the healthiest benthic habitat in the river system.

4 2) During discussions with VDOT staff at the September 8th public hearing, it was mentioned that mitigation for benthic habitat has not been factored into the overall cost of each alternative. Benthic habitats are just as important to the health of a river as wetlands, and we strongly encourage VDOT to include the costs for benthic mitigation and to begin looking at specific mitigation projects which could be undertaken. We recommend cleanup of contaminated sediments within the Elizabeth River as the closest in-kind mitigation for these impacts.

5 3) The draft EIS discusses the possibility of using offsite mitigation to mitigate for the pollutants from storm water on the bridges and tunnels. The document also suggests that the storm water impacts are not as much of an issue because the crossings would be built in an area with impaired waters. The state and localities are under intense regulatory pressure to improve those impaired waters, working with partners including Elizabeth River Project. Your selected alternative should contribute to progress with reducing impairment of the waterways, rather than worsening the impairment. Recently, in fact, area partners succeeded in delisting the Lafayette River for bacteria impairment after more than $100 million in investments. The Elizabeth River has also seen some of the Chesapeake Bay's most improving trends in water quality.

- Receiving waters for the anticipated runoff pollution should also benefit from any off-site storm water mitigation.
- Mass transit should be maximized with any alternative selected, to reduce air emissions which also impact water quality (as much as one third of nitrogen pollution in the Chesapeake Bay and Elizabeth River comes from air emissions.)

6 4) The report indicates that the last water quality report was developed in 2001 for this project. We recommend that a new water quality report be developed to evaluate past water quality trends and determine how much impact the "Preferred Alternative" will have on water quality.

7 5) VDOT staff also indicated that Virginia Institute of Marine Science will not have the hydrodynamic model completed before a "Preferred Alternative" is selected. Elizabeth River Project encourages VDOT to wait until a final evaluation is completed from VIMS before an alternative is selected. A full understanding of the impacts of this project needs to be completed before an alternative is selected. The large structures planned can have significant impact on water flow, which can then impact salinity, dissolved oxygen, suspended sediments, in turn impacting river health.

As a next step, we will be in touch regarding meeting with you and other key stakeholders to discuss how to achieve the win-win approach that appears to be needed.

Sincerely,

Marjorie Mayfield Jackson
Executive Director

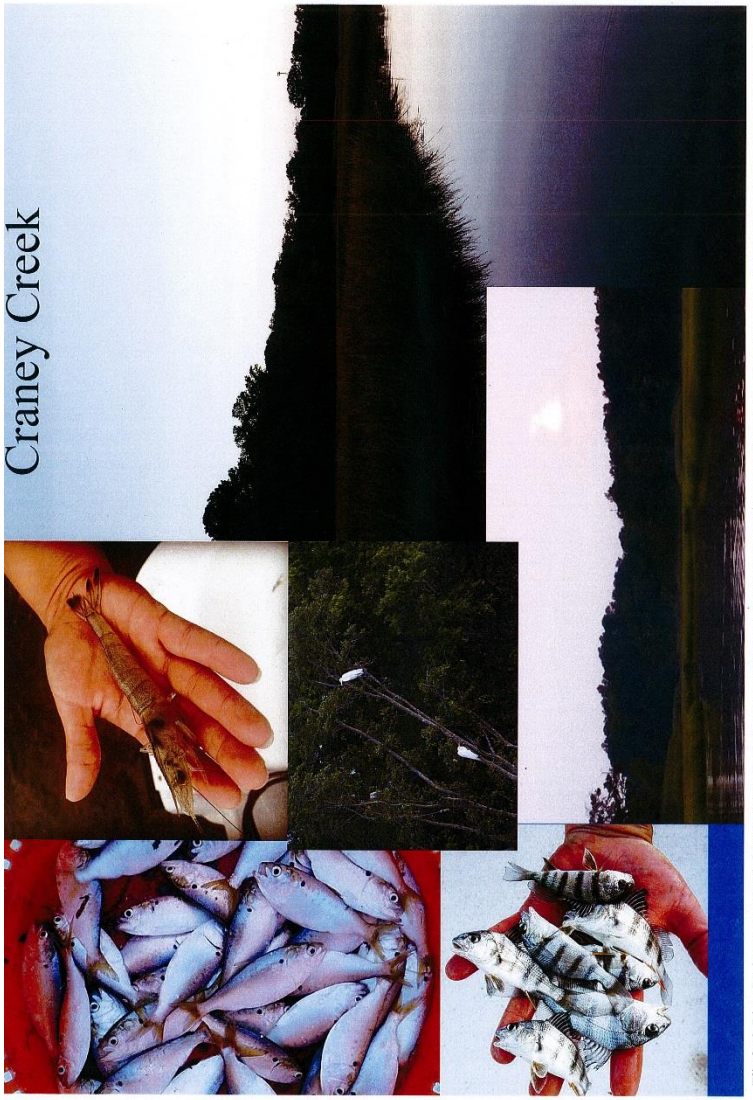
unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The Preferred Alternative includes improvements to I-64, including the HRBT, between I-664 in Hampton and I-564 in Norfolk (Segments 8 and 9 from the Draft SEIS). As such, there would be no direct impacts to Craney Creek.

3. Since the publication of the Draft SEIS Alternative A has been identified as the Preferred Alternative. The I-564 Connector is not part of the Preferred Alternative. The level of design detail necessary for a permit application cannot be developed until after FHWA issues a ROD. At that time, the permit application requirements would be coordinated with USACE, VDEQ, the Virginia Marine Resources Commission (VMRC), and other regulatory agencies. Proposed impact to benthic communities and resources is provided in detail in the *HRCS Natural Resources Technical Report*.

4. Such costs were not identified in a specific line item in the cost estimates presented in the *HRCS Alternatives Technical Report*. The cost estimates provided in the Draft and Final SEIS include a 40% contingency which is meant to account for some unknown costs. Financial obligations, such as those referenced in the comment, are not specifically accounted for in the NEPA process. Such considerations would be addressed during more detailed design phases and the permitting process. At that time, appropriate mitigation would be identified and developed in coordination with the USACE and VDEQ.

Elizabeth River Project, cont.



Elizabeth River Project recommendations include eliminating or reducing impacts to Craney Creek, a major nursery for juvenile fish and feeding grounds for breeding and osprey and terns. A study funded by the US Corps of Engineers in 1983 showed Craney Creek having the highest diversity of fin fish species in the lower Chesapeake Bay (Birdsong,et al. 1983). We also recommend completing a new survey of the area.

5. At this stage of the project, detailed drainage and hydraulic/hydrological studies have not been completed. Detailed stormwater management strategies, including the need for and placement of stormwater facilities, would be determined during the final design and permitting process after a ROD is issued. Stormwater runoff would be controlled in accordance with all applicable state regulations. The Virginia Stormwater Management Program, implemented by VDEQ, includes regulations (9 VAC 25-870) requiring water quality treatment, stream channel protection and flood control standards for all new construction and redevelopment projects. Each project must address compliance through the use of the Virginia Runoff Reduction Method, a stormwater compliance framework. The Virginia Construction General Permit outlines specific measures that development projects must address, including the development of a Stormwater Pollution Prevention Plan. The project would also comply with Executive Order 13508, the Chesapeake Bay Total Maximum Daily Load requirements, and the Commonwealth of Virginia Watershed Implementation Plan. Additionally, Sections 107 and 303 of VDOT's specifications require the use of stormwater management practices to address issues such as post-development storm flows and downstream channel capacity. The required permits would be obtained and/or procedures put into place prior to the initiation of project construction. As part of the permitting process, the required federal and state agencies such as USACE, VDEQ, and the EPA would be coordinated with regarding water quality issues. Part of this coordination would involve instituting these agencies' requirements to avoid and minimize impacts to jurisdictional areas to the greatest extent practicable, which would include placement of best management practices outside of Waters of the US (WOUS). Permits are generally conditioned such that the project must not permanently restrict or impede the passage of normal or expected high flows, and that the pre-construction course, condition, capacity, and location of open waters must be maintained to the maximum extent practicable.

Elizabeth River Project, cont.

In its resolution of December 7, 2016, CTB indicated that the board would be briefed on and have the opportunity to endorse a managed lane concept should it be identified by the region (HRTPO and HRTAC) and the appropriate analysis and financial plans are in place. As of the publication of this Final SEIS, a managed lane strategy for the Preferred Alternative, such as HOT or HOV lanes, has not yet been determined. It is anticipated that the managed lanes would accommodate transit such as BRT, as recommended in the DRPT November 16, 2015 letter to VDOT. The impacts provided in the SEIS are preliminary estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. The final impacts would be determined during the final design and permitting process after a ROD is issued. Future design modifications will be accommodated within the LOD that has been used in the Final SEIS. Details on accommodating transit in the Preferred Alternative are included in **Section 2.7** of this Final SEIS.

6. The HRCS SEIS methodologies for analysis were developed and, reviewed by the federal Cooperating Agencies during the scoping phase of the study. Given the amount of available data on water quality within the region, it was determined that an independent water quality report was not necessary. The Virginia Institute of Marine Science (VIMS) Study (January 2017) provides planning-level analysis of the potential impact on surface water elevation, flow, salinity, and bottom shear stress related to the No-Build and Build Alternatives. The VIMS Study has been made available to the public of the study website with the publication of the Final SEIS. A summary of the findings is presented in **Section 3.8.1.6** of the Final SEIS.

7. During the development of the methodologies for the HRCS SEIS, the FHWA, VDOT, and the Cooperating Agencies agreed that the hydrodynamic study (VIMS Study) could be published in conjunction with the Final SEIS. The understanding was that the findings of the study would most likely not have an influence on the identification of a Preferred

Elizabeth River Project, cont.

Alternative but influence the future design and permitting of the Preferred Alternative. The VIMS report was made available with this Final SEIS. While this occurred after the CTB identification of a Preferred Alternative, it was well in advance of the anticipated FHWA action to issue a ROD and formally identify the federal agency's Selected Alternative.

Hampton Roads Transit

HAMPTON ROADS TRANSIT

September 19, 2016

Mr. Scott Smizik
Project Manager
Virginia Department of Transportation
1401 E. Broad Street
Richmond, VA 23219

Re: Comments on Hampton Roads Crossing Study draft Supplemental Environmental Impact Statement

Dear Mr. Smizik:

Hampton Roads Transit would like to thank you for the opportunity to provide comments on the draft Supplemental Environmental Impact Statement for the Hampton Roads Crossing Study. It is a very comprehensive and thorough documentation of the alternatives that are under consideration for connecting the Peninsula to the southside of Hampton Roads. We have provided specific comments in a bulleted list below that references suggested changes by page number.

1 The project website specifically makes reference to the fact that all alternatives will include a transit component. While your project website goes on to say that in some cases this will include dedicated lanes and in other cases the SEIS will prescribe means by which transit could be incorporated into other lanes on each facility, HRT is disappointed that only Alternative "C" has two dedicated transit only lanes included as part of that alternative.

The narrative that describes Alternative "D" clearly states that all components of Alternative "B" and "C" are to be included as part of Alternative "D" with the exception of the dedicated transit lanes that were contained in Alternative "D". No explanation was given as to why this component was removed from Alternative D. Hampton Roads Transit is the region's primary public transit service provider and serves the six cities of Chesapeake, Hampton, Newport News, Norfolk, Portsmouth and Virginia Beach. Our entire service area population is 1.3 million. We provide nearly 17 million passenger trips each year on bus, light rail, ferry, paratransit and Travel Demand Management services.

Transportation investments of the magnitude that the Hampton Roads Crossing Study represents should take seriously the effective mobility for all segments of society, connecting communities and supporting economic prosperity and quality of life across the entire Hampton Roads region. Connecting more workers to jobs, customers to businesses, and access to educational, retail, medical, recreation and other activities by transit is essential to supporting quality of life and thriving local and regional economies.

2 We believe after reviewing the document that three of the four alternatives has relegated transit services to "managed" lanes that may not allow transit services to achieve true travel time advantage over general purpose traffic lanes. While the document states that transit services would be enhanced

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Response:

1. As explained in the Draft SEIS, Alternative C represented the approved alternative from the 2001 ROD, which included a dedicated transit lane. As described in Section 2.8 of the Draft SEIS, The OIS strategy used for the HRCS SEIS not only allows for hybrid alternatives to be created but allows for different sections from one alternative to be replaced with another. By analyzing the transit only lanes in Alternative C, the study did not restrict transit only lanes from being included in hybrid alternatives. Such hybrids were suggested by the City of Newport News and other members of the public. By not including the transit only lanes in Alternative D, the study provided additional data on the impact and cost of overwater crossings without the transit only lanes. This also lent itself to the identification of hybrids that removed the transit only lanes from the water crossings. It would have been possible for a hybrid alternative to be created that includes the transit only lanes from Alternative C applied to Alternative D. However, this hybrid would have been by far the most costly and impactful alternative that could be identified from the HRCS SEIS.

2. During the public review of the HRBT DEIS in 2012, there was a clear lack of public or political support for the level of impacts associated with the 8- and 10-lane build alternatives. Specifically, potential impacts to Hampton University, Hampton National Cemetery, and the high number of displacements were key issues identified by the public, elected officials, and University and Veterans Affairs officials. Given the impacts identified in the previous analysis and opposition, the decision was made to limit the cross-section of alternatives involving the HRBT. Accordingly, the Preferred Alternative consists of a six-lane facility along I-64 with one bridge-tunnel structure crossing Hampton Roads. Due to the right-of-way restraints in this area, transit only lanes cannot be accommodated along I-64.

Hampton Roads Transit, cont.

HAMPTON ROADS TRANSIT

by increasing the capacity of the highways by adding additional lanes, the reality is that history has shown there is enough "latent demand" that quickly fills the new capacity that is added into the overall roadway system. While we are appreciative of allowing buses and future Bus Rapid Transit services to utilize the managed lanes and/or HOT/HOV lanes, they too have a finite capacity and are also subject to vehicle accidents, breakdowns and other events that effectively can shut down the lane.

HRT would like to see Alternative "D" carry a dedicated "transit only option." Failure to do so will limit the mobility options for transit to effectively connect the northside cities to the southside cities of Hampton Roads.

Specific Comments

3 • Ex Sum S-1: Please consider changing the language at the bottom of the page to indicate that "no ROD was issued", rather than "prepared."

4 • 1-19 (Section 1.4.3): Please consider revising the language to describe Amtrak as "passenger rail service" rather than transit service. Please remove reference to an extension of light rail to the city of Virginia Beach under the narrative of extensions to Naval Station Norfolk. These two projects are separate and distinct.

5 • 1-29 (section 1.4.7): In the last paragraph of this section please consider adding language that indicates that the "previous studies" also encouraged investments in projects that provide better transit services.

6 • Chapter 2: Discussion of MAX routes should include the fact that in the study corridors, only the 961 provides all-day transit access across the water. All other routes are limited, peak-hour service and that should be noted in the document so that the public can make an informed decision.

7 • Chapter 2: HOV lanes are only useful to transit if they are bidirectional throughout the service day. Lanes that only operate in one direction depending on time of day will not enhance transit because one leg of every inbound/outbound trip pair would always suffer from the same lack of travel time reliability experienced by transit today.

8 • Chapter 2: Transit is not enhanced by increasing roadway capacity. Transit will still be stuck in congestion and suffer from travel time reliability issues unless it has dedicated ROW or bidirectional, congestion-priced HOT lanes that provide reliability and travel time advantage.

9 • 2-3: "Improve Transit" Section of alternatives analysis does not mention HRT as a local service option. Measurement used for alternatives analysis was "improving transit capacity" or "access to transit". Is there a definition for either measurement? Is transit capacity the same as the metric used for time travel savings (or rather, is it double counted?)

10 • 2-4: In general- include images with alternatives and corridors

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Using the additional capacity in each direction for a dedicated transit lane would not address most of the components of the Purpose and Need.

While transit-only lanes could be accommodated along I-664 and I-564 and the VA 164 Connector, along VA 164 the existing median includes two Commonwealth Railway rail lines which operate on VDOT-owned property. The lease agreement with the Commonwealth Railway included the provision for future widening of VA 164 adjacent to the rail lines. Widening to the outside of VA 164 to accommodate a transit-only lane in addition to a third general purpose lane in each direction would result in significant property impacts, relocations, and park impacts.

DRPT has served as a Participating Agency in the HRCS SEIS. During the agency scoping period DRPT provided comments indicating that the study should evaluate managed lanes that would accommodate BRT. At this time, the ridership forecasts do not warrant dedicated lanes for transit. The SEIS analysis includes consideration of high frequency BRT service in a fixed guideway or in shared HOV or HOT lanes. As of the publication of this Final SEIS, a managed lane strategy for the Preferred Alternative, such as HOT or HOV lanes, has not yet been determined. Such decisions would be made after the conclusion of the NEPA process, once a ROD has been published by FHWA.

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to

Hampton Roads Transit, cont.

HAMPTON ROADS TRANSIT

11	• 2-6: Define "2 multimodal lanes"- does that mean designated transit lanes?
12	• 2-7 Managed lanes/vehicle occupancy restrictions- Will transit vehicles be allowed to utilize the managed lanes?
13	• 2-9: Light rail- What is the basis for claiming the low potential ridership? "Limited ability to accommodate traffic"? What is the basis for claiming that light rail would have less capacity than BRT?
14	• 2-9: BRT- "would not attract enough riders" – What study was used for this ridership projection? What is the numerical threshold for "enough" riders?
15	• 2-11: "BRT would not increase military connectivity"... "regional accessibility" or "emergency evacuation". What is the basis for these claims?
16	• 2-16: first paragraph: replace "regional light rail system" with "regional high capacity transit system"
17	• 2-19: HRT knows of no DRPT study conducted in 2015 on BRT in HOV/HOT lanes. Is this referring to the modeling exercise DRPT hired a consultant to conduct specifically to inform this SEIS?
18	• 2-36: "Transit does not offer a time travel advantage" Please provide clarifying language as to why transit does not offer a travel time advantage.
19	• 2-37: It is unclear in the narrative why Alternative "D" drops the 'transit only' lanes since it clearly describes that everything in this alternative includes everything listed in Alternatives B and C. Please elaborate why the tansit only lanes were dropped.
20	• 2-39: Section for Alt D does not have a "Transit" section. In general, organize alternative sections and headers more consistently (they are in different order for Alt A, B, and C).
21	• Chapter 3: When discussing the project impacts on mobility (page 3-14), it should be noted that Alternative C provides a mobility advantage to transit users that the other alternatives do not
22	• Freight rail network maps in both Chapter 3 and the Traffic and Transportation Technical Report appear to show former Norfolk Southern ROW in which HRT's Tide light rail service now operates as active freight rail line. The Norfolk Southern alignment was formally abandoned in 2002. Tide light rail service started revenue operation in August 2011.
23	• Table 3-8: should include MAX routes 968 and 969, which travel along I-664 and serve the DoD offices on Lake View Parkway in Suffolk. Figure 3-4 should also be updated.

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complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft

Hampton Roads Transit, cont.

HAMPTON ROADS TRANSIT

24

- 3-35: In selecting a threshold to use for determining "low-income" classification, why was a household size of 4 used when the average regional household size is around 2.5 persons per household? Just because 4 people might be considered impoverished with a household income of $23,550 does not mean that a family of the regional average size (2 or 3) is considered low-income when making $23,550. Low-income is generally considered to be a higher bar than poverty, with many agencies using a standard of 150% of the HHS poverty level. A better threshold for the study's low-income classification might be to interpolate the HHS income for the average size Hampton Roads household and use 150% of that value.

25

- 3-56: The entire document uses the Imperial system of measurements, however in the discussion of sea level rise, the document switches to Metric system of measurements. Please consider revising 6 and 59 centimeters to the Imperial (standard) measurement system.

26

- In table 5-18 of the Traffic and Transportation Technical Report the cell under the PM peak section for the Westbound 2040 Alternative D appears to either be incorrectly shaded or has an incorrect value.

27

- Appendix C, page C-2: Under Local Agencies/Others, "Hampton Roads Transportation Accountability" should have "Committee" added to the end of its name.

Thank you in advance for your assistance in this matter. Should you have any questions or comments, please do not hesitate to contact Mr. Ray Amoruso at (757)222-6000 ext: 6133.

Sincerely,

William E. Harrell
President & CEO

Cc:
Robert Crum, Executive Director, HRTPO
Ray Amoruso, Chief Planning & Development Officer, HRT
Brian Smith, Assistant to the President &CEO, Organizational Advancement, HRT
Joe Dillard Jr., Government Affairs Liaison, HRT
Doc-Center

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SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

3. Edit has been made to text under #3, Executive Summary.

4. Edit has been made to text under **Section 1.4.3**.

5. The discussion under **Section 1.4.7** is focused on military needs as documented in previous reports. **Section 2.6** contains detailed information on how each retained alternative meets elements of the Purpose and Need.

6. The alternatives considered in the HRCS SEIS could provide increased capacity in which transit services could operate. None of the alternatives seek to address transit operations. The operation of existing bus routes could be changed in the absence of the study and future routes could be added/modified as the result of a Preferred Alternative. Introducing operational information into the SEIS would not provide additional information for the identification of a Preferred Alternative, as this information could change with or without the study.

7. During the agency scoping period DRPT provided comments indicating that the study should evaluate managed lanes that would accommodate BRT. At this time, the ridership forecasts do not warrant dedicated lanes for transit. The SEIS analysis includes consideration of high frequency BRT service in shared HOV or HOT lanes.

Hampton Roads Transit, cont.

8. As of the publication of this Final SEIS, a managed lane strategy for the Preferred Alternative, such as HOT or HOV lanes, has not yet been determined. Such decisions would be made after the conclusion of the NEPA process, once a ROD has been published by FHWA.

9. The referenced section on page 2-3 of the Draft SEIS falls under "Methods for Assessing Ability of Each Alternative to Meet Needs". This is not the place to discuss service providers but to discuss the methodology used to describe how the alternatives meet the Purpose and Need. FHWA does not prescribe performance metrics for determining if elements of Purpose and Need are satisfied. This manner of alternatives evaluation has been found acceptable by FHWA, VDOT, and all of the Federal Cooperating Agencies that will need to adopt this document for future actions. This section provides a methodology used to inform discussion later in the document. Further, this section explains how each alternative meets the transit access need through increased capacity for transit operations or increased access to existing transit facilities.

10. The comment is unclear.

11. In the 2001 HRCS FEIS, the term "multimodal lanes" describes lanes that could support light-rail or BRT. As described above, for the SEIS DRPT has recommended this term focus on BRT.

12. In their comments on the Draft SEIS, DRPT provided recommendations for how BRT could be accommodated in a Preferred Alternative. In its resolution of December 7, 2016, CTB indicated that the board would be briefed on and have the opportunity to endorse a managed lane concept should it be identified by the region (HRTPO and HRTAC) and the appropriate analysis and financial plans are in place. Such action would most likely occur after a ROD has been issued and VDOT can advance with more detailed design and procurement

Hampton Roads Transit, cont.

activities. As of the publication of this Final SEIS, a managed lane strategy for the Preferred Alternative, such as HOT or HOV lanes, has not yet been determined and the HRTPO LRTP does not rely on toll revenues that may be generated from a managed lane concept to construct the project. Should a management strategy be selected, it is anticipated that the managed lanes would accommodate transit such as BRT, as recommended in the DRPT November 16, 2015 letter to VDOT.

13. A preliminary ridership forecast provided by DRPT in December 2015 which modeled the Candidate Build Alternatives of the 2001 EIS indicated that ridership impacts from the proposed transit improvements on vehicular traffic volumes on the HRBT and MMMBT (BRT, LRT and regular bus) are minimal. Under No-Build conditions, region-wide transit trips constitute 0.67% of daily person trips; under CBA-9, transit trips increase to 0.72% of daily person trips. Although those percentages are region-wide (not specific to the crossings or the Study Area Corridors), they were deemed insufficiently high to affect peak hour traffic volumes in study area and reduce the need for capacity expansion on the crossing. The reduction in Year 2034 daily auto trips between the north and south sides is 638 under CBA 1 and 622 under CBA 9. Given a combined daily vehicle traffic volume of approximately 220,000+ on both crossings, the impact appears to be minimal.

14. See response to HRT comment number 13. This discussion has been updated in **Chapter 2** of the Final SEIS.

15. As described earlier, the methodology presented in Chapter 2 of the Draft SEIS that defines how each alternative meets the needs points to capacity improvements as a means of meeting the needs referenced in the comment. While incorporating BRT into other improvements may enhance the means these needs are met, BRT

Hampton Roads Transit, cont.

cannot meet these needs within existing capacity. The Cooperating Agencies concurred on January 12, 2016, that all retained alternatives would include and address how transit could function in the proposed alignment. For the purposes of the SEIS, BRT is assumed to be the appropriate form of transit (based on the recommendation from DRPT/HRT). These discussions are provided under a "transit" subheading in **Section 2.6** in the Draft and Final SEIS.

16. Edit has been made to text under **Section 2.6.1** of the Final SEIS.

17. This section refers to the November 13, *2015 Transit Patronage Forecasting for Hampton Roads Crossing Study SEIS* report (DRPT, 2015). In September 2015, DRPT was asked by VDOT to provide estimated ridership data for potential future BRT access across Hampton Roads. The evaluated alternatives included the Candidate Build Alternatives advanced in the 2001 study, discussed in **Section 2.3.1**.

18. The full text of the statement referenced in the comment states, "In the absence of managed lanes, transit would not offer a travel time advantage over personal vehicles within the Study Area Corridors." In other words, without dedicated transit lanes or lanes with a specific management option/vehicle occupancy restriction that could accommodate transit, a Preferred Alternative would not provide a travel time advantage for BRT. As indicated above in response to HRT comment number 12, a managed lane strategy for the Preferred Alternative has not been determined. Such decisions would be made during the detailed design phase after a ROD is issued.

19. See response to HRT comment number 1.

20. The "transit" subheading for Alternative D is located at the bottom of page 2-40 of the Draft SEIS.

Hampton Roads Transit, cont.

21. Text has NOT been updated to reflect the mobility advantage to transit users under Alternative C for the Final SEIS, since the Preferred Alternative could accommodate transit.

22. Figure 3-5 had been updated- the former Norfolk Southern freight route has been removed.

23. Figure 3-4 has been updated. Routes were made more visible and were slightly offset. MAX routes 968 and 969 were not added to Table 3-8. Due to low ridership, these routes were discontinued (effective January 15, 2017).

24. The HHS poverty level for a family of four ($23,550) was used to identify the presence of low-income populations based on study census block group median household income. The family of four measure was a conservative estimate. The methodology used to identify low-income populations was reviewed by the Federal Cooperating Agencies at the beginning of the study. No comments were received that resulted in a change to this standard practice.

25. The Draft SEIS is reporting the findings of another study. The referenced study reported its findings in the Metric system. In order to accurately reflect the work of that study, the information is presented in the same format.

26. The value is correct but the shading should be green. This edit has been made in the *HRCS TTTR*.

27. A typographic error in the Coordination Plan for the study that was reproduced as part of the Draft SEIS has been corrected. Text now reads Hampton Roads Transportation Accountability Commission.

Hampton Roads Transportation Planning Organization

the heartbeat of HAMPTON ROADS TPO
TRANSPORTATION PLANNING ORGANIZATION

Linda T. Johnson, Chair, Thomas G. Shepperd, Jr, Vice-Chair
Robert A. Crum, Jr., Executive Director

September 19, 2016

Mr. Scott Smizik
VDOT Project Manager
1401 E. Broad Street
Richmond, VA 23219
HRCSSEIS@VDOT.Virginia.gov

Re: HRTPO Staff Comments Regarding the HRCS Draft SEIS

Dear Mr. Smizik:

On behalf of the Hampton Roads Transportation Planning Organization (HRTPO), the designated Metropolitan Planning Organization for the Hampton Roads metropolitan planning area in southeastern Virginia, please find attached HRTPO staff comments on the Hampton Roads Crossing Study (HRCS) Draft Supplemental Environmental Impact Statement (SEIS).

If I can be of further assistance, please do not hesitate to contact me or Dr. Camelia Ravanbakht at 757-420-8300.

Sincerely,

Robert A. Crum, Jr.
Executive Director

/kg

Attachment

The Regional Building 723 Woodlake Drive Chesapeake, Virginia 23320 757-420-8300

Response:

Response begins on the next page.

Hampton Roads Transportation Planning Org., cont.

Hampton Roads Crossing Study SEIS– Draft (August 2016)

HRTPO Staff Comments

General Comments

1 • The current SEIS adds no capacity to the Bowers Hill interchange (see Appx. B, Figure 22): according to the drawing, after construction of C or D, there will still only be 4 WB lanes where I-64 joins I-264, and there will still only be four EB lanes where I-664 ends and I-64 & I-264 begin. Given a) that these eight lanes are congested today, and b) that the HRTPO's "Regional Priority Projects Funding Plan (2016-2040)" shows that I-64 Southside and High-Rise Bridge (Phase 1) will be widened before HRCS Phase 1 of the Preferred Alternative construction, please modify the SEIS drawing, cost, and traffic analysis to add additional lanes on I-664 between I-64/I-264 and US 13/58/460.

2 • Table A-1 of Appendix A describes Alt B with segments 8,9,10,12,13,14 and 3. However, all the Maps throughout the documents showing Alt B do not show Segment 3. In addition, the cost for Alt B as shown in the SEIS is $6.6B. This cost does not include the cost of Segment 3. Should Segment 3 cost be included in the total cost of Alt B? Please clarify and revise the cost or the maps accordingly.

3 • The current HRTPO CLRP is the 2040 Long-Range Transportation Plan (LRTP) adopted by the HRTPO Board on July 21, 2016. Therefore, references to the 2034 LRTP as being the currently approved plan should be modified accordingly.

4 • HRTPO Staff performed an Environmental Justice (EJ) and Public Involvement review of the Hampton Roads Crossing Study SEIS in order to determine and identify any disproportionately low benefits and disproportionately high and adverse impacts. A specific effort was made in order to determine if any benefits would arise from improved safety, mobility, accessibility, environmental quality, business and job opportunities, and to determine if adverse impacts would arise from decreased safety, mobility, accessibility, environmental quality, business and job opportunities, and lack of access. HRTPO Staff has looked to find documentation that the EJ Groups within this project study area were actively engaged and involved in all phases of this project to date, that their transportation needs were considered, that alternative solutions to meeting their needs were discussed, and that all alternatives currently under consideration are sensitive to these communities. Additionally, a review was performed to determine if public involvement activities to date and proposed mitigative measures were sensitive to the community's heritage and supportive of local economic institutions critical to these communities' livelihood and well-being. Special effort was made to determine if each project alternative's impacts would exceed or be liked to appreciably exceed those on the general population.

1

1. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The Preferred Alternative includes improvements to I-64, including the HRBT, between I-664 in Hampton and I-564 in Norfolk (Segments 8 and 9 from the Draft SEIS). Details on the Preferred Alternative are provided in **Chapter 2** of the Final SEIS. Had a Preferred Alternative included this segment, additional analysis suggested in the comment may have been completed as part of the Final SEIS. Following the NEPA process, additional studies including an Interchange Modification Report would be required to determine the optimal interchange configuration and ensure that the design meets VDOT, FHWA, and all other applicable design standards.

2. Segment 3 has been removed from Alternative B in **Appendix A** of the Final SEIS.

3. Text has been modified accordingly and, as noted in the SEIS, the Preferred Alternative has been modeled in the 2040 LRTP model (see Memo in **Appendix G**).

4. An Environmental Justice (EJ) Methodology Memorandum was prepared in support of the SEIS. The memo outlines the approaches used to identify EJ populations, the EJ public outreach strategy, and impact evaluation methods. FHWA and the federal Cooperating Agencies agreed with the scope of the study and the methodology memo. This

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methodology found that nearly all of the Census blocks adjacent to and intersecting the study area corridors met the definition of an EJ population.

Outreach to EJ populations began by sending scoping letters to the cities that comprise the Study Area Corridors, as well as known community groups, community leaders, and elected officials in the study area with knowledge of minority and low-income areas and concerns in their communities. The HRTPO provided comment on the EJ analysis methodology advising that the geographic level of analysis be census blocks rather than census tracts, which would be more representative of the population possibly impacted by the build alternatives. Given the length of the study corridors, using the census block group level would encompass more area than the census blocks but would still encompass the geographic area potentially impacted by the build alternatives. Also, some census information such as median household income is not available at the block level.

During the development of the Draft SEIS, the draft Socioeconomics and Land Use Technical Report was circulated to participating and cooperating agencies, as well as localities within the Study Area. The City of Newport News commented on the breakdown of Hispanics in census blocks was double counted in the total population field. Their suggested correction was incorporated into the final Socioeconomics and Land Use Technical Report. No other comments or direction regarding EJ populations was received as a result of this review from the localities.

In addition to fulfilling NEPA public outreach requirements, public meetings, including CIMs organized by the study were advertised in minority, low-income and limited English proficient media outlets in addition to other widely disseminated sources of news in the Hampton Roads area, including The New Journal and Guide, Tidewater Hispanic News, Virginian Pilot and The Daily Press. Public meetings were held at

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It is determined, that:

- Public Involvement efforts have not adequately centered on EJ Communities within the project study area. Public meetings should have occurred more frequently than the 2 set on September 7th and 8th at the Hampton Convention Center and Lake Wright Quality Suites in Norfolk
- While the mitigative measures outlined in the Indirect and Cumulative Effects Technical Report may meet the standard as set forth by the USDOT, it is recommended that the communities, who will be impacted by the projects outlined in this study, be included in the process used to form a set of measures. These measures, should stem from a collaboration between the VDOT and the EJ Community itself and it is hoped that that collaboration would result in a set of mitigative measures, that exceeded those traditionally implemented.

Once an alternative is selected, the HRTPO staff would like to conduct an independent study of the project area, to include a community impact assessment. This will ensure that the community which lies within the selected alternative project study area will be fully evaluated and considered. Additionally, once the community impact assessment

Technical Comments

5
- **Page 1-4 and other Study Area Corridor Maps**
  - Hampton Boulevard is not referred to as a major road. Hampton Boulevard should definitely be considered a major road in this study.
  - Portsmouth Boulevard is not referred to as a major road. Portsmouth Boulevard should be considered a major road in this study.

6
- **Page 1-19, Table 1.1**
  - The average annual daily traffic and average weekday daily traffic volumes listed for the HRBT and MMMBT for 2015 do not match the volumes released by the tunnels in the Hampton Roads District Tunnel Traffic Volume and Stoppage Reports.
  - 2015 AADT and AAWDT data is currently available for I-564 and VA 164.

7
- **Page 1-19, Section 1.4.3 Improve Transit Access**
  - The Amtrak station in Williamsburg needs to be added to the list of regional stations. In the second paragraph, the second sentence should be reworded: "Transit rail in the Hampton Roads region is provided via Amtrak, which has stations in the cities of Newport News, Williamsburg, and Norfolk,...". The Williamsburg station also needs to be added to the third sentence.

8
- **Page 1-20, Figure 1.7**
  - Many overlapping transit routes are hidden in the map.

9
- **Page 1-21, Table 1.2**
  - The "Study Area Corridors Overlap" column is incorrect for many of the transit routes. Route 918 should say "Uses I-64 and I-564". Route 919 should say "Uses I-64 and I-564", but it does not use the HRBT. Route 965 should say "Uses I-64 and

2

locations close to publicly accessible bus routes, as well as in facilities compliant with the Americans with Disabilities Act (ADA).

In accordance with state code, which requires that all property owners within the study area corridor(s) for a Location Study be notified of a Location Public Hearing at least 30 days prior to the meeting, postcards were mailed to over 140,000 address 30 days before the hearing. Given the significance of the HRCS, this mailing exceeded state code requirements by notifying all properties within each zip code that intersects the study area corridors. In addition to the mailings, an email blast was sent to the project mailing list; a notification of the meeting was posted to VDOT's website and included in other social media outreach; and the meeting was advertised in local newspapers 30 days and 15 days prior to the hearing, per VDOT public involvement policies. Further, the overall document release schedule has been publicly available and shared through email blasts, community meetings, HRTPO briefings, and through the study website since the study began in 2015.

Following issuance of ROD, VDOT will host design public hearings and continue to keep the localities informed via HRTPO briefings and other outreach.

5. Hampton Boulevard (Route 337 Norfolk) and Portsmouth Boulevard (Route 337 Chesapeake) are now indicated as major roads on Study Area Corridor maps in the Final SEIS.

6. The Draft SEIS volumes were determined from permanent count stations maintained by VDOT at the HRBT and MMMBT. The traffic data for VA 164 and I-564 have been updated using 2015 data (Table 1-1 of the Final SEIS).

7. Williamsburg has been added to list of stations in **Section 1.4.3** of the Final SEIS.

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HRBT", but it does not use I-564. Route 967 should say "Uses I-64, I-664, and MMMBT".

- **Page 1-21, Section 1.4.4 Increase Regional Accessibility**
  - In the second paragraph, the statement "Admiral Taussig Boulevard also has inadequate capacity at peak morning travel hours...." is not true. The backups are due to gate constrictions as was stated previously, not the capacity of Taussig Boulevard.

10

- **Page 1-23, Section 1.4.4 Increase Regional Accessibility**
  - In the second paragraph, it says that "In some cases, during maintenance or construction at the HRBT or MMMBT, travel lanes may close altogether, requiring two-way traffic in a single tunnel tube and reducing capacity to one lane in each direction for an extended period of time without a viable detour." However, VDOT does not generally do this but instead maintains one-way traffic in one tunnel while the parallel facility is closed.

11

- **Page 1-25, Section 1.4.4 Increase Regional Accessibility**
  - In the fourth paragraph where travel time reliability is discussed, it would be helpful to have some Planning Time Index information included to describe reliability issues.

12

- **Page 1-25, Section 1.4.5 Address Geometric Deficiencies**
  - It should be noted that "An average of 135 westbound over-height trucks per month must be stopped and inspected on the HRBT" only includes those trucks that are turned around on the South Island of the HRBT. The number is much higher if you include those trucks that get stopped at the inspection booth.

13

- **Page 1-26, Section 1.4.5 Address Geometric Deficiencies**
  - "Improve safety" should be included in its own section, rather than included under geometric deficiencies. This also should include incident data for incidents responded to by the Safety Service Patrol.

14

- **Page 1-26, Table 1.3**
  - The statewide and district total crashes and average crash rates also should be done for the 2012-2014 period, since this data is available and allows for an apples-to-apples comparison.

15

- **Page 1-27, Section 1.4.6 Evacuation**
  - It would be valuable to mention that according to the Virginia Hurricane Evacuation Study (USACE, May 2008, pg. 3-15), HRBT is the "most critical" highway segment for the evacuation of Virginia Beach, Norfolk, Portsmouth, and Chesapeake.

16

- **Page 1-30, Section 1.5.2 Accommodate Travel Demand**
  - It is unclear if the AM and PM volumes in Table 1.4 are peak period or peak hour (information is necessary to determine reasonableness).

17

3

8. Route lines on Figure 3-4 were made thicker in the Final SEIS.

9. Table has been modified in the Final SEIS (see page 1-34).

10. Sentence has been changed to "Admiral Taussig Boulevard is also congested at peak morning travel hours due to Naval gate constrictions, causing traffic to back up on northbound I-564".

11. MOT Plans would be developed during the detailed design phases following the issuance of a ROD from FHWA. Those plans would be influenced by construction methodology, sequencing decisions, schedule, and other factors.

12. PTI compares travel times at the most congested periods with free flow travel time. The PTI represents how much total time a traveler should allow to ensure on-time arrival. It is one of several measures of travel reliability. The PTI is the ratio of the 95th percentile travel time versus free-flow travel time. The HRCS SEIS uses the 2012 Travel Time Index at the HRBT reported by the HRTPO (2013a) that measures average conditions, calculating how much longer, on average, travel times are during congestion compared to free-flowing traffic. While various tools and methods provide different metrics, it is unlikely that any would have produced data that would have changed the overall findings of the HRCS SEIS or decisions made by HRTPO, HRTAC, the Cooperating Agencies, or the CTB to identify a Preferred Alternative.

13. Sentence has been modified to "An average of 135 westbound over-height trucks per month must be stopped and inspected on the HRBT on the south portal island, causing disruption to traffic flow."

14. These subsections of the document represent the need elements that the federal Cooperating Agencies concurred should be included in the document. Safety was not identified as a specific need element but as a

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- **Page 2-16, Alternative A**
  - The text indicates that the "existing eastbound HRBT tunnel would be restriped to carry two westbound lanes, for a total of four westbound tunnel lanes". This conflicts with Figure 2-5 (pg. 2-18) which shows three westbound lanes and three eastbound lanes.

18

- **Pages 2-17 (Alt A), 2-23 (Alt B), 2-38 (Alt D), I-64 in Hampton**
  - Of all the highway segments of all the alternatives (A, B, C, D), the only highway segment that the document shows as being proposed for work (e.g. drawn in heavy black) is I-64 from Settlers Landing Road to I-664, yet—as shown on Figure 2-5—no work is proposed for this segment in the SEIS. Correcting this apparent error would improve reader understanding.

19

- **Page 2-19 (Alt A), Elevation of New Bridge**
  - The text indicates that a "new bridge would be constructed…at the same elevation of the existing bridges", but given that "the HRBT bridges have substandard vertical clearance above the water and may be overtopped in heavy storms" (pg. 1-27), it seems appropriate to build the new bridge somewhat higher.

20

- **Page 2-21, JRB Volume**
  - The text indicates that "the HRBT carries the greatest amount of traffic of the three (HRBT, MMMBT, James River Bridge)", but apparently no future-year JRB volumes are published in the document. Please publish JRB volumes under each scenario.

21

- **Page 2-22 (Alt A), Military Connectivity**
  - The text: "While Alternative A would enhance capacity along the I-64 Study Area Corridor,…the other [non-HRBT] STRAHNET facilities in the Study Area would continue to see a decline in military mobility and connectivity. The US Navy has stated that improvements to the I-64 Study Area Corridor only does not improve direct military connectivity to the Norfolk Naval Base, the largest military facility in the Study Area."
    - The congestion at HRBT reduces the throughput and reliability—i.e. the "connectivity"—that it could provide. Therefore, increasing its *capacity* increases its *connectivity*. Given that this bullet on page 2-22 deals solely with "connectivity", stating that "Alternative A enhances *connectivity* along the I-64 Study Area Corridor" would address this more accurately.
    - Given that the model shows widening the HRBT would result in more people from the Peninsula traveling to (i.e. "connecting to") the Naval Base, it seems inappropriate to include without comment the incorrect statement that widening the HRBT "does not improve direct military connectivity to the Norfolk Naval Base".

22

- **Pages 2-22 (Alt A) and 2-29 (Alt B), Evacuation via HRBT & MMMBT**
  - The text indicating that "it [HRBT widening] would not improve capacity for those regions directed to follow other evacuation routes including the MMMBT" is true but beside the point: the data shows that widening HRBT would reduce (regular)

23

4

component of geometric deficiencies. As the Coordination Plan laid out a series of concurrence points through which the study could advance, making the suggested edit would require returning to the original concurrence point.

15. At the time of publication of the Draft SEIS, Statewide and District interstate crash data were available for 2013 only.

16. Text in **Section 1.4.6** has been added to reflect this.

17. No change required. In Table 1-4 the Eastbound and Westbound columns both indicate in parentheses that the data is per peak hour.

18. Text has been added to more clearly describe operations between Settlers Landing Road and the HRBT, along the approach bridges, and in the tunnel itself. A diagram has been added to show the lane configuration in the tunnel.

19. The thick black line shown on the overview map represents the Study Area Corridor, not necessarily the area where proposed roadway improvements would occur.

20. Text has been revised to state that the new bridge would be constructed to meet design standards.

21. The volumes for the James River Bridge were not evaluated for the HRCS SEIS because it is not located within the study area corridors.

22. & 23. Comment noted. Alternative A would increase capacity and improve military connectivity.

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trips on MMMBT, thereby providing less-congested evacuation for those using MMMBT.

- **Page 2-22 (Alt A), Access to Port**
  - The text indicates that widening the HRBT "would not increase capacity to and from any port facilities", but—given that I-64 is the primary truck gateway for Hampton Roads (Hampton Roads Regional Freight Study, HRTPO, Sept. 2012, pg. 89)—it would be more appropriate to write that widening the HRBT "would increase capacity thereby increasing access to all port facilities".

24

- **Pages 2-24 (Alt B), 2-32 (Alt C), 2-39 (Alt D); Intermodal Connector (IC)**
  - The text indicates that "It [the IC] is under construction", but it is not; recently the IC only had 60% plans.
  - The text indicates that the "I-564 Intermodal Connector (IC) is a separate project from HRCS", but:
    - the IC is shown as part of Alts B, C, and D of the HRCS (e.g. on Alt B map on page 2-23)
    - do the cost estimates of Alts B, C, and D include the cost of IC? Since the IC is under design, therefore, the cost estimates should not include the cost of the IC.
    - page 2-37 reads "Alternative C would expand interstate capacity…with the proposed construction of the I-564 IC", implying that the IC is part of Alt C.

25

- **Pages 2-37 (Alt C) and 2-43 (Alt D), Military Connectivity**
  - The text indicates that "Alternative [C, D] would enhance capacity along [two, three] STRAHNET corridors." Please provide the name of those corridors.

26

- **Page 2-37 (Alt C), Evacuation via HRBT & MMMBT**
  - The text indicating that "it [Alt C] would not improve capacity for those regions directed to follow other evacuation routes including the HRBT" is true but beside the point: the data shows that widening MMMBT would reduce (regular) trips on HRBT, thereby providing less-congested evacuation for those using HRBT.

27

- **Page 2-43, Section 2.7 Operational Analysis of Alternatives**
  - The first sentence states that the "agencies to identify four 'hot spots'." Since these four locations are really corridors, some of which are over 10 miles in length, there is probably a better term to use, such as "hot spot corridors."

28

- **Page 2-44, Section 2.7.1 HRBT**
  - In Table 2.7, it would be helpful to include in the title the definition of the corridor. For example, the title could be "I-64 PM Peak Travel Time Comparison – Between I-664 and I-564".
  - In Table 2.7, the terms "speed" and "delay" should be expanded to say "PM Peak Speed" and "PM Peak Delay".
  - In Table 2.7, measures are included for travel time, speed, average delay, VHT, and VMT. However, a measure that would better reflect corridor and system impacts is total delay.

29

5

24. Alternative A would not directly increase access to port facilities because it would not improve the roads that directly connect into the ports; however, it would indirectly increase access to port facilities by improving capacity on I-64. **Section 2.6** of the SEIS describes the methodology used to describe how the alternatives meet the Purpose and Need. As indicated in this comment, it is acknowledged that other readers would have different interpretations of how the different alternatives meet the Purpose and Need. The interpretations documented in the Draft SEIS as well as those expressed in the comments on the Draft SEIS illustrate the decision-making processes conducted by members of HRTPO, HRTAC, CTB, and other boards and agencies.

25. The Intermodal Connector (IC) is under construction. Ongoing work includes drainage, grading, utility relocation, construction of mechanically stabilized earth walls and placement of backfill. While the IC overlaps a portion of the I-564 study corridor, it is not part of HRCS and is not included in the costs.

26. Text under **Section 2.6** has been updated to reference the specific STRAHNET corridors (I-64, I-664, and I-564).

27. See response to HRTPO comment number 23.

28. Text has been revised to say "hot spot corridors."

29. The title of Table 2-7 has been revised to "I-64 HRBT PM Peak Travel Time Comparison – between I-664 and I-564"; likewise, limits were added to all travel time comparison tables. The terms "speed" and "delay" were added to the descriptions for all travel time comparison tables. An additional column for "Total Delay" was added to all travel time comparison tables.

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30

- **Page 2-45, Section 2.7.2 I-564**
  - Since this analysis reflects not only I-564 but also the Intermodal Connector, a better name of the hotspot would be "I-564/Intermodal Connector".
  - In Table 2-8, it needs to be clear what the data in the "Existing (2015)" column represents, since a large section of this corridor – The Intermodal Connector – does not exist yet.
  - Similar comments as those listed above for Section 2.7.1 also apply to this section.

31

- **Page 2-47, Section 2.7.3 MMMBT**
  - In the first sentence, it would be helpful to state that the endpoint of the corridor is I-64 at the Hampton Coliseum, rather than only listing I-64.
  - Throughout this section, the corridor is referred to as eastbound and westbound. It would be clearer if the northbound and southbound directions were used instead. (See comment for page 2-48 below.)
  - Similar comments as those listed above for Section 2.7.1 also apply to this section.

32

- **Page 2-48, Table 2-9 "I-664 MMMBT"**
  - Based on the reported 7 minute ("WB") and 0 minute ("EB") existing delays—and the fact that PM delays at the MMBT are mostly in the southbound direction—indicates that your "EB" should be labeled "NB" and your "WB" should be labeled "SB". (But, because of being parallel to HRBT, one would think that your "EB" label would refer to the SB direction, please verify which direction (SB or NB) your "EB" and "WB" data cover before changing them to "SB" or "NB".)

33

- **Page 2-49, Section 2.7.4 I-664 Bowers Hill**
  - Similar to Section 2.7.3, the corridor is referred to as eastbound and westbound. It would be clearer if the northbound and southbound directions were used instead.
  - Similar comments as those listed above for Section 2.7.1 also apply to this section.

34

- **Page 2-54, OIS**
  - Unlike the example shown in section 2.11.1, it is suggested not to widen I-64 from I-564 to Mallory Street (OIS VI), stop, and then later widen I-64 from Mallory Street to Settlers Landing Road (OIS V) because doing so would create a bottleneck between Mallory and Settlers. Therefore, I-64 from Mallory to Settlers is not an "independent section", and should therefore be combined with I-564 to Mallory to create a truly independent section, I-564 to Settlers Landing Road.

35

- **Page 3-40, Section 3.3 Energy, Environmental Consequences, No-Build Alternative**
  - The first sentence of this part states that the "No-Build Alternative would not result in any project-related construction and would therefore not directly impact energy consumption."
  - There are two issues with this statement:
    - Previous to this part, energy consumed during construction is defined as indirect energy use.
    - Following the sentence referred to in the bullet above, the part on the No-Build Alternative goes on to suggest that congestion and delay associated with the do-nothing approach will result in increased fuel consumption (direct energy use).

6

30. This naming convention is consistent with the materials presented to the Cooperating and Participating Agencies during the development of the study, and changing it at this stage of the study would confuse matters.

31. The limits of the Study Area Corridors are described in **Section 1.3** of the Final SEIS. However, this directional change for I-664 has been made in the text.

32. & 33. This directional change for I-664 has been made in the text.

34. As noted in Section 2.11 of the Draft SEIS, the order of implementation was presented as an example of how a Preferred Alternative could be presented in a Final SEIS and was not meant to represent a recommended order. This approach was designed to solicit comments like this to inform the proposed order of implementation for a Preferred Alternative.

On October 20, 2016, the HRTPO and HRTAC boards voted unanimously to endorse Alternative A as their Preferred Alternative. The HRTPO's decision was supported by a similar decision by the HRTAC which set aside $4.031 billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. It is likely that VDOT will request a single ROD from the FHWA for the Preferred Alternative, as a whole, and advance the alternative in its entirety through the design and construction process. It is anticipated that construction sequencing would be determined during more detailed phases of design following the issuance of a ROD from FHWA.

35. Edits to the No-Build Alternative's energy consumption (Environmental Consequences) have been made in **Section 3.3** of the Final SEIS.

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- Given the above, recommend modifying the sentence referred to in the bullet above to read as follows: "The No-Build Alternative involves no project-related construction and would therefore have no indirect energy consumption impact."

36

- **Page 3-41, Section 3.3 Energy, Environmental Consequences, Alternative A**
  - 1st paragraph, 4th line – For clarity, recommend modifying the sentence to read, "However, this would be offset by easing congestion – improving traffic speed and reducing vehicle idling – thereby reducing energy consumption."
  - 2nd paragraph, Last sentence – Taking into account the definition previously provided for indirect energy use, recommend modifying sentence to read, "Because construction is a one-time, temporary occurrence, no long-term indirect energy consumption would be associated with this alternative."

37

- **Page 3-41, Section 3.3 Energy, Environmental Consequences, Alternative B**
  - 1st paragraph, third sentence – For clarity, recommend modifying the sentence to read, "Therefore, it would provide greater benefits relative to Alternative A in terms of capacity – resulting in the somewhat offsetting effects of increased direct energy consumption due to carrying more traffic, and decreased energy consumption due to reduced congestion."

38

- **Page 3-47, Section 3.6 Air Quality, Methodology, Interchanges**
  - 2nd bullet – For clarity, recommend using "Route 460/Granby St" in the place of "Route 460".
  - For all bullets – For clarity, recommend adding Exit Numbers for each of the interchanges.

39

- **Page 3-48, Section 3.6 Air Quality, Methodology, Tunnel Assessment**
  - 3rd sentence – For clarity, recommend spelling out ASHRAE since it does not appear to be defined previously in the document.

40

- **Page 3-48, Section 3.6 Air Quality, Methodology, Mobile Source Air Toxics**
  - 1st paragraph, 4th sentence – The sentence appears to be incomplete. Perhaps it should read ". . . the daily volume change and travel time change for congested and uncongested links were used to develop each network."

41

- **Page 3-48, Section 3.6 Air Quality, Methodology, Mobile Source Air Toxics**
  - 1st paragraph, Second to last sentence – The sentence lists a number of air toxics, but it is unclear to what the "1" after "benzene" is related. If it is supposed to be "1, 3-butadiene", then using semicolons to separate the various toxics is recommended for clarity.

42

- **Page 3-51, Section 3.6 Air Quality, Methodology, Mobile Source Air Toxics**
  - 2nd paragraph under Tunnel Carbon Monoxide, last sentence – The sentence is unclear, particularly the sections that states ". . . ensuring the air quality within the tunnel will be met and consistent with normal ventilation air qualities as described."

7

36. Edits to the Alternative A energy consumption (Environmental Consequences) have been made in **Section 3.3** of the Final SEIS.

37. Edit not made. Text on energy consumption under Alternative B remains the same in the Final SEIS.

38. Exit numbers have been added to bullets in **Section 3.6** of the Final SEIS.

39. ASHRAE has been spelled out in **Section 3.6** of the Final SEIS.

40. The sentence has been changed per the suggested edits. Edits have been made in **Section 3.8** of the Final SEIS.

41. The air toxic is 1,3-butadiene. Semi-colons have been added to separate the toxics. Edits have been made in **Section 3.6** of the Final SEIS.

42. Sentence has been broken up into two sentences for clarification. Edits have been made in **Section 3.6** of the Final SEIS.

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43

- **Page 3-92, Section 3.8.1.4 Water Quality**
  - The map provided does not differentiate between types of impairments (nutrient, bacteria, etc.). If each type of impairment cannot be shown on the same map, separate maps should be provided for each type of impairment.

44

- **Pages 3-92, Section 3.8.1.4 Water Quality**
  - The chapter should include an analysis or assessment of how the proposed project would cumulatively impact wetlands.
  - The chapter should assess potential impacts on wetland migration as a result of sea level rise.

45

- **Pages 3-92, Section 3.8.1.5 Floodplains**
  - The draft SEIS uses the present standard definition of floodplains as the 100-year or 1% annual chance flood, but this standard will soon be updated to address the requirements of Executive Order 13690 – Establishing a Federal Flood Risk Management Standard. Although FHWA has not finalized its rule on the incorporation of EO 13690 in federally-funded projects, the SEIS should incorporate at least one of the required options for designating the floodplain under EO 13609. These options include:
    - The elevation and flood hazard area that result from using a climate-informed science approach that uses the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science. This approach will also include an emphasis on whether the action is a critical action as one of the factors to be considered when conducting the analysis.
    - The elevation and flood hazard area that result from using the freeboard value, reached by adding an additional 2 feet to the base flood elevation for non-critical actions and by adding an additional 3 feet to the base flood elevation for critical actions.
    - The area subject to flooding by the 0.2 percent annual chance flood.

46

- **Pages 3-92, Chapter 3 Affected Environment & Environmental Consequences**
  - In addition to impacts to the floodplain and other natural resources, the SEIS should consider using the Coastal Virginia Ecological Value Assessment to determine impacts to important natural resources. The Coastal Virginia Ecological Value Assessment is a comprehensive assessment of the ecological value of green and blue natural resources in Virginia.

47

- **Page 3-151, Section 3.9 Historic Resources**
  - Page 3-151/ paragraph 3/line 8/last sentence – States that an Arborist in 2012 recommended that any construction within the existing interstate right of way in this area, the Tree LOD and the Emancipation Oak itself should be monitored. However, it does not state how it would be monitored to reduce potential effect or if it, in fact, would be monitored. Although the Emancipation Oak which is a National Historic Landmark is outside the HRCS LOD it is within the direct effects APEs of the alternatives, therefore, it is recommended to strengthen this language by being

8

43. The water impairments are listed by waterbody and impairment type in **Table 3-39** of the Final SEIS.

44. Indirect and cumulative effects related to the proposed alternatives are provided in **Section 3.15.3** of the Final SEIS.

45. The Draft SEIS defined the floodplain regulations that were in place at the time of the development of the document.

46. The methodologies used to assess natural resources were reviewed and adjusted by FHWA, VDOT, and the Federal Cooperating Agencies (including USACE, EPA, and NOAA). It is acknowledged that there are numerous tools and methods that are available to assess resource conditions. While these tools and methods provide different metrics, it is unlikely that any would have produced data that would have changed the overall findings of the HRCS SEIS or decisions made by HRTPO, HRTAC, the Cooperating Agencies, or the CTB to identify a Preferred Alternative.

47. & 48. The Draft and Final SEISs both carefully consider impacts to cultural resources, including historic architecture and archaeological sites, pursuant to Section 106 of the National Historic Preservation Act of 1966, as well as Section 4(f) of the Department of Transportation Act. Through the Section 106 process, VDOT/FHWA delineated an APE; coordinated with numerous consulting parties, including the Virginia Department of Historic Resources (VDHR); identified and evaluated all resources over 40 years of age according to National Register of Historic Places criteria; and assessed project effects on historic properties listed in or eligible for listing in the National Register of Historic Places. This included an evaluation of several potential residential historic districts, one battlefield, and two historic trails. In correspondence dated April 1, 2016, July 8, 2016, and November 9, 2016, VDOT/FHWA coordinated with VDHR and other consulting parties regarding

Hampton Roads Transportation Planning Org., cont.

more descriptive of how it would be monitored or protected from potential adverse effects.

48
- **Page 3-164, Section 3.9.2 & Section 3.9.3**
  - VDOT has chosen to defer completion of this section until after the selection of a Preferred Alternative. However, before the release of the final SEIS it is recommended that this section be updated to include the effects the project has on archaeological sites and architectural historic properties. Once completed it also is recommended that this section be vetted for public comment.

49
- **Page 3-181, Section 3.15 Indirect and Cumulative Impacts, Regulatory Context and Methodology**
  - 1st sentence after Figure 3-20 – For clarity, recommend spelling out "ICE" since it does not appear to be defined previously in the document.

50
- **Page 3-199, Section 3.15 Indirect and Cumulative Impacts, Alternative B**
  - 1st paragraph under Socioeconomic Resources, 3rd sentence – For clarity, recommend spelling out "POV" since it does not appear to be defined in the document.

51
- **Page 3-223, Section 3.15 Indirect and Cumulative Impacts, Cumulative Effects**
  - 2nd paragraph, 1st sentence – For clarity, recommend spelling out "IC" since it does not appear to be clearly defined previously in the document.

52
- **Page 3-224, Section 3.15 Indirect and Cumulative Impacts, Cumulative Effects**
  - 1st paragraph under Table 3-63, 2nd sentence – For clarity, recommend spelling out "EA" since it does not appear to be clearly defined previously in the document.

53
- **Appendix A, Table A-1**
  - Table A-1 of Appendix A describes Alt B with segments 8,9,10,12,13,14 and 3. However, all the maps throughout the documents showing Alt B do not show segment 3. In addition, the cost for Alt B as shown in the SEIS is $6.6B. This cost does not include the cost of Segment 3. Should segment 3 cost be included in the total cost of Alt B? Please clarify and revise the cost or the maps accordingly.

Other Comments (on main SEIS Document)

54
- **Page 1-5, Figure 1-2A**
  - In the map, "VA 258" should be referred to as "US 258".

55
- **Page 1-7, Figure 1-2C**
  - Exit 274 incorrectly refers to "Ocean View Avenue". The exit should say "I-64 to WB Bay Avenue".
  - In the map, "VA 460" should be referred to as "US 460".

9

its findings and recommendations for the identification of architectural and archaeological historic properties. VDHR concurred with these findings by correspondence dated April 28, 2016, July 20, 2016, and December 5, 2016. By additional correspondence dated November 22, 2016, VDOT/FHWA coordinated with VDHR and other consulting parties on its assessment of no effect, no adverse effect, or conditioned no adverse effect for each of the 20 above-ground architectural, battlefield, and historic trail resources recognized as historic properties and located within the APE for the Preferred Alternative. VDHR concurred with the assessment of project effects on December 29, 2016.

As indicated in the Programmatic Agreement (**Appendix I** of this Final SEIS) there will be no encroachment into the Tree Limit of Disturbance for the Emancipation Oak during construction. The condition of the Emancipation Oak and loblolly pines will be monitoring during construction and for one year following construction.

49. Edits have been made in **Section 3.15** of the Final SEIS.

50. Edits have been made in **Section 3.15** of the Final SEIS.

51. Edits have been made in **Section 3.15** of the Final SEIS.

52. Edits have been made in **Section 3.15** of the Final SEIS.

53. See response to HRTPO comment number 2.

54. Figure 1-2A on page 1-5 now correctly labeled as "US 258".

55. Page 1-7, Figure 1-2C changed Exit 274 Westbound label to Naval Station Bay Ave. "VA 460" is changed to "US 460".

Hampton Roads Transportation Planning Org., cont.

56
- **Page 1-9, Figure 1-3B**
  - In the map, the label "Norfolk International Terminals" is not in the correct location.

57
- **Page 1-11, Figure 1-4**
  - Virginia International Gateway should be labeled on this map, since the other marine terminals are identified on the other Study Area Corridor maps.
  - High Street is shown as Business US 17 on the map. It should be labeled as US 17, not Business US 17.

58
- **Page 1-12, Figure 1-5A**
  - In the map, the label "Newport News Marine Terminal" is not in the correct location.

59
- **Page 1-16, Section 1.4.1 Overview**
  - The second sentence of the second paragraph should be reworded to say "However, capacity is inadequate at peak travel times on all of these corridors, leading...".

60
- **Page 1-16, Section 1.4.2 Accommodate Travel Demand**
  - The second bullet should refer to 19.7 million tons of containerized cargo.
  - In the second bullet, NIT should be spelled out, similar to the other marine terminals that are listed.
  - In the second bullet, the third sentence should refer to "the Virginia International Gateway Terminal".
  - In the second bullet, the term "to points further west" should be removed from the third sentence since it's repetitive with the "heading west" that is included in the sentence.
  - In the third bullet, it should say "This shipyard, which is accessed indirectly by I-664,...".

61
- **Page 1-17, Figure 1.6**
  - The title of the figure should reflect that these are the state-run port facilities, or VPA marine terminals.

62
- **Page 1-18, Section 1.4.2 Accommodate Travel Demand**
  - The Bank of America bullet should probably not be listed here. There are larger employers in the region.
  - In the first paragraph after the bullets, the phrase "and related to the beaches" should not be used. Although much of the tourist-related traffic in the region is beach related, much of it is not.
  - In the second paragraph, it should start "I-64, I-564, and I-664, and VA 164 provide..."
  - In the second paragraph, Town Center in Virginia Beach is not a mall. Also, the mall referred to as the "Chesapeake mall" in the text is actually called Chesapeake Square Mall.
  - In the second paragraph, it would be helpful to also reference the upcoming Norfolk Premium Outlets and Ikea developments in Norfolk.

10

56. Figure 1-3b Norfolk International Terminal label relocated more within the facility.

57. Figure 1-4 Virginia International Gateway label added. US 17 label corrected on High Street.

58. Figure 1-5A Newport News Marine Terminal label moved to correct location.

59. Edit has been made to **Section 1.4.1**.

60. Bullet 1: The source document Port of Virginia Annual Report 2015 on page 7 does not qualify the total 19.7 million tons of cargo processed by the ports as being only "containerized".
Bullet 2: NIT has already been spelled out on p.1-3.
Bullets 3-5: Edits made.

61. Major ports are shown and discussed in this section. The owner / operators are not shown on the figure or discussed in the SEIS.

62. Bullet 1: Bank of America removed.
Bullet 2: Edit made.
Bullet 3: Edit made.
Bullet 4: "Chesapeake Mall" corrected to "Chesapeake Square".
Bullet 5: Sentence revised to "Regional shopping destinations near the Study Area Corridors include: MacArthur Center in downtown Norfolk; Peninsula Town Center in the City of Hampton; City Center at Oyster Point and Patrick Henry Mall in the City of Newport News; High Street in the City of Portsmouth; Greenbrier and Chesapeake Square malls in the City of Chesapeake; and Town Center, Pembroke Mall and Lynnhaven Mall in the City of Virginia Beach."
Bullet 6: Edit made.

Hampton Roads Transportation Planning Org., cont.

- In the second paragraph, additional entertainment venues that should be added are the Ted Constant Convocation Center in Norfolk and the Amphitheater in Virginia Beach.
- In the third paragraph, it would be helpful to mention that bicycle and pedestrian travel is also prohibited at the James River Bridge.
- In the fourth paragraph, the Port of Virginia statistics should be updated to account for all of Calendar Year 2015.

63

- **Page 1-19, Section 1.4.3 Improve Transit Access**
  - In the second paragraph, the portion of the second sentence that refers to the Tide light rail line needs to be reworded.
  - In the second paragraph, fifth sentence, the term "the confines of" should be removed.
  - In the third paragraph, the title of DRPT's "Hampton Roads Regional Transit Vision Plan" should be included in the text.

64

- **Page 1-21, Section 1.4.4 Increase Regional Accessibility**
  - In the first paragraph, why does the second sentence reference Table 1-1?
  - In the first paragraph, the third sentence should be reworded to say "..., tunnels provide less capacity than typical freeway segments."
  - In the first paragraph, the fourth sentence can be updated to say that HRBT, MMMBT, and James River Bridge increased 73 percent from 1990 to 2015.
  - In the second paragraph, the statement "Admiral Taussig Boulevard also has inadequate capacity at peak morning travel hours...." is inaccurate. The backups are due to gate constrictions as was stated previously, not the capacity of Taussig Boulevard.

65

- **Page 1-23, Section 1.4.4 Increase Regional Accessibility**
  - In the first paragraph, it should be noted that the backups on the Western Freeway are due to the Midtown Tunnel, and that these backups should be alleviated by the widened tunnel.
  - In the third paragraph, fifth sentence, the term "accidents" should be replaced with "crashes."
  - In the fourth paragraph, the first sentence should say "....allow westbound over-height trucks to turn around on the South Island."
  - In the last paragraph, is the third location at the West Ocean View interchange ramp? Or at the Fourth View interchange?

66

- **Page 1-24, Section 1.4.4 Increase Regional Accessibility**
  - In the second to last sentence, it should be updated to say "2 to 3 miles southbound at peak afternoon travel times."
  - In the last sentence, it should be reworded to say "On I-564, traffic queued to enter Gate 3A...."

67

- **Page 1-25, Section 1.4.4 Increase Regional Accessibility**
  - In the second paragraph, second sentence, the word "irregular" should be removed.

11

Bullet 7: Edit made.
Bullet 8: More recent data does not separate out Hampton Roads from the rest of the Port facilities in Virginia.

63. Edits have been made in **Section 1.4.3**.

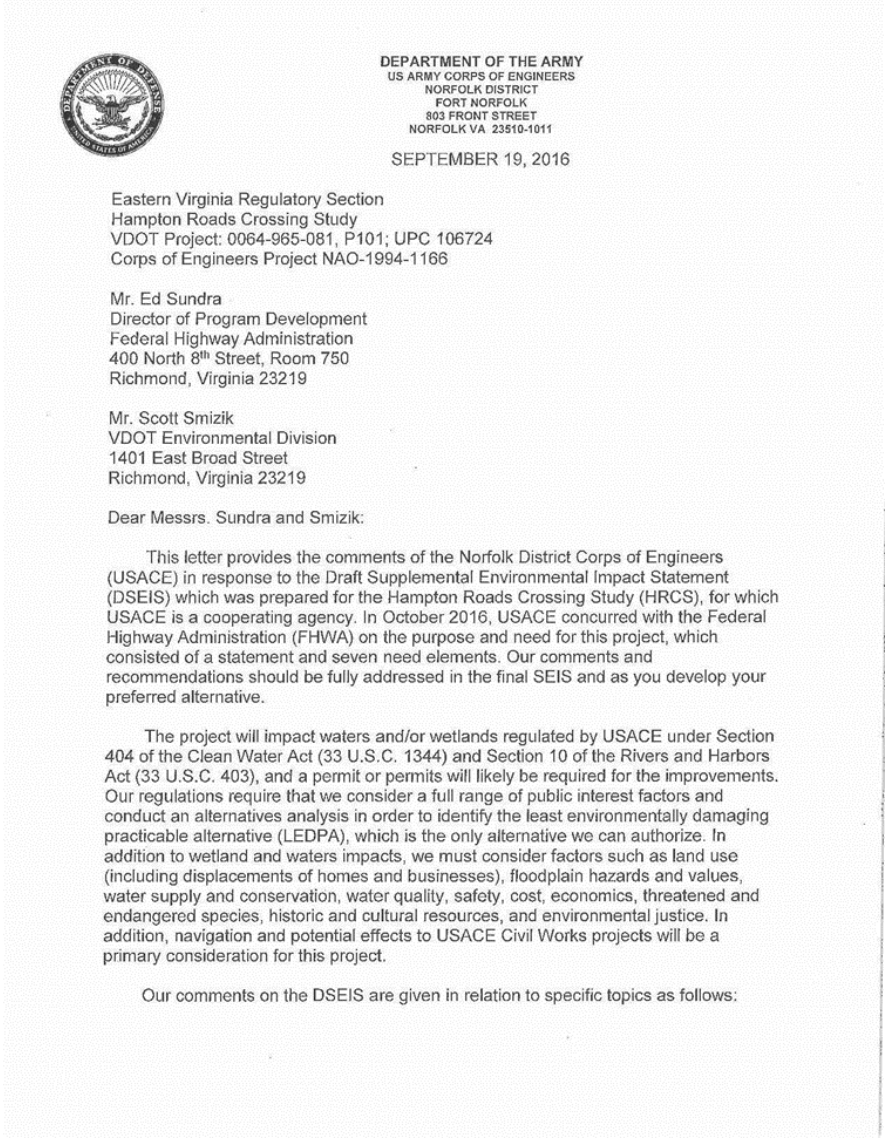
64. Table 1-1 is referred to in the first paragraph second sentence to refer the reader to truck volumes on the Study Corridors. In the first paragraph, fourth sentence updated to read "HRTPO estimated the volume of vehicles crossing Hampton Roads via the HRBT, MMMBT, and James River Bridge increased 73 percent from 1990 to 2015 (HRTPO, 2016)." In the second paragraph, sentence modified to read "Admiral Taussig Boulevard is also congested at peak morning travel hours due to Navy gate constrictions, causing traffic to back up on northbound I-564".

65. Bullet 1: Sentence added about Midtown tunnel backups.
Bullet 2: Edit made.
Bullet 3: Edit made.
Bullet 4: Sentence modified to "According to VDOT, traffic must be stopped in both directions at the HRBT to allow westbound over-height trucks to turn around on the south portal island." The last paragraph identification of the West Ocean View ramp as a primary westbound bottleneck on I-64 just south of the HRBT is correct per the cited *Investigation of Sources of Congestion at the Hampton Roads Bridge Tunnel* (Cetin et al., In Draft).

66. Sentence revised to "At the MMMBT, queue lengths typically extend from 2 to 3 miles southbound at peak afternoon travel times."

67. Edit made.

United States Army Corps of Engineers



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

SEPTEMBER 19, 2016

Eastern Virginia Regulatory Section
Hampton Roads Crossing Study
VDOT Project: 0064-965-081, P101; UPC 106724
Corps of Engineers Project NAO-1994-1166

Mr. Ed Sundra
Director of Program Development
Federal Highway Administration
400 North 8th Street, Room 750
Richmond, Virginia 23219

Mr. Scott Smizik
VDOT Environmental Division
1401 East Broad Street
Richmond, Virginia 23219

Dear Messrs. Sundra and Smizik:

This letter provides the comments of the Norfolk District Corps of Engineers (USACE) in response to the Draft Supplemental Environmental Impact Statement (DSEIS) which was prepared for the Hampton Roads Crossing Study (HRCS), for which USACE is a cooperating agency. In October 2016, USACE concurred with the Federal Highway Administration (FHWA) on the purpose and need for this project, which consisted of a statement and seven need elements. Our comments and recommendations should be fully addressed in the final SEIS and as you develop your preferred alternative.

The project will impact waters and/or wetlands regulated by USACE under Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act (33 U.S.C. 403), and a permit or permits will likely be required for the improvements. Our regulations require that we consider a full range of public interest factors and conduct an alternatives analysis in order to identify the least environmentally damaging practicable alternative (LEDPA), which is the only alternative we can authorize. In addition to wetland and waters impacts, we must consider factors such as land use (including displacements of homes and businesses), floodplain hazards and values, water supply and conservation, water quality, safety, cost, economics, threatened and endangered species, historic and cultural resources, and environmental justice. In addition, navigation and potential effects to USACE Civil Works projects will be a primary consideration for this project.

Our comments on the DSEIS are given in relation to specific topics as follows:

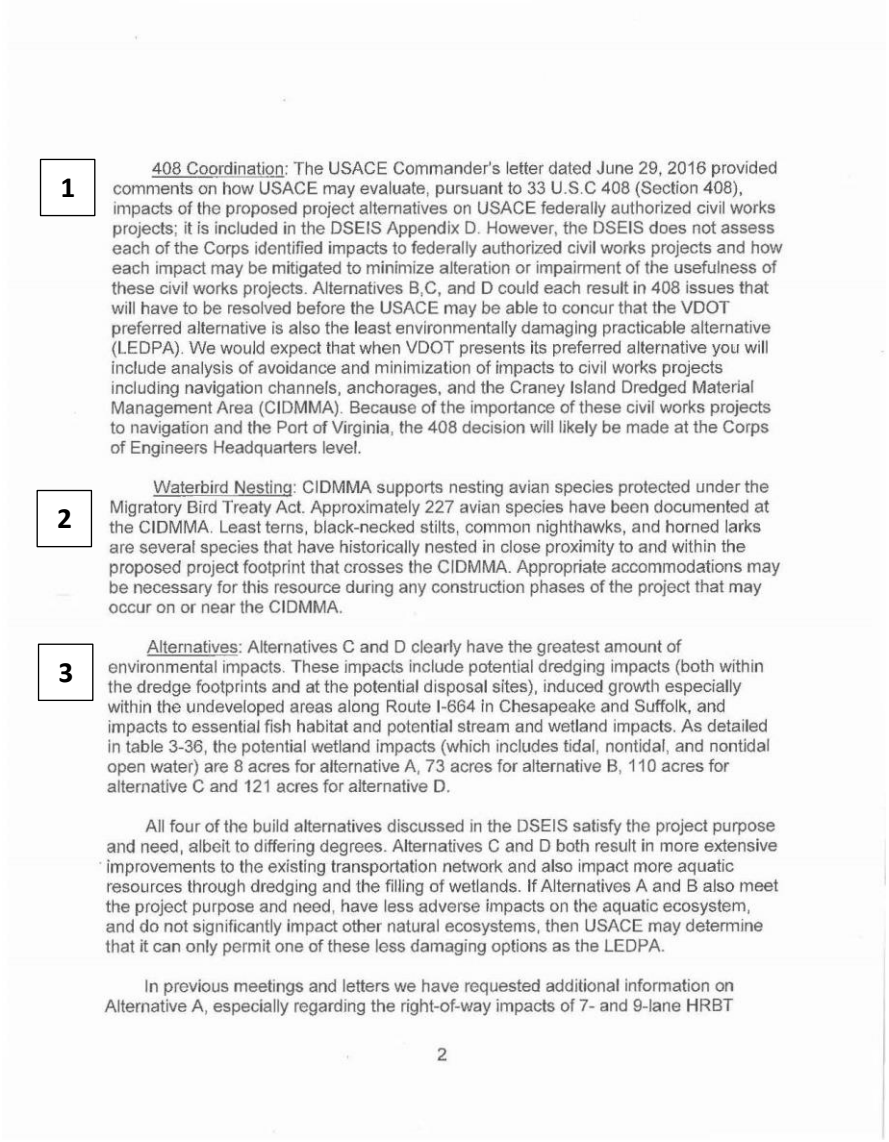
Response:

1. Since the issuance of the June 29, 2016 USACE letter, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision.

On September 27, 2016, VDOT recommended Alternative B to the USACE as the Preferred Alternative. This recommendation was informed by comments from the USACE on September 19, 2016 which stated "*If Alternatives A and B also meet the project purpose and need, have less adverse impacts [than Alternative C or D] on the aquatic ecosystem, and do not significantly impact other natural ecosystems, then USACE may determine that it can only permit one of these less damaging options as the LEDPA.*" From among Alternative A and Alternative B, VDOT considered Alternative B the least impactful alternative that fully addressed the purpose statement in the Draft SEIS.

HRTPO and HRTAC unanimously endorsed Alternative A as their Preferred Alternative on October 20, 2016. VDOT subsequently updated their recommendation of a Preferred Alternative to Alternative A on November 14, 2016, and requested USACE's concurrence that Alternative A can be considered the preliminary LEDPA. USACE concurred on VDOT's recommendation for Alternative A as the Preferred Alternative on December 2, 2016. USACE based their concurrence on information in the Draft SEIS which demonstrated that Alternative A sufficiently meets the HRCS Purpose and Need and would have less environmental impacts than the other build alternatives in the Draft SEIS, including Alternative B. USACE also found no reason to disagree that Alternative A may be considered the preliminarily LEDPA.

USACE, cont.



1

408 Coordination: The USACE Commander's letter dated June 29, 2016 provided comments on how USACE may evaluate, pursuant to 33 U.S.C 408 (Section 408), impacts of the proposed project alternatives on USACE federally authorized civil works projects; it is included in the DSEIS Appendix D. However, the DSEIS does not assess each of the Corps identified impacts to federally authorized civil works projects and how each impact may be mitigated to minimize alteration or impairment of the usefulness of these civil works projects. Alternatives B,C, and D could each result in 408 issues that will have to be resolved before the USACE may be able to concur that the VDOT preferred alternative is also the least environmentally damaging practicable alternative (LEDPA). We would expect that when VDOT presents its preferred alternative you will include analysis of avoidance and minimization of impacts to civil works projects including navigation channels, anchorages, and the Craney Island Dredged Material Management Area (CIDMMA). Because of the importance of these civil works projects to navigation and the Port of Virginia, the 408 decision will likely be made at the Corps of Engineers Headquarters level.

2

Waterbird Nesting: CIDMMA supports nesting avian species protected under the Migratory Bird Treaty Act. Approximately 227 avian species have been documented at the CIDMMA. Least terns, black-necked stilts, common nighthawks, and horned larks are several species that have historically nested in close proximity to and within the proposed project footprint that crosses the CIDMMA. Appropriate accommodations may be necessary for this resource during any construction phases of the project that may occur on or near the CIDMMA.

3

Alternatives: Alternatives C and D clearly have the greatest amount of environmental impacts. These impacts include potential dredging impacts (both within the dredge footprints and at the potential disposal sites), induced growth especially within the undeveloped areas along Route I-664 in Chesapeake and Suffolk, and impacts to essential fish habitat and potential stream and wetland impacts. As detailed in table 3-36, the potential wetland impacts (which includes tidal, nontidal, and nontidal open water) are 8 acres for alternative A, 73 acres for alternative B, 110 acres for alternative C and 121 acres for alternative D.

All four of the build alternatives discussed in the DSEIS satisfy the project purpose and need, albeit to differing degrees. Alternatives C and D both result in more extensive improvements to the existing transportation network and also impact more aquatic resources through dredging and the filling of wetlands. If Alternatives A and B also meet the project purpose and need, have less adverse impacts on the aquatic ecosystem, and do not significantly impact other natural ecosystems, then USACE may determine that it can only permit one of these less damaging options as the LEDPA.

In previous meetings and letters we have requested additional information on Alternative A, especially regarding the right-of-way impacts of 7- and 9-lane HRBT

2

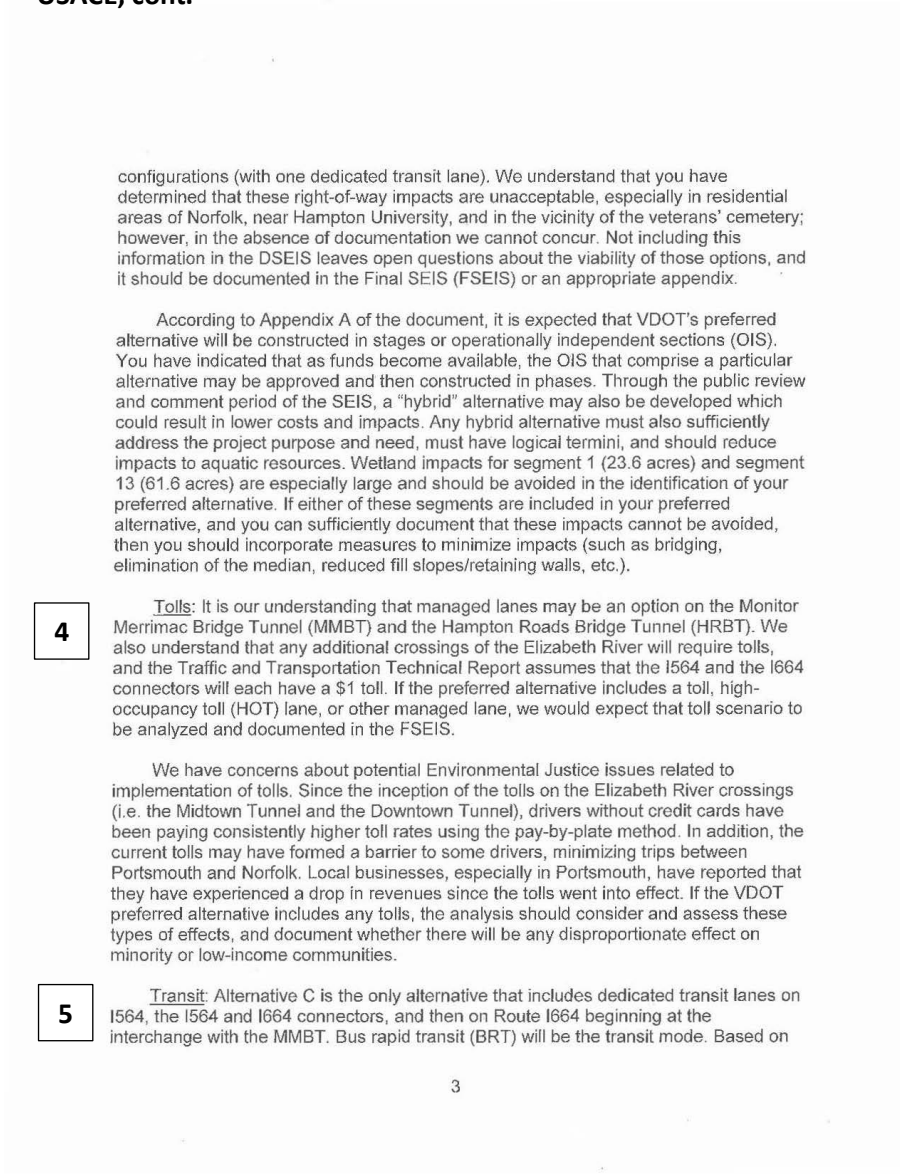
Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

While previous communication between VDOT and USACE indicated that Alternatives B, C, and D had the potential for the greatest issues related to a Section 408 decision, it is acknowledged that Alternative A also would require coordination to resolve Section 408 issues. **Section 3.8.1.2** of this Final SEIS identifies these issues, discusses how they have been addressed in the NEPA phase, and how they would be advanced following the issuance of a ROD from FHWA.

2. The Preferred Alternative includes improvements to I-64 only and would not impact CIDMMA. Any impacts to other nesting areas for avian species will be addressed during the final design and construction phases of the Preferred Alternative.

3. Based on this comment, and input from other agencies and stakeholders, VDOT formally recommended Alternative B be considered as the Preferred Alternative to USACE on September 27, 2016 (See **Appendix D**).

USACE, cont.



configurations (with one dedicated transit lane). We understand that you have determined that these right-of-way impacts are unacceptable, especially in residential areas of Norfolk, near Hampton University, and in the vicinity of the veterans' cemetery; however, in the absence of documentation we cannot concur. Not including this information in the DSEIS leaves open questions about the viability of those options, and it should be documented in the Final SEIS (FSEIS) or an appropriate appendix.

According to Appendix A of the document, it is expected that VDOT's preferred alternative will be constructed in stages or operationally independent sections (OIS). You have indicated that as funds become available, the OIS that comprise a particular alternative may be approved and then constructed in phases. Through the public review and comment period of the SEIS, a "hybrid" alternative may also be developed which could result in lower costs and impacts. Any hybrid alternative must also sufficiently address the project purpose and need, must have logical termini, and should reduce impacts to aquatic resources. Wetland impacts for segment 1 (23.6 acres) and segment 13 (61.6 acres) are especially large and should be avoided in the identification of your preferred alternative. If either of these segments are included in your preferred alternative, and you can sufficiently document that these impacts cannot be avoided, then you should incorporate measures to minimize impacts (such as bridging, elimination of the median, reduced fill slopes/retaining walls, etc.).

4

Tolls: It is our understanding that managed lanes may be an option on the Monitor Merrimac Bridge Tunnel (MMBT) and the Hampton Roads Bridge Tunnel (HRBT). We also understand that any additional crossings of the Elizabeth River will require tolls, and the Traffic and Transportation Technical Report assumes that the I564 and the I664 connectors will each have a $1 toll. If the preferred alternative includes a toll, high-occupancy toll (HOT) lane, or other managed lane, we would expect that toll scenario to be analyzed and documented in the FSEIS.

We have concerns about potential Environmental Justice issues related to implementation of tolls. Since the inception of the tolls on the Elizabeth River crossings (i.e. the Midtown Tunnel and the Downtown Tunnel), drivers without credit cards have been paying consistently higher toll rates using the pay-by-plate method. In addition, the current tolls may have formed a barrier to some drivers, minimizing trips between Portsmouth and Norfolk. Local businesses, especially in Portsmouth, have reported that they have experienced a drop in revenues since the tolls went into effect. If the VDOT preferred alternative includes any tolls, the analysis should consider and assess these types of effects, and document whether there will be any disproportionate effect on minority or low-income communities.

5

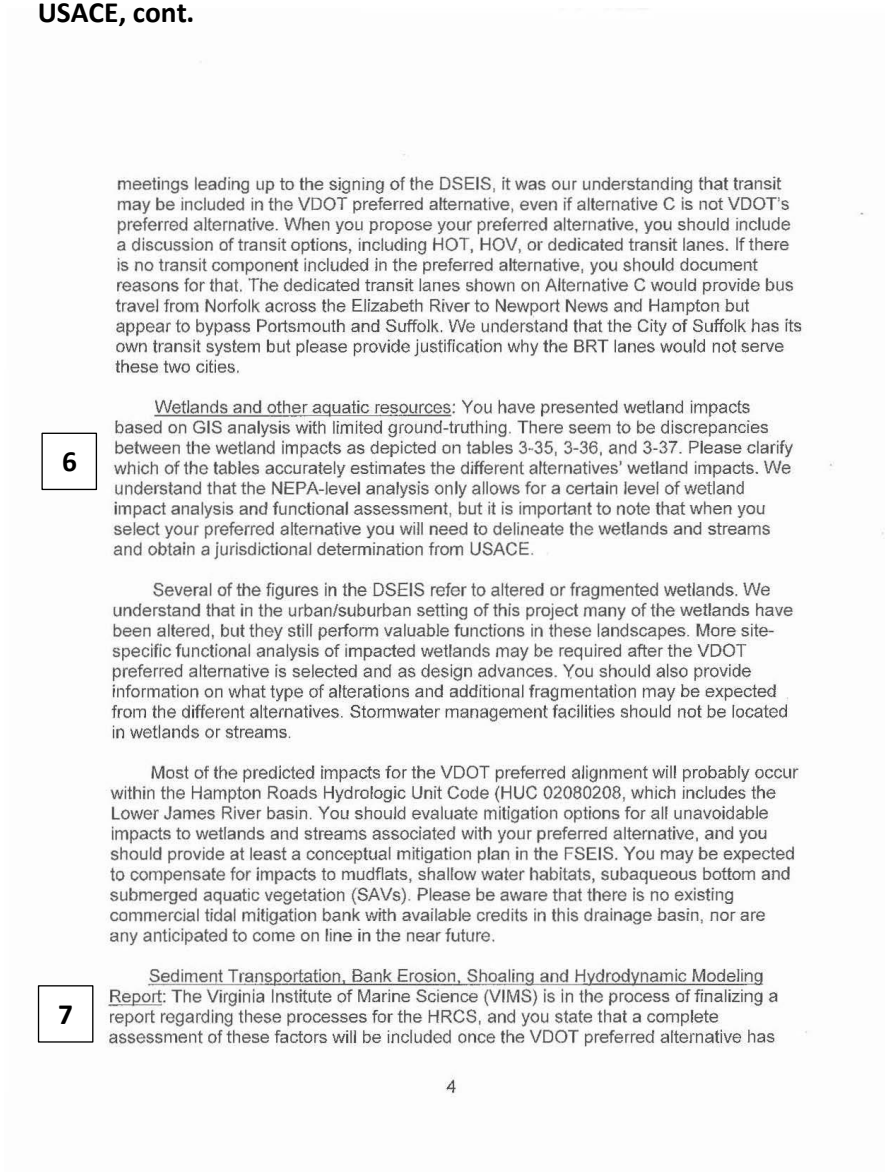
Transit: Alternative C is the only alternative that includes dedicated transit lanes on I564, the I564 and I664 connectors, and then on Route I664 beginning at the interchange with the MMBT. Bus rapid transit (BRT) will be the transit mode. Based on

3

This recommendation was made in accordance with the Coordination Plan for the study. The USACE response to this recommendation, dated October 13, 2016 requested clarification as to the impacts of Alternative B were justified to meet the study needs compared to the lesser impacts of Alternative A. Prior to VDOT providing a response, HRTPO and HRTAC endorsed Alternative A as the Preferred Alternative. As FHWA will only issue a ROD for what is included in the HRTPO LRTP, this led VDOT to make a similar change in its recommendation to USACE. The HRTPO and HRTAC actions were based on fiscal constraint and they also acknowledged the need for other improvements considered in the HRCS by committing funding to future study of the I-564, I-664, and VA 164 Connectors, as well as future improvements to I-664. USACE and the other federal Cooperating Agencies were made aware of this commitment prior to concurrence on the recommended Preferred Alternative. Based on these actions and the items discussed above in response to USACE comment number 1, CTB has identified Alternative A as the Preferred Alternative.

During the public review of the HRBT DEIS in 2012, there was a clear lack of public and political support for the level of impacts associated with the 8- and 10-lane build alternatives. Specifically, potential impacts to Hampton University, Hampton National Cemetery, and the high number of displacements were key issues identified by the public, elected officials, and University and Veterans Affairs officials. Given the lack of support, VDOT and FHWA agreed that improvements considered along the I-64 corridor in the HRCS SEIS would be confined largely to existing right of way. This resulted in the Preferred Alternative consisting of a six-lane facility along I-64 with one bridge-tunnel structure crossing Hampton Roads. The SEIS provides preliminary impact estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. The impacts have been calculated using a worst-case scenario, or the largest potential footprint that may be required to construct the improvements, for the proposed six-lane facility on I-64. Additional efforts will be made to refine

USACE, cont.



meetings leading up to the signing of the DSEIS, it was our understanding that transit may be included in the VDOT preferred alternative, even if alternative C is not VDOT's preferred alternative. When you propose your preferred alternative, you should include a discussion of transit options, including HOT, HOV, or dedicated transit lanes. If there is no transit component included in the preferred alternative, you should document reasons for that. The dedicated transit lanes shown on Alternative C would provide bus travel from Norfolk across the Elizabeth River to Newport News and Hampton but appear to bypass Portsmouth and Suffolk. We understand that the City of Suffolk has its own transit system but please provide justification why the BRT lanes would not serve these two cities.

6 Wetlands and other aquatic resources: You have presented wetland impacts based on GIS analysis with limited ground-truthing. There seem to be discrepancies between the wetland impacts as depicted on tables 3-35, 3-36, and 3-37. Please clarify which of the tables accurately estimates the different alternatives' wetland impacts. We understand that the NEPA-level analysis only allows for a certain level of wetland impact analysis and functional assessment, but it is important to note that when you select your preferred alternative you will need to delineate the wetlands and streams and obtain a jurisdictional determination from USACE.

Several of the figures in the DSEIS refer to altered or fragmented wetlands. We understand that in the urban/suburban setting of this project many of the wetlands have been altered, but they still perform valuable functions in these landscapes. More site-specific functional analysis of impacted wetlands may be required after the VDOT preferred alternative is selected and as design advances. You should also provide information on what type of alterations and additional fragmentation may be expected from the different alternatives. Stormwater management facilities should not be located in wetlands or streams.

Most of the predicted impacts for the VDOT preferred alignment will probably occur within the Hampton Roads Hydrologic Unit Code (HUC 02080208, which includes the Lower James River basin. You should evaluate mitigation options for all unavoidable impacts to wetlands and streams associated with your preferred alternative, and you should provide at least a conceptual mitigation plan in the FSEIS. You may be expected to compensate for impacts to mudflats, shallow water habitats, subaqueous bottom and submerged aquatic vegetation (SAVs). Please be aware that there is no existing commercial tidal mitigation bank with available credits in this drainage basin, nor are any anticipated to come on line in the near future.

7 Sediment Transportation, Bank Erosion, Shoaling and Hydrodynamic Modeling Report: The Virginia Institute of Marine Science (VIMS) is in the process of finalizing a report regarding these processes for the HRCS, and you state that a complete assessment of these factors will be included once the VDOT preferred alternative has

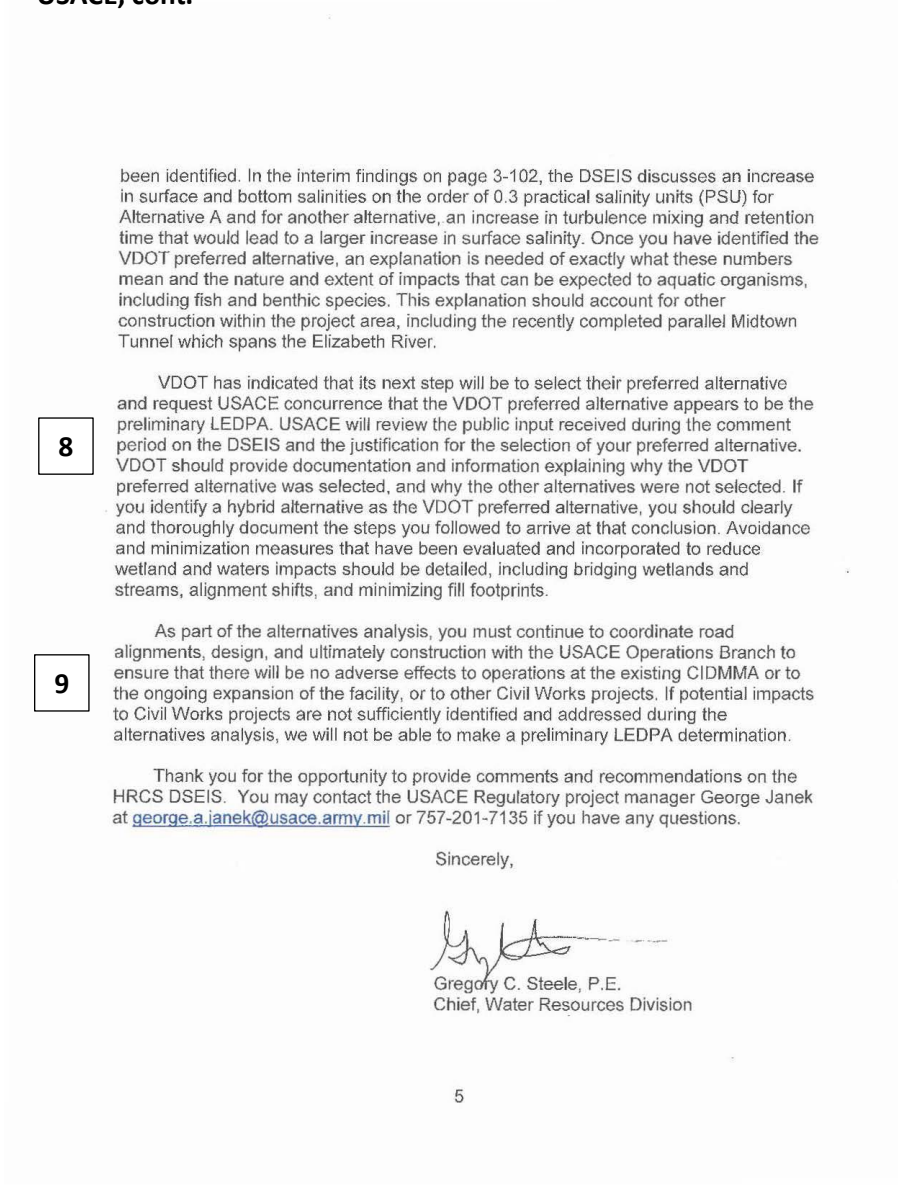
4

and reduce these impacts during the final design and permitting process after a ROD is issued.

As depicted in the Draft SEIS, the six lane facility would still fall outside of existing right of way resulting in impacts to Hampton University property and the associated historic district, as well as non-contributing features to the Phoebus Historic District. On December 29, 2016, DHR concurred with VDOT that impacts to the Phoebus Historic District features would have no adverse effect on this historic property. As documented in **Appendix D** of this Final SEIS, Hampton University indicated that the proposed impacts would be unacceptable. The revisions made to Alternative A and presented in **Section 2.7** of this Final SEIS avoid these impacts but illustrate that any lane configuration greater than six-lanes would result in unacceptable property impacts and greater impacts to wetlands and water resources than the Preferred Alternative.

In addition to the increase in physical impacts, a 7-lane scenario would have limited benefit compared to the operational issues they would create. While data on vehicle diversions have been documented in the past by VDOT and the Virginia DRPT, the most recent data available for the corridor comes from the Patronage Forecasting analysis DRPT and Hampton Roads Transit (HRT) completed to inform the Draft SEIS (see **Appendix D**). The DRPT/HRT report indicated that BRT was the appropriate form of transit to be considered and examined the potential BRT ridership and the related reduction in personal vehicle trips/mileage along the I-64/HRBT corridor. The DRPT/HRT analysis indicates that a BRT transit service provided in dedicated lanes would reduce less than 1% of person trips and less than 1,000 of 200,000 vehicle trips of average weekday daily traffic volumes on the existing general purpose lanes. This reduction also assumed transit lanes operating in each direction. Including a single transit lane would presumably offer less reduction and would pose logistic issues as the timing of bus trips and which direction the bus service may run.

USACE, cont.



been identified. In the interim findings on page 3-102, the DSEIS discusses an increase in surface and bottom salinities on the order of 0.3 practical salinity units (PSU) for Alternative A and for another alternative, an increase in turbulence mixing and retention time that would lead to a larger increase in surface salinity. Once you have identified the VDOT preferred alternative, an explanation is needed of exactly what these numbers mean and the nature and extent of impacts that can be expected to aquatic organisms, including fish and benthic species. This explanation should account for other construction within the project area, including the recently completed parallel Midtown Tunnel which spans the Elizabeth River.

8

VDOT has indicated that its next step will be to select their preferred alternative and request USACE concurrence that the VDOT preferred alternative appears to be the preliminary LEDPA. USACE will review the public input received during the comment period on the DSEIS and the justification for the selection of your preferred alternative. VDOT should provide documentation and information explaining why the VDOT preferred alternative was selected, and why the other alternatives were not selected. If you identify a hybrid alternative as the VDOT preferred alternative, you should clearly and thoroughly document the steps you followed to arrive at that conclusion. Avoidance and minimization measures that have been evaluated and incorporated to reduce wetland and waters impacts should be detailed, including bridging wetlands and streams, alignment shifts, and minimizing fill footprints.

9

As part of the alternatives analysis, you must continue to coordinate road alignments, design, and ultimately construction with the USACE Operations Branch to ensure that there will be no adverse effects to operations at the existing CIDMMA or to the ongoing expansion of the facility, or to other Civil Works projects. If potential impacts to Civil Works projects are not sufficiently identified and addressed during the alternatives analysis, we will not be able to make a preliminary LEDPA determination.

Thank you for the opportunity to provide comments and recommendations on the HRCS DSEIS. You may contact the USACE Regulatory project manager George Janek at george.a.janek@usace.army.mil or 757-201-7135 if you have any questions.

Sincerely,

Gregory C. Steele, P.E.
Chief, Water Resources Division

5

The proposed 9-lane facility would have similar operational issues and also would result in property impacts to the adjacent Veterans Cemetery that were avoided in the HRCS Draft SEIS. In response to the Draft HRBT EIS, the Department of Veterans Affairs "urged" VDOT and FHWA not to select an alternative that would impact its property. The Department of Veterans Affairs went on to question if sufficient or suitable replacement acreage could be identified for burial site relocations. Noting the potential for public controversy associated with burial site relocations or impacting parking/access to the Veterans Affairs Cemetery, the Department of Veterans Affairs stated it would be difficult to execute a Section 106 Programmatic Agreement or MOA to address any impacts to the cemetery.

For reference, the impacts from the 8- and 10-lane facilities considered in the HRBT DEIS were provided to USACE in VDOT's recommendation of a Preferred Alternative on September 27, 2016 and are included in **Section 2.2** of this Final SEIS. Engineering of the 7- and 9- lane options were not advanced to great enough detail to provide similar impact estimates. Given the information above, it is assumed these alternatives would be more impactful than the Preferred Alternative and present additional operational challenges.

4. In its resolution identifying the Preferred Alternative, the CTB did not identify a specific management option (HOT, HOV, etc) but reserved the right to review and approve such a management option should one be identified as part of the project. For the purposes of this Final SEIS, a "worst case scenario" has been identified and discussed in **Appendix G**.

In cooperation with VDOT, regional agencies including the HRTAC and the HRTPO would determine whether an HOV or HOT option would be implemented as part of Alternative A (all toll scenarios are prohibited on existing interstates without specific action from the Virginia General Assembly). Therefore, it is expected that the same number of free lanes currently available to the public will still be available after the Preferred

USACE, cont.

Alternative is implemented. A final decision on managed lanes would be made following issuance of a ROD.

If HOT lanes were to be implemented, the decision on how tolls would be collected would be determined after the NEPA study is complete. The HRCS SEIS has assumed that if tolling was to be implemented, it would be done with overhead electronic toll gantries designed to avoid the larger footprint associated with toll booths. Effects of tolling is analyzed in the Final SEIS in **Sections 3.2** and **3.15**.

5. With the exception of a few differences, Alternative C was the alternative from the 2001 ROD. Since it had transit-only lanes at that time, those transit-only lanes were maintained for this study. While only Alternative C specifically included transit-only lanes, each of the Build Alternatives retained in the Draft SEIS had the capacity to include transit (see Chapter 2 of the Draft SEIS). The Preferred Alternative would widen I-64 from four to six lanes. Buses that use this route would benefit from the decrease in congestion and increased mobility. Transit would be considered and further accommodated in the managed lane option. Details on the transit options for the Final SEIS Preferred Alternative are included in **Section 2.7**.

In their comments on the Draft SEIS, DRPT provided recommendations for how BRT could be accommodated in a Preferred Alternative. In identifying the Preferred Alternative, the CTB did not apply a specific management option/vehicle occupancy restriction but did retain the authority to be briefed on and approve and future decisions. A decision on a specific management option/vehicle occupancy restriction would most likely be made after the issuance of a ROD during more detailed design. A description of the Preferred Alternative, including how transit could operate is included in **Section 2.7**.

USACE, cont.

6. Discrepancies in Tables 3-35 through 3-37 in the Draft SEIS are a result of rounding to different decimal places. Revised wetland numbers for the Preferred Alternative are provided in the Final SEIS under Section 3.8.1.3. These values have been rounded to the tenth decimal place and are consistent among tables in the Final SEIS.

As part of the HRCS SEIS, the federal Cooperating Agencies concurred that a proven photointerpretation method for identifying wetlands would be appropriate for the study. While reliable and appropriate for NEPA analysis, photointerpretation is not meant to provide the level of detail necessary for permit actions. Following the issuance of a ROD from FHWA, VDOT could advance with more detailed designs that would inform future coordination with USACE and other permitting agencies. This coordination would include identifying appropriate mitigation options and ensuring stormwater management facilities are not located in wetlands or streams.

7. The VIMS Study (January 2017) provides planning-level analysis of the potential impact on surface water elevation, flow, salinity, and bottom shear stress related to the No-Build and Build Alternatives. The VIMS Study has been made available to the public of the study website with the publication of the Final SEIS. A summary of the findings is presented in **Section 3.8.1.6** of the Final SEIS.

8. Refer to Comment #1 and #3.

9. Following the issuance of a ROD by FHWA, VDOT could advance to more detailed design and procurement activities. At that time, a timeline for future design refinements and permitting actions could be established. As this process progresses, there would be continued coordination with the USACE and other regulatory agencies. See response to NMFS comment number 1 regarding Section 408.

United States Department of Commerce – National Marine Fisheries Service (NMFS)

United States Department of Commerce
National Marine Fisheries Service
Greater Atlantic Region
Virginia Field Office
1375 Greate Rd., P.O. Box 1346
Gloucester Point, VA 23062

September 19, 2016

Mr. Scott Smizik
Location Studies Project Manager
Virginia Department of Transportation
Environmental Division
1401 East Broad Street
Richmond, VA 23219

Re: Hampton Roads Crossing Study; Draft Supplemental Environmental Impact Statement

Dear Scott,

Thank you for the opportunity to review and provide comment on the Virginia Department of Transportation (VDOT) Draft Supplemental Environmental Impact Statement (DSEIS) prepared for the Hampton Roads Crossing Study (HRCS). Four alternatives were selected for further analysis in development of the SEIS to update information provided in the HRCS Final EIS, published back in 2001. As a cooperating agency, NOAA Fisheries Service has participated in meetings over the past year whereby Alternatives A, B, C and D have been developed and defined in their ability to satisfy the project's purpose and seven need elements. In addition, preliminary environmental studies such as wetland photo-interpretation and limited ground-truthing have been conducted to help determine the environmental impacts resulting from each Alternative. It is understood that construction of VDOT's preferred Alternative may be constructed in discrete segments or Operationally Independent Sections (OIS) as funding is available.

The project planning corridor is located in the Hampton Roads Hydrologic Unit Code (HUC 02080208) which includes the lower James River basin and the port of Hampton Roads. Each of the Alternatives presented in the DSEIS results in impacts to wetlands and waters of the U.S., where Alternative D has the largest potential to impact aquatic resources. Please recognize that the level of information required to produce the DSEIS under National Environmental Policy Act (NEPA) guidelines is typically insufficient for the environmental permitting process which includes coordination with NOAA Fisheries Service.

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires all Federal agencies to consult with the National Marine Fisheries Service (NOAA Fisheries Service) on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish

Response:

Response begins on next page.

NMFS, cont.

Habitat (EFH). EFH is designated for 14 federally managed species in the HRCS project planning corridor. In addition, NOAA Fisheries Service helps protect anadromous species such as American shad, striped bass, alewife, blueback herring, yellow perch, and the federally listed Atlantic sturgeon under the Fish and Wildlife Coordination Act (48 Stat. 401, as amended 1964; 16 U.S.C 661 et seq.). Our comments and recommendations provided under the Fish and Wildlife Coordination Act are intended to reduce environmental impacts to migratory, estuarine, and marine fisheries and their habitats.

Alternatives A, B, C and D have not been fully designed at this time, though several include design elements such as new bridges and/or tunnels which will affect aquatic resources under our purview such as tidal wetlands, mudflats, shellfish beds, submerged aquatic vegetation, EFH and endangered species as identified in the Natural Resources Technical Report of the DSEIS. However, specific information regarding the means, methods, materials, timing and duration of various construction elements will be necessary in order to assess the potential for project impacts to aquatic resources as well as to identify mitigate measures which may be employed to help avoid, minimize or mitigate those impacts. In an effort to reduce impacts to NOAA trust resources, Habitat Conservation Division (HCD) staff are developing a manual of best management practices (BMPs) for FHWA to be used during the planning, design, permitting and construction of transportation infrastructure projects. It is our intention that incorporating BMPs into all FHWA projects, including the Preferred Alternative ultimately selected for the HRCS, will help streamline the EFH and Endangered Species Act (ESA) Section 7 consultation processes. If you would like to review NOAA's BMPs being developed for FHWA I am happy to provide you a draft copy under separate cover.

1

The HRCS project corridor overlaps with areas that may support several species listed by NOAA under the ESA including four species of sea turtles (Leatherback sea turtle (*Dermochelys coriacea*), Green sea turtle (*Chelonia mydas*), Kemp's ridley sea turtle (*Lepidochelys kempi*), and the Northwest Atlantic Ocean Distinct Population Segment (DPS) of loggerhead sea turtle (*Caretta caretta*)), as well as five DPSs of Atlantic sturgeon (Acipenser oxyrinchus oxyrinchus). Therefore, we encourage VDOT and FHWA to evaluate the effects of the proposed Alternatives on the ESA-listed species in selecting a Preferred Alternative. As you may know, any discretionary federal action, such as the approval or funding of a project by a Federal agency such as FHWA that may affect a listed species must undergo consultation pursuant to Section 7 of the ESA. As the lead Federal agency for the HRCS, FHWA will be responsible for determining whether the Preferred Alternative is likely to affect listed species. When specific project plans are being developed, FHWA should submit their determination of effects, along with justification for the determination, and a request for concurrence to NOAA Fisheries Service, Greater Atlantic Region Fisheries Office, Protected Resources Division, 55 Great Republic Drive, Gloucester, MA 01930. After reviewing this information, our Protected Resources Division (PRD) will be able to consult with FHWA under section 7 of the ESA.

2

Thank you for the opportunity to provide comments and recommendations on the HRCS DSEIS. Please feel free to contact me at david.l.o'brien@noaa.gov or 804-684-7828 if you have any questions.

1. Best Management Practices will be determined during the final design and permitting phases, after the issuance of a ROD.

2. As acknowledged in your letter, the information and level of detail needed to enter into Section 7 consultation is not normally available during the NEPA process. This includes information on the means, methods, materials, timing and duration of various construction elements. It also includes information on the limits of construction, the quantity and quality of dredged material, and the availability of suitable disposal sites. This information is not typically developed until the design phase of the project, after a ROD is issued. Given the nature of the marine species and the extent of their habitat, the Preferred Alternative is not likely to adversely affect endangered and threatened species.

Experience from other projects in the region has shown that any concerns over effects on the marine species identified can be adequately addressed with conservation measures and time-of-year restrictions employed during construction. A couple of recent projects addressed Endangered Species Act (ESA) requirements well after the NEPA process was completed. On the Gilmerton Bridge project, ESA requirements were addressed after the sturgeon was listed late in the construction of the project. On the Chesapeake Bay Bridge Tunnel project, coordination with the NOAA was initiated after the construction contract was awarded when the means, methods, and materials of construction were known. Further, there would not be any irreversible or irretrievable commitment of resources with respect to the agency action that has the effect of foreclosing the formulation or implementation of any reasonable alternative measures that would avoid adverse effects to endangered and threatened species.

The Draft SEIS included commitments to ensure that the consultation process concludes prior to construction. Additionally, VDOT has

NMFS, cont.

Sincerely,

David L. O'Brien

David L. O'Brien
Fisheries Biologist

numerous controls in place to ensure threatened and endangered species requirements are addressed prior to construction including environmental certification and the permitting process. Accordingly, FHWA is confident that an informed decision can be made regarding the Preferred Alternative and that sufficient controls are in place to ensure adverse effects to endangered and threatened species do not occur.

United States Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

September 19, 2016

Ms. Angel Deem
Division Director
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219

Ms. Jessie Yung
Acting Division Administrator
Federal Highway Administration
400 North 8th Street, Suite 750
Richmond, Virginia 23219-4825

Re: Hampton Roads Crossing Study Draft Supplemental Environmental Impact Statement Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, and Suffolk, Virginia CEQ No. 20160177

Dear Ms. Deem and Ms. Yung:

In accordance with the National Environmental Policy Act (NEPA) of 1969, Section 309 of the Clean Air Act and the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1508), the United States Environmental Protection Agency (EPA) has reviewed the Hampton Roads Crossing Study (HRCS) Draft Supplemental Environmental Impact Statement (DSEIS). The DSEIS has been prepared by the Federal Highway Administration (FHWA) in conjunction with the Virginia Department of Transportation (VDOT). The DSEIS re-evaluates the findings of the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) that were approved by the FHWA in 2001. The purpose of the HRCS is to relieve congestion at the I-64 Hampton Roads Bridge Tunnel (HRBT) in a manner that improves accessibility, transit, emergency evacuation, and military and goods movement along the primary transportation corridors in the Hampton Roads region, including the I-64, I-664, I-564, and VA 164 corridors.

The DSEIS evaluates five alternatives including the No Build.

- Alternative A (based on Alternative (CBA) 1 from the 2001 Hampton Roads Crossing Study, HRSC, FEIS) is approximately 12 miles long and impacts 7.8 acres of wetlands, 138.4 acres of essential fish habitat (EFH), 14.9 acres of forest, 1 acre of threatened and endangered (T&E) habitat, and costs $3.3 B.

Response:

1. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by

USEPA, cont.

- Alternative B (based on CBA 2 from the 2001 HRCS FEIS with the addition of the VA164 Study Corridor) is approximately 26 miles long and impacts 72.6 acres of wetlands, 214.3 acres of EFH, 111.9 acres of T&E habitat, 73.1 acres of forest, and costs $6.6 B.

- Alternative C (based on CBA 9- Preferred Alternative in 2001 HRCS FEIS, with the addition of the VA 164 Study Corridor) is approximately 40 miles long with dedicated transit facilities and impacts 547. 9 linear feet of stream, 111.5 acres of wetlands, 565.4 acres of EFH, 163.9 acres of T&E habitat, 179.5 acres of forest, costs $12.5 B.

- Alternative D is a combination of Alternatives B and C with no dedicated transit-only lanes. This alternative was not included in the 2001 FEIS and was included in response to comments and estimates prepared by the Hampton Roads Transportation Accountability Commission that suggested the organization could fund improvements to all the Study Area Corridors over time. It is approximately 55 miles long and impacts 547.9 linear feet of stream, 119.9 acres of wetlands, 636.3 acres of EFH, 153.7 acres of T&E habitat, 177.6 acres forest, and costs $11.9 B.

The SEIS further states that given the magnitude and scope of the alternatives, it is expected that the Preferred Alternative would be implemented in stages or operationally independent sections (OISs). Different sections within an OIS could be replaced with another and OISs could be combined to form "hybrid" alternatives that could reduce cost and impacts. If a hybrid is identified as the Preferred Alternative, it would be presented to the public and fully documented in the Final SEIS (FSEIS).

While we understand that the complexity of the project area and the SEIS conservatively estimates direct impacts associated with the project, adequate avoidance and minimization has not been applied or discussed in detail in the NEPA document. In addition, stormwater management and design adaptation have not been evaluated. These, though important features, may increase impacts. Alternative A appears to have the fewest impacts, however, the SEIS indicates that this alternative may not meet all of the project needs. Alternatives B, C, and D have significant impacts to aquatic resources, threatened and endangered species habitat, fish and terrestrial habitat, floodplains and a number other resources. There is also uncertainty to the availability of appropriate mitigation options for such large aquatic impacts. Given the number and extent of these impacts, we support evaluating a hybrid approach to meet the project needs while minimizing impacts to communities and resources. We believe that the objections we raise to the project can be alleviated by careful review and selection of sections of new proposed alignment and upgraded existing alignment including allowance for multimodal growth. We recommend avoidance of highly functioning resources, measures to avoid and minimize impacts such as bridging, innovative stormwater management, and construction approaches to minimize dredging. More information should be provided on potential dredge disposal methods, locations and impacts in the FSEIS.

1

2

Based on our review summarized above and presented in the attached Detailed Technical Comments, EPA has rated the environmental impacts associated with Alternative A as Environmental Concerns, Insufficient Information (EC2) and Alternatives B, C, and D as Environmental Objections, Insufficient Information (EO2). While we understand that Alternatives A, B, and C are based on alternatives evaluated in the Draft EIS, the addition of the VA 164 Study Area Corridor to Alternatives B and C is new. In addition, the impacts associated

HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

Dredging and dredge material disposal will be evaluated in more detail during the final design and permitting phases, after the issuance of a ROD.

2. Detailed responses to these concerns are provided in detail on the following pages.

USEPA, cont.

with these alternatives have increased. The EPA review has identified significant impacts that should be avoided in order to adequately protect the environment. Careful selection of a preferred alternative and corrective measures to insure protection of the environment will be required to address impacts identified. A description of our rating system can be found at: www.epa.gov/nepa/environmental-impact-statement-rating-system-criteria

We look forward to continuing a close working relationship with FHWA, VDOT and the interagency team as progress is made toward selection of a preferred alternative. We suggest the project team maintain close coordination with affected residents and continue to explore methods to avoid and minimize construction and operational impacts associated with the build alternatives. If you have questions regarding these comments, the staff contact for this project is Ms. Barbara Okorn; she can be reached at 215-814-3330.

Sincerely,

Jeffrey D. Lapp
Associate Director
Office of Environmental Programs

Enclosure

3. A high bridge option would pose greater permanent Section 408 issues than a tunnel and may not be a permittable option due to greater impacts to hydrodynamic characteristics and visual impact to nearby communities and historic properties than a tunnel alignment (see Sections 4.3 and 4.4 of the *HRCS Alternatives Technical Report* for more detail). A high bridge would introduce a height restriction over the shipping channel that does not exist today. Section 408 review will require continued unconstrained access through the unconstrained passages over the existing tunnels. The required height of the bridge structures could result in impacts outside of existing right-of-way. VDOT and the FHWA have committed that improvements proposed in the HRCS SEIS to the I-64 corridor would be largely confined to existing right-of-way. To meet this commitment, the Build Alternatives in the HRCS SEIS consist of a six-lane facility along I-64. Furthermore, a high bridge would require 500-foot to 800-foot tall towers that would be potential obstructions to aviation (HRBT *High Bridge Technical Memorandum*, July 2012, appended to HRBT *Alternatives Technical Report*, November 2012).

4. The cost estimates provided in the Draft and Final SEIS include a 40% contingency which is meant to account for some unknown costs, which could include stormwater management. At this stage of the project, detailed drainage and hydraulic/hydrological studies have not been completed. Detailed stormwater management strategies, including the need for and placement of stormwater facilities, would be determined during the final design and permitting process after a ROD is issued. Stormwater runoff would be controlled in accordance with all applicable state regulations. As part of the permitting process, the required federal and state agencies such as USACE, VDEQ, and EPA would be coordinated with regarding water quality issues. Part of this coordination would involve instituting these agencies' requirements to avoid and minimize impacts to jurisdictional areas to the greatest extent practicable, which would include placement of Best

USEPA, cont.

Enclosure
Detailed Technical Comments for Draft Supplemental Environmental Impact Statement, HRCS Virginia

Alternatives

3 • Additional detail should be provided as to why the High Bridge Crossing was dismissed.

4 • Stormwater management (SWM) facilities were not included within the limit of disturbance (LOD) for the alternatives. This could greatly increase impacts. SWM should not be placed in aquatic habitats. SWM should address existing and new conditions.

5 • Page 2-21: The 3-4-3 concept is confusing as presented. Additional information should be provided to explain how this concept can work with all the build alternatives. It is also unclear how the alternatives can be equally evaluated if the 3-4-3 will work while the presented alternative does not. Impacts associated with the 3-4-3 should be presented.

6 • Page 2-21: It is unclear why only Alternative C has dedicated transit facilities in specific locations.

7 • Additional information should be provided describing how the Craney Island Eastward Expansion may impact the proposed road construction in Alternatives B, C, and D (and vice versa). Coordination should continue with the US Army Corps of Engineers (Corps, USACE), VA Port Authority and other entities.

8 • Additional information should be presented on how the bridge/tunnel construction in Alternatives B, C, and D may impact navigation, especially high traffic area around Craney Island.

9 • Additional information should be provided on how bridge construction may effect erosion on the perimeter of Craney Island.

Social and Environmental Justice (EJ)

Potential for disruption of the current community structure is notable by the number of residential impacts and potential displacements, summarized below.

Alternative	Residential Properties	Potential Displacements
A	24	9
B	29	9
C	58	11
D	69	20

10 • It would be helpful to label and clarify the minority benchmark value used.

11 • It would be helpful if the maps showed the areas of EJ concern with respect to the various project activities. This would assist the public to view their proximity to project activities, and gain better perspective to the potential impacts of the project.

Management Practices in WOUS. Permits are generally conditioned such that the project must not permanently restrict or impede the passage of normal or expected high flows, and that the pre-construction course, condition, capacity, and location of open waters must be maintained to the maximum extent practicable.

5. As indicated in the *3-4-3 Technical Memorandum*, which is appended to the *HRCS Alternatives Technical Report*, the 3-4-3 Option could be included with any Build Alternative that includes improvements to the HRBT. This includes Alternatives A, B, and D. Since Alternative C does not include any improvements to the HRBT, the 3-4-3 option could not be considered as part of that Alternative. Appendix D of the *HRCS Alternatives Technical Report* includes a 3-4-3 Technical Analysis Memorandum that includes more detailed information on the traffic operations of a four-lane tunnel. The traffic analysis showed that the 3-4-3 concept would result in severely degraded congestion levels due to extensive merging and lane changing maneuvers at the downstream end of the tunnels. Additionally, higher crash rates along freeway facilities typically occur at locations where drivers must make a choice and/or perform a driving maneuver. Therefore, it can be presumed that the 3-4-3 concept could potentially result in more crashes than a design with a continuous cross section without merge and diverge points.

Consequently, Build Alternatives that included that the 3-4-3 concept at the HRBT were not included in the Draft SEIS and detailed environmental impacts were not quantified.

6. With the exception of a few differences, Alternative C was the alternative from the 2001 ROD. Since it had transit-only lanes at that time, those transit-only lanes were maintained for this study. While only Alternative C specifically included transit-only lanes, each of the Build Alternatives retained in the Draft SEIS had the capacity to include

USEPA, cont.

transit (see Chapter 2 of the Draft SEIS). Under Alternative C, transit would be accommodated along I-664 from I-64 to the I-664 Connector, the I-664 Connector, the I-564 Connector, and I-564. Details on the transit options for the Final SEIS Preferred Alternative are included in Section 2.7. Given the minimal reduction in vehicle trips that a dedicated transit option would achieve (based on the December 2015 DRPT study), and therefore the likely minimal impact of regional travel times for single occupant vehicles, a dedicated transit lane was not a specific element in Alternatives A, B, and D. However, including it in Alternative C allowed for the determination of the additional direct impacts and cost associated with a transit-only lane so the decision makers could make an informed decision whether to include a transit-only lane in the other alternatives.

7. The detailed plans for the Craney Island Eastward Expansion are not available and have not been used in determining the alternatives for the HRCS SEIS. The VA 164 Connector alignment was based upon right-of-way included in a Feasibility Study and Environmental Impact Statement for an eastward expansion of the CIDMMA prepared by USACE in 2006 (as discussed in Section 8.5.1 in the *HRCS Alternatives Technical Report)*. The Preferred Alternative does not include the VA 164 Connector.

Since the publication of the Draft SEIS, VDOT has met with USACE/Navy/Port/Coast Guard on several occasions to discuss how the alignment could be accommodated within the agencies' existing/planned activities in the region.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill (I-664 / I-264 / I-664 / US 460) Interchange, which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also could affect the CIDMMA and surrounding Navy and Coast Guard properties. Future plans for these locations are uncertain,

USEPA, cont.

and therefore potential impacts are not clear. VDOT, on behalf of FHWA, continues to coordinate with these agencies to identify acceptable transportation improvements that could be made in the vicinity of the federal properties. Though these improvements are not included in the Preferred Alternative for the HRCS SEIS, they remain regional priorities. HRTPO has set aside funding to continue to study the crossing of the Elizabeth River and improvements to these other study area corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate studies.

8. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. The Preferred Alternative does not include construction adjacent to Craney Island and would not affect navigation around Craney Island or cause erosion. This level of detail is dependent on construction techniques that would be determined during final design and permitting phases of the study, after the issuance of a ROD. The VIMS Study (January 2017) provides planning-level analysis of the potential impact on surface water elevation, flow, salinity, and bottom shear stress related to the No-Build and Build Alternatives. The VIMS Study has been made available to the public of the study website with the publication of the Final SEIS. A summary of the findings is presented in **Section 3.8.1.6** of the Final SEIS.

Since the publication of the Draft SEIS, VDOT has met with USACE/Navy/Port/Coast Guard on several occasions to discuss how the alignment could be accommodated within the agencies' existing/planned activities in the region. Copies of Agency correspondence is included in **Appendix D** of this Final SEIS.

9. See response to USEPA comment number 8.

USEPA, cont.

10. As indicated in **Section 3.2.5** of the Draft and Final SEIS, for this study a Census Block Group is identified as a minority population when a) the percentage of minority residents exceeds 50 percent of total population of the Block Group or (b) the minority population percentage of a Census Block Group is greater than 11 percent. This method has resulted in almost every block group in the study area being identified as containing a minority population.

11. Figure 3-7 shows the individual Census Block Groups that contain EJ populations in relation to the Study Area Corridors. **Appendix B** of the Final SEIS presents the detailed plan maps of the Build Alternatives showing the extent of the LOD. At this point in project development, the location of construction activities is not known. The location of activites will be governed, in part, by the means and methods of construction which will be determined during the final design and permitting phases.

12. Readily available information was used to determine EJ populations for the purpose of this SEIS. Therefore, potential disproportionate high and adverse impacts to minority and low-income populations is assessed at the Census Block Group level. Determining localized impacts beyond the Block Group level is outside the methodology for this evaluation, which has been coordination and agreed upon by the Cooperating Agencies.

13. To date, it has not been determined as to whether the crossings would be tolled. HOT lanes are one of the options being considered. HOT lanes are HOV)lanes that also allow lower occupancy vehicles to gain access to the lanes by paying a toll. HOT lanes optimize the number of people and vehicles that travel on the lanes, managing demand through a user fee. If HOT lanes are implemented, the general purpose lanes would remain free for travelers using the facility; thus,

USEPA, cont.

2

12 • More discussion with respect to the impact of the various aspects of the project on minority and low income populations should be provided. There may be localized impacts that may impact portions of the population that need further consideration.

13 • The EIS should evaluate and present information to show that tolling of roads will not impact low income communities.

14 • A coordination plan should be developed to assist the community with concerns and impacts related to impacts associated with the projects.

Public Health/Children's Health/Noise

15 • Page 3-16 states: "Each alternative would impact community facilities; however, the use and functionality of the resources would not be impacted. **Alternative A** would impact 1.4 acres of Hampton University and <0.1 acres of the Willoughby Boat Ramp. **Alternative B** would impact a total of 8.9 acres at three facilities (one school and two park and recreational facilities). **Alternative C** would impact a total of 10.0 acres at four facilities (one religious facility, one school, and two park and recreational facilities). **Alternative D** would have the largest impact to community facilities; 9.8 acres at five facilities (two schools and three park and recreational facilities). Impacts to community facilities are summarized in **Table 3-4**." Although the use and functionality of the resources would not be impacted, please discuss the human impact associated with and specific to the sensitive resource directly impacted. In particular, EPA is concerned with school age children using schools, parks, recreational facilities, etc. in close proximity to a large transportation corridor in regards to air quality, hazardous materials exposure, noise impact on learning (indoor and outdoor). EPA is aware that a final design noise study would take place after the Preferred Alternative is selected and the project's engineering design begins. Please ensure that these concerns are addressed.

16 17 18 19 • Page 3-69 states: "Therefore, the noise barrier design parameters and cost identified in this document are preliminary and should not be considered final. A final decision on the feasibility and reasonableness of noise barriers would be made during final design when the project design is developed and traffic updated. If a noise barrier is determined to be feasible and reasonable, the affected public would be given an opportunity to decide whether they are in favor of construction of the noise barrier." Giving the public an opportunity to decide in favor of construction of the noise barrier is commendable, but what is their alternative? Please discuss. It appears that the public will be given an opportunity in express their concerns at a Public Hearing/Meeting in September. Public involvement is critical to decision-making. Please discuss how the public, especially Environmental Justice communities, will be reached. Consider local churches, libraries, local papers to advertise the upcoming meeting. Also, has an assessment been conducted to determine the population of children in the area evaluated for noise barriers? The ratio of population impact (households including children) should be included in the assessment. In addition, to effective noise attenuation barriers, aesthetic value should also be considered. Noise impacts are summarized from the EIS below.

there would be no disproportionate impact to EJ populations. The direct impact of tolling on low-income populations is addressed in **Section 3.2** of the Final SEIS. The indirect and cumulative impacts of tolling are considered in **Sections 3.15.2** and **Section 3.15.3.3** of the Final SEIS.

14. Coordination to assist EJ populations with concerns about projects advanced for construction will be undertaken during final design and permitting phases, after the issuance of a ROD. VDOT and the project contractor(s) will continue to conduct outreach to address concerns from the public.

15. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. The Preferred Alternative has been modified so that all of the work in the vicinity of Hampton University and the Willoughby Boat Ramp will occur within the existing right-of-way. A MOA will be prepared to specify how temporary access can be achieved along the Hampton University property during construction.

As documented in **Appendix D** of this Final SEIS, Hampton University indicated that the impacts to their property proposed under Alternative A would be unacceptable. The revisions made to Alternative A and presented in **Section 2.7** of this Final SEIS avoid these impacts. No schools or universities would be directly impacted as a result of the implementation of the project. Willoughby Elementary School is located approximately 120 feet east of I-64 in Norfolk. However, the proposed widening along I-64 at this location would be to the west; therefore, no changes would occur adjacent to the school property. There would be no noise impacts at this location based on the preliminary noise analysis. Two other school facilities are proximal to I-64: Ocean View Elementary School is approximately 300 feet from I-64 and Northside Middle School is approximately 530 feet from I-64.

USEPA, cont.

There are no noise impacts at either location. The I-64 corridor exists today and improvements would not cause additional impact to these facilities.

The air quality analysis provided in **Section 3.6** of the Final SEIS indicate that the project would not cause any violations of National Ambient Air Quality Standards (NAAQS) established to protect human health and welfare, including children. The Clean Air Act (CAA) requires EPA to set NAAQS (40 CFR part 50) for pollutants considered harmful to public health and the environment. The CAA identifies Primary Standards to provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly. Air quality is important to children's health as pollution can retard lung growth and exacerbate respiratory diseases. The most likely locations of potential effects on children, other than in residential areas, would be at schools where there are outdoor activities for children.

There are 179 identified hazardous materials sites within ¼ of a mile of the Preferred Alternative. Prior to acquisition of right-of-way and construction, thorough site investigations would be conducted to determine whether any of the sites are actually contaminated, and, if so, the nature and extent of that contamination would be assessed. Phase I Environmental Site Assessments and, if necessary, Phase II Environmental Site Assessments could be performed to determine the presence of and/or the extent of contamination. Undocumented hazardous materials that are encountered during construction efforts will be managed, handled and disposed of in accordance with federal, state and local regulations.

VDOT would identify any hazardous materials sites of concern located near school facilities and appropriately remediate said sites during the final design and permitting phases, after issuance of the ROD.

USEPA, cont.

Construction of the Preferred Alternative would include transporting and using construction-related hazardous materials and wastes, and could potentially result in accidental releases of hazardous material. Additionally, construction of the Preferred Alternative has the potential of mobilizing contaminants already present in the soil or groundwater. Construction areas for the Project would have restricted access (fencing, gates, barriers, security guards, etc.) to help prevent accidental exposure.

16. The noise analysis conducted for the SEIS was preliminary and based on planning-level data and information. A more detailed review will be completed during final design after the issuance of a ROD. As such, noise barriers that are found to be feasible and reasonable during the preliminary noise analysis may also not be found to be feasible and reasonable during the final design noise analysis. Public outreach regarding noise barrier placement would be conducted. If a majority of those impacted by noise decide that they do not want a feasible and reasonable noise barrier constructed, then VDOT will honor their request and not construct a barrier. There are times when those that do not want a noise barrier are concentrated or located in a specific area; in these instances, VDOT will look to see if they can still provide a feasible and reasonable noise barrier to those that desire one while honoring the desires of those that do not. It is not uncommon for commercial establishments, churches, and apartment buildings to vote against noise barriers because they prefer the visibility from the road.

17. Outreach to invite potentially impacted minority and low-income populations along the Study Corridors to the Location Hearing in September 2016 was achieved in several ways. First, postcards announcing the meeting date and time were sent to all addresses in the zip codes encompassing the Study Corridors, including areas identified as minority and low-income census block groups. The public

USEPA, cont.

meeting was advertised in several local newspapers and online publications such as the Virginian-Pilot and Daily Press, including minority oriented publications such as the New Journal and Guide. Press releases to television and radio media resulted in widespread coverage of the upcoming meeting in the area. Finally, notification emails were sent to stakeholders who identified their interest in minority and low-income issues of the project during the scoping period for the SEIS and those who requested such notice via the project website and earlier public meetings. Coordination with the HRTPO has been ongoing throughout the development of the SEIS and will continue through final design. The public will continue to receive updates via the study website and public briefings.

18. Data to identify children that reside within the proposed noise barrier locations is not available. See response to USEPA comment numbers 15 and 16.

19. The table provided by EPA on page 3 of their comment includes a typo (the number of noise impacts under Alternative A is 953, not 6,953).

The noise impacts under the No-Build scenario are greater than those anticipated under the build scenario for Alternative A (1,002 and 953, respectively).

20. It is not possible to determine the limits of construction during the NEPA process. This information is needed to inform construction activities including truck haul routes, borrow disposal, and construction staging areas which would not be identified until final design and permitting phases of the project, which would only occur after issuance of a ROD. Federal Spill Prevention, Control, and Countermeasure (SPCC) requirements in Virginia are handled under

USEPA, cont.

3

Alternative	Noise Impacts
A	6, 953
B	1,987
C	1,014
D	2,548

20

- Page 3-174 states: "Specific trucking routes, frequency of trips, or waste disposal destinations will be identified as part of the construction documents for the Preferred Alternative and after issuance of the Record of Decision (ROD)." Construction routes/corridors and staging areas should be identified and included in the environmental analysis to determine potential risks to human health and the environment. EPA is concerned with potential impacts to children and EJ communities. Exposure risks from dust, hazardous materials, noise and traffic should be address in the FSEIS. In addition, please address if Contingency Plans are in place to address potential risks from spills, hazardous materials exposure, etc.

21

- We suggest that the project team closely coordinate with residents related to displacements and other impacts.

22

- In addition to considering EJ and children's health, the project team should consider health impact assessments, which could help to define the services or interventions required to help to prevent or mitigate health problems associated to this type of project, if any. HIA is a tool designed to investigate how a proposed program, project, policy, or plan may impact health and well-being and inform decision-makers of potential outcomes before the decision is made. An HIA could allow input from the public and other stakeholders, including those potentially affected by the proposed action. EPA is available for further discussion and guidance on this matter. Please consider the following: http://www.humanimpact.org/new-to-hia/faq/ https://www.epa.gov/healthresearch/health-impact-assessments

Historic Resources

EPA appreciates the coordination done with the State Historic Preservation Office (SHPO) and the information provided in the DSEIS. Potential impacts are noted, and summarized below. Approaches to avoid or minimize historic impacts should be fully explained for the preferred alternative in the Final SEIS. As stated on page 3-164, "Once a Preferred Alternative has been selected and preliminary engineering has been further refined, VDOT and FHWA will reassess the effects of the project on architectural historic properties and coordinate the findings with the SHPO and other consulting parties before release of a Final SEIS. Should any of the architectural historic properties be adversely affected, FHWA and VDOT will consult with the SHPO and other parties to the Section 106 process to determine appropriate measures that would avoid, minimize, or mitigate the adverse effects. These measures would constitute commitments that would be incorporated as stipulations in a legally binding agreement document executed by the FHWA, the SHPO, the ACHP, VDOT, and other parties as appropriate to conclude the Section 106 process." It is expected that all measures to avoid or minimize historic impacts are exhausted and if a Programmatic Agreement is necessary, please detail impacts and

23

the VDEQ, which requires review and approval of plans to impact aboveground storage tanks. SPCCs are also required in Virginia for General Virginia Pollutant Discharge Elimination Sysytem permits through the State Water Control Board, as administered under the Virginia Stormwater Management Act.

Proximity to schools, parks, and other activity centers would be considered during the development of truck haul routes, borrow disposal, and construction staging areas after the issuance of a ROD. Construction areas would have restricted access (fencing, gates, barriers, etc.) to help prevent accidental exposure. Exposure risks would be minimized through the development and implementation of best management practices during construction.

21. Property impacts provided in the SEIS are preliminary estimates based on planning-level data and engineering and would be refined during final design phases after the issuance of a ROD. Specific outreach to impacted property owners will be conducted by VDOT during final design after a ROD has been issued. In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended, 1987), displaced property owners would be provided relocation assistance advisory services together with the assurance of the availability of decent, safe, and sanitary housing. Relocation resources would be made available to all displacees without discrimination.

VDOT would require that all construction contractors prepare and implement a health and safety contingency plan that includes emergency release countermeasures appropriate for the hazardous materials are being used or stored at the construction site.

22. During the development of the Draft SEIS, VDOT met with the Virginia Department of Health and other agencies and groups that

USEPA, cont.

4

mitigation for the preferred alternative in the Final SEIS. The Programmatic Agreement (PA) should also be included in the Final SEIS (if completed or include a draft PA). Impacts are summarized below.

Alternative	Historic Resources	Archaeology Resources
A	6	6
B	11	10
C	10	26
D	16	33

Aquatic Resources

Aquatic resources are highly impacted by proposed action alternatives. A summary of some critical impacts are included in the letter, the table and comments below.

Alternative	Navigable waters (acres)	Floodplains (acres)	Subaquatic Vegetation (SAV) (acres)	EFH (acres)	Wetlands (acres)	Stream (lin ft)
A	147.3	112.6	1.8	138.4	7.8	0
B	215.6	213.3	1.8	214.3	72.6	0
C	369.9	213.3	1.8	565.4	111.5	547. 9
D	480.9	313.3	1.8	636.3	119.9	547.9

24

- Offsetting the loss of aquatic resource or reduction in functions with mitigation will be difficult and is a significant issue, especially given the extensive impacts proposed. Tidal wetlands, shallow water habitats, including sand and mudflats, and mature, high functioning forested hardwood wetlands are difficult to replace resources. Mitigation banks generally do not offer suitable mitigation for these impacts. The Final SEIS should identify viable mitigation options, including banks that may have tidal credits or opportunities to replace or restore resources.

25

- As discussed, shallow water habitat provides valuable habitat forage, refuge, spawning and rearing habitat for fish, shellfish, and benthos. Mitigation for loss of these resources and their functions will be an important component of any project to avoid losses. We do not support replacing tidal resources with nontidal resources or mudflats with vegetated wetlands.

26

- Wetland assessments were conducted on "representative" wetlands; however, it appears that these wetlands were primarily selected based on whether they were accessible. When a preferred alignment is identified, additional assessment of wetlands may be necessary. This will require coordination with EPA and the Corps for identifying appropriate steps for functional assessment of the resources and approaches to identify resources that should be avoided. After avoidance and minimization has been

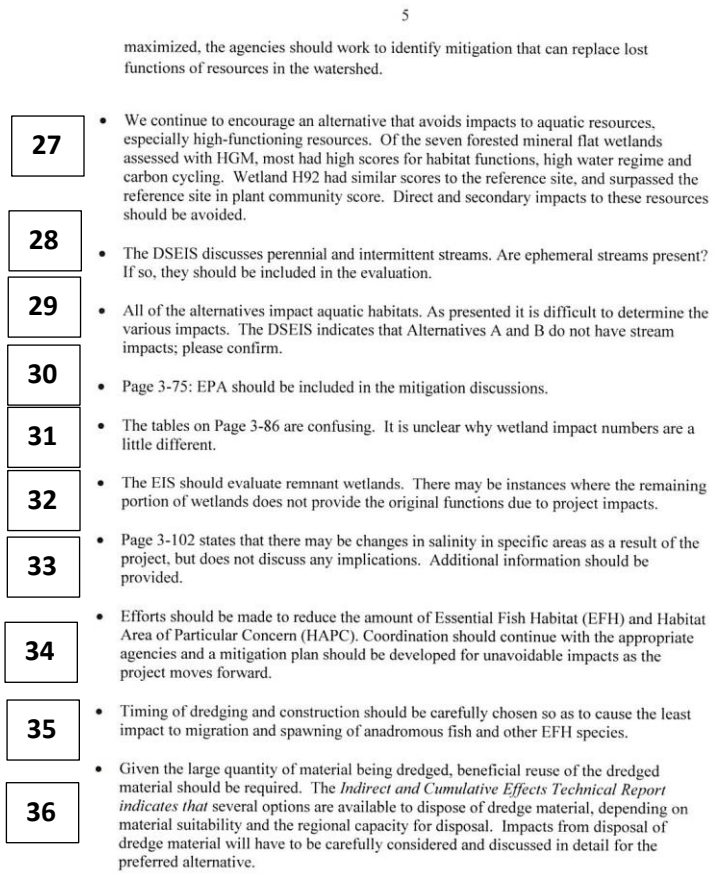
have interest, purview, and expertise in preparing a Health Impact Assessment (HIA). None of these agencies were in a position to take the lead in developing an HIA, but they provided information on the type of information that is included in an HIA. The type of information that would be included in an HIA, including health and safety risks associated with air quality and noise impacts, has been included in the SEIS to inform decision makers about the potential impacts.

23. Historic resources are evaluated in the Final SEIS under **Section 3.9**.

Design commitments and a Programmatic Agreement (PA) have been prepared in consultation with VDHR to address project conditions and stipulate the process VDOT/FHWA would follow to complete efforts to identify archaeological historic properties, assess project effects, and develop measures to avoid, minimize, or mitigate adverse effects to resolve the Section 106 process. The Secretary of the Interior and the ACHP have been notified of the project. The signatories of the PA include FHWA, VDOT, City of Hampton, City of Suffolk, City of Newport News, Hampton University, African America Historical Society of Portsmouth, USACE, Buckroe Historical Society, J. Brewer Moore, NPS, USCG, National Cemetery Administration, American Battlefield Protection Program, Partnership for a New Phoebus, Norfolk Historical Society, Norfolk Preservation Alliance, and Citizens for a Fort Monroe National Park. The PA is included in **Appendix I** of the Final SEIS. Per the PA, VDOT will continue to coordinate with the Department of Historic Resources as the study moves forward.

24. In addition, HRTPO and HRTAC unanimously endorsed Alternative A as their Preferred Alternative on October 20, 2016. VDOT subsequently updated their recommendation of a Preferred Alternative to Alternative A on November 14, 2016, and requested USACE's concurrence that Alternative A can be considered the preliminary LEDPA. USACE concurred on VDOT's recommendation for

USEPA, cont.



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maximized, the agencies should work to identify mitigation that can replace lost functions of resources in the watershed.

27 • We continue to encourage an alternative that avoids impacts to aquatic resources, especially high-functioning resources. Of the seven forested mineral flat wetlands assessed with HGM, most had high scores for habitat functions, high water regime and carbon cycling. Wetland H92 had similar scores to the reference site, and surpassed the reference site in plant community score. Direct and secondary impacts to these resources should be avoided.

28 • The DSEIS discusses perennial and intermittent streams. Are ephemeral streams present? If so, they should be included in the evaluation.

29 • All of the alternatives impact aquatic habitats. As presented it is difficult to determine the various impacts. The DSEIS indicates that Alternatives A and B do not have stream impacts; please confirm.

30 • Page 3-75: EPA should be included in the mitigation discussions.

31 • The tables on Page 3-86 are confusing. It is unclear why wetland impact numbers are a little different.

32 • The EIS should evaluate remnant wetlands. There may be instances where the remaining portion of wetlands does not provide the original functions due to project impacts.

33 • Page 3-102 states that there may be changes in salinity in specific areas as a result of the project, but does not discuss any implications. Additional information should be provided.

34 • Efforts should be made to reduce the amount of Essential Fish Habitat (EFH) and Habitat Area of Particular Concern (HAPC). Coordination should continue with the appropriate agencies and a mitigation plan should be developed for unavoidable impacts as the project moves forward.

35 • Timing of dredging and construction should be carefully chosen so as to cause the least impact to migration and spawning of anadromous fish and other EFH species.

36 • Given the large quantity of material being dredged, beneficial reuse of the dredged material should be required. The *Indirect and Cumulative Effects Technical Report indicates that* several options are available to dispose of dredge material, depending on material suitability and the regional capacity for disposal. Impacts from disposal of dredge material will have to be carefully considered and discussed in detail for the preferred alternative.

Alternative A as the Preferred Alternative on December 2, 2016. USACE based their concurrence on information in the Draft SEIS which demonstrated that Alternative A sufficiently meets the HRCS Purpose and Need and would have less environmental impacts than the other build alternatives in the Draft SEIS, including Alternative B. USACE also found no reason to disagree that Alternative A may be considered the preliminarily LEDPA. For mitigation required by an agency, mitigation measures would be determined during the design and permitting stage.

25. See response to USEPA comment number 24.

26. Additional functional assessments of wetlands would be performed once an alternative is selected, after issuance of the ROD. The VDEQ's Virginia Water Protection regulation requires that functional assessments be performed on wetlands when the impacts per each single and complete project exceed 1 acre and the mitigation will either be permitte-responsible or from a Bank or In-lieu Fee Fund at less than the standard mitigation ratios (9VAC25-210-80C). VDOT will continue to coordinate with the agencies on these issues following the issuance of a ROD when detailed design and permitting efforts are underway.

27. Efforts will be made to avoid and minimize impacts to these resources, particularly high-functioning resources. While additional functional assessments would be performed on the selected alternative, the USACE finds no reason to object that the Preferred Alternative could be the LEDPA. Both the USACE and EPA concurred with the recommendation of the Preferred Alternative for the Final SEIS given in part that it has the least amount of wetland impacts. Wetland H92 is not located along the Preferred Alternative.

USEPA, cont.

28. The presence of WOUS was determined through photointerpretation, which did not identify any ephemeral streams. This methodology was reviewed by USACE, EPA and the other federal Cooperating Agencies before these respective analyses were initiated. It was agreed that this methodology would provide enough information to identify a Preferred Alternative and possibly a preliminary LEDPA. The selected alternative would have a formal delineation completed in which all jurisdictional streams, including ephemeral streams, will be delineated.

29. That is correct. The photointerpretation process used to determine the presence of WOUS did not confirm the presence of any perennial, intermittent, or ephemeral streams within Alternatives A and B. The selected alternative will have a formal delineation completed in which all jurisdictional streams will be delineated.

30. Per Section 404 of the CWA to minimize delays in the issuance of permits, the USACE and the EPA have entered into a MOA stating that the "Corps will…fully consider the EPA's views when determining whether to issue the [404b] permit, to issue the permit with conditions and/or mitigation, or to deny the permit." As such, EPA would be provided the opportunity to further consult on mitigation through the 404 permitting process.

31. The wetland numbers presented in the Draft SEIS in Tables 3-35, 3-36, and 3-37 varied slightly due to inconsistencies in rounding the numbers. This has been resolved in the Final SEIS.

32. Representative wetlands were assessed using either the tidal or non-tidal functional assessment method. These methods were prescribed and reviewed by the federal Cooperating Agencies. Wetlands that have previously been fragmented, as well as those that would be fragmented by the different alternatives were assessed. The

USEPA, cont.

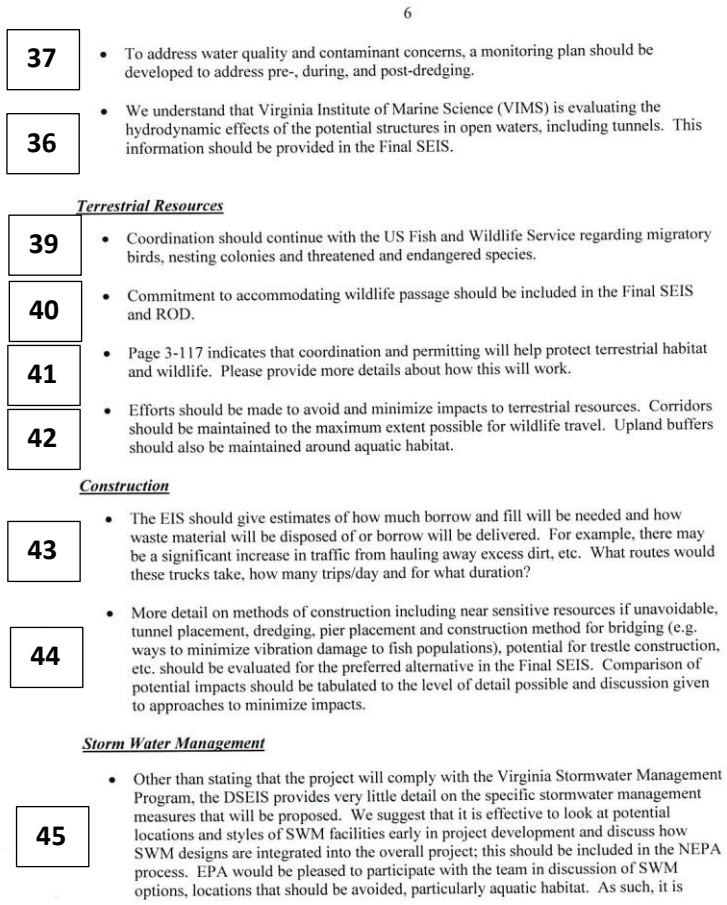
Environmental Consequences portion of the **Section 3.8.1** (Wetlands) describes the potential impacts that fragmenting or impacting portions of wetlands (thus leaving remnant wetlands) may have on the wetlands within each alternative. Some wetlands would have negligible impacts to function while others would be more substantial.

33. The relative impacts to salinity from all alternatives would be less than 2% total deviation. In addition, the maximum predicted change from any of the alternatives of up to 1.5 PSU is small compared to the 10 PSU variability over the course of a year shown at the monitoring stations in the lower James River that were used for model calibration in the VIMS Study. These small changes in salinity should have little to no effect on the species using the area since it's smaller than the natural variability. Additional information pertaining to salinity changes is provided in the VIMS Study (January 2017) which has been made available to the public of the study website with the publication of the Final SEIS. A summary of the findings is presented in **Section 3.8.1.6** of the Final SEIS.

34. Coordination with NOAA Fisheries will continue through the design, permitting, and construction phases of the project. This was added to the *Mitigation* portion of the *Essential Fish Habitat* section of the Final SEIS.

35. Coordination with the NOAA under the Magnuson-Stevens Fishery Conservation and Management Act to protect essential fish habitat and the Fish and Wildlife Coordination Act to protect anadromous species will continue as the project is developed. As mentioned in both the *Essential Fish Habitat* and *Anadromous Fish* sections of the Final SEIS, coordination will include time of year restrictions (TOYR) discussions.

USEPA, cont.



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37 • To address water quality and contaminant concerns, a monitoring plan should be developed to address pre-, during, and post-dredging.

36 • We understand that Virginia Institute of Marine Science (VIMS) is evaluating the hydrodynamic effects of the potential structures in open waters, including tunnels. This information should be provided in the Final SEIS.

Terrestrial Resources

39 • Coordination should continue with the US Fish and Wildlife Service regarding migratory birds, nesting colonies and threatened and endangered species.

40 • Commitment to accommodating wildlife passage should be included in the Final SEIS and ROD.

41 • Page 3-117 indicates that coordination and permitting will help protect terrestrial habitat and wildlife. Please provide more details about how this will work.

42 • Efforts should be made to avoid and minimize impacts to terrestrial resources. Corridors should be maintained to the maximum extent possible for wildlife travel. Upland buffers should also be maintained around aquatic habitat.

Construction

43 • The EIS should give estimates of how much borrow and fill will be needed and how waste material will be disposed of or borrow will be delivered. For example, there may be a significant increase in traffic from hauling away excess dirt, etc. What routes would these trucks take, how many trips/day and for what duration?

44 • More detail on methods of construction including near sensitive resources if unavoidable, tunnel placement, dredging, pier placement and construction method for bridging (e.g. ways to minimize vibration damage to fish populations), potential for trestle construction, etc. should be evaluated for the preferred alternative in the Final SEIS. Comparison of potential impacts should be tabulated to the level of detail possible and discussion given to approaches to minimize impacts.

Storm Water Management

45 • Other than stating that the project will comply with the Virginia Stormwater Management Program, the DSEIS provides very little detail on the specific stormwater management measures that will be proposed. We suggest that it is effective to look at potential locations and styles of SWM facilities early in project development and discuss how SWM designs are integrated into the overall project; this should be included in the NEPA process. EPA would be pleased to participate with the team in discussion of SWM options, locations that should be avoided, particularly aquatic habitat. As such, it is

36. Potential disposal options are addressed in the *Dredging and Disposal of Dredged Material* section of the Final SEIS. These options would be re-evaluated, selected, and permitted for the selected alternative following completion of the design phase. The actual dredge quantities cannot be determined until more detailed design phases are completed that occur post-ROD. At that time, the quantities and characteristics of the dredge material would be used to coordinate/identify appropriate disposal options. Impacts of the disposal of dredged material have been evaluated in each of the commercial sites' permitting documentation, and would be reviewed further in the permit support documents required during the permitting of the selected alternative.

37. Requests for monitoring, including the method, timing, material composition, and disposal option would be made and considered during the CWA Section 404 and Virginia Wetland Protection permitting processes. Specifics of a water quality and contaminant monitoring plan would be coordinated then. As already stated in the *Water Quality* and the *Dredging and Disposal of Dredged Material* sections, pre-construction sediment quality assessments and water quality monitoring during dredging may be conducted. The potential for post-dredging monitoring has been added.

38. As summary of the VIMS Study is presented in **Section 3.8.1.6** of the Final SEIS.

39. Comment acknowledged.

40. At the present, there are no laws/policies/regulations advising that highway projects include wildlife passages. Wildlife passages are mentioned in the *Mitigation* portion of the *Terrestrial Wildlife/Habitat* section and the *Threatened and Endangered Species* section in order to minimize corridor disruption and effects of fragmentation to more

USEPA, cont.

intact habitat blocks. Their inclusion will be considered during the design phase.

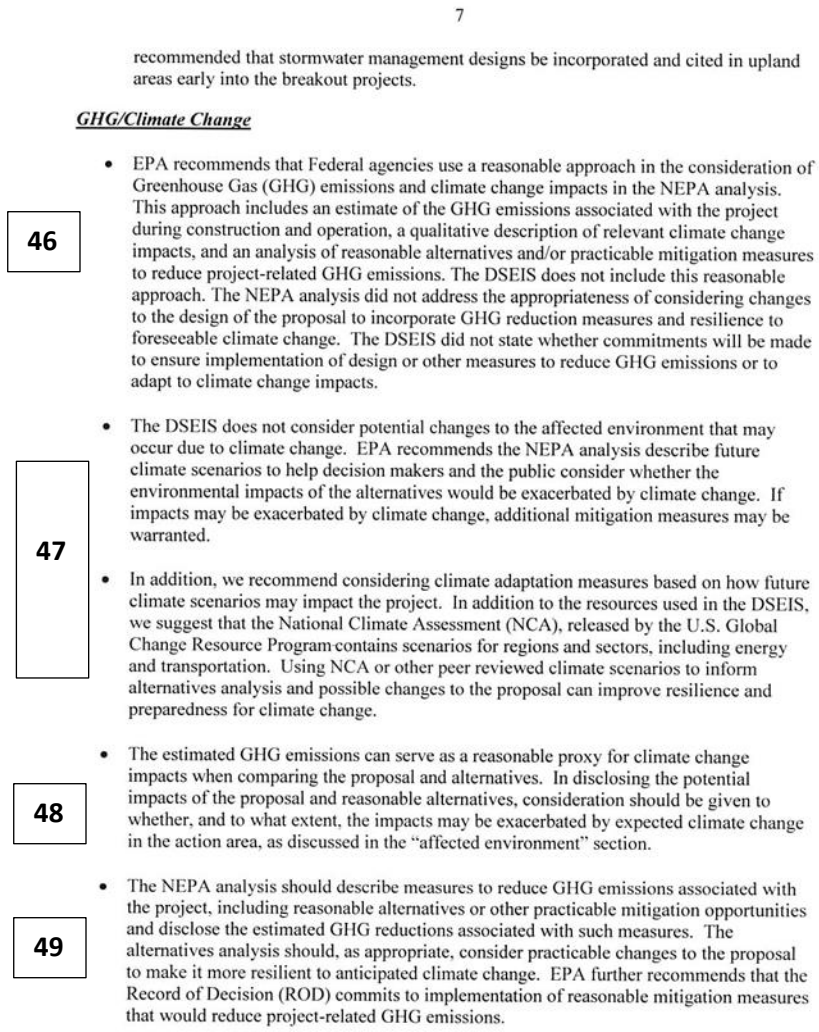
41. Coordination with those agencies having jurisdiction over terrestrial wildlife and habitat may identify conservation measures to minimize impacts to protected species. Species dependent upon aquatic resources will benefit by efforts under the CWA to avoid and minimize impacts to floodplains, streams, and wetlands. This coordination, along with the necessary permitting, would help to avoid and minimize potential impacts to these resources through a collaborative process of identifying applicable design changes and techniques and construction methods to be used during implementation.

42. This is discussed in the *Mitigation* portion of the *Terrestrial Wildlife/Habitat* section and in the discussion of the build alternatives. Efforts to maintain corridors for wildlife travel and to act as upland buffers for aquatic habitat would be further evaluated during the design process and mitigated for as necessary during the permitting process.

43. As indicated in **Section 3.14** of the Final SEIS, the LOD takes into account potential construction limits. The LOD includes grading to accommodate proposed improvements and a 30-foot offset to accommodate drainage, utilities, potential stormwater management, and construction easements.

Specific construction limits can't be established until the means and methods of construction are established. These means and methods will not come into focus until final design and the contracting and bidding process. At this time, information on construction activities including truck haul routes, borrow disposal, and construction staging areas will be developed, after issuance of a ROD.

USEPA, cont.



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recommended that stormwater management designs be incorporated and cited in upland areas early into the breakout projects.

GHG/Climate Change

- EPA recommends that Federal agencies use a reasonable approach in the consideration of Greenhouse Gas (GHG) emissions and climate change impacts in the NEPA analysis. This approach includes an estimate of the GHG emissions associated with the project during construction and operation, a qualitative description of relevant climate change impacts, and an analysis of reasonable alternatives and/or practicable mitigation measures to reduce project-related GHG emissions. The DSEIS does not include this reasonable approach. The NEPA analysis did not address the appropriateness of considering changes to the design of the proposal to incorporate GHG reduction measures and resilience to foreseeable climate change. The DSEIS did not state whether commitments will be made to ensure implementation of design or other measures to reduce GHG emissions or to adapt to climate change impacts.

46

- The DSEIS does not consider potential changes to the affected environment that may occur due to climate change. EPA recommends the NEPA analysis describe future climate scenarios to help decision makers and the public consider whether the environmental impacts of the alternatives would be exacerbated by climate change. If impacts may be exacerbated by climate change, additional mitigation measures may be warranted.

47

- In addition, we recommend considering climate adaptation measures based on how future climate scenarios may impact the project. In addition to the resources used in the DSEIS, we suggest that the National Climate Assessment (NCA), released by the U.S. Global Change Resource Program contains scenarios for regions and sectors, including energy and transportation. Using NCA or other peer reviewed climate scenarios to inform alternatives analysis and possible changes to the proposal can improve resilience and preparedness for climate change.

- The estimated GHG emissions can serve as a reasonable proxy for climate change impacts when comparing the proposal and alternatives. In disclosing the potential impacts of the proposal and reasonable alternatives, consideration should be given to whether, and to what extent, the impacts may be exacerbated by expected climate change in the action area, as discussed in the "affected environment" section.

48

- The NEPA analysis should describe measures to reduce GHG emissions associated with the project, including reasonable alternatives or other practicable mitigation opportunities and disclose the estimated GHG reductions associated with such measures. The alternatives analysis should, as appropriate, consider practicable changes to the proposal to make it more resilient to anticipated climate change. EPA further recommends that the Record of Decision (ROD) commits to implementation of reasonable mitigation measures that would reduce project-related GHG emissions.

49

Short-term construction impacts are provided in **Section 3.14** for each resource that would be affected. Tunnel dredge quantities and potential disposal locations were discussed in **Section 3.8.1.7** of the Final SEIS to be used in the alternative's comparison of impacts and cost. Based on VDOT's Project Cost Estimating System, earthwork quantities were not developed for the proposed widening activities of the Preferred Alternative.

44. Specific construction limits and associated impacts are not prescribed in this SEIS. Level of design that occurs during the NEPA evaluation process preliminary and is not detailed enough to provide this level of information. As this information is developed after the issuance of a ROD, it would be coordinated accordingly.

For the purpose of the SEIS, the worst-case impact area was used. It is expected that this area can be minimized during final design. Short-term construction effects that could occur to water quality, soils and erosion, noise, wildlife and habitat, and other resources are provided in **Section 3.14** of the Final SEIS.

45. Comments made by the USEPA and other regulatory agencies regarding the design and location of stormwater management facilities have been noted. Following the issuance of a ROD when more detailed design is developed, this information will be incorporated and coordination with the agencies will be carried out during the construction process.

46. The approach described by EPA in their comment is the same approach prescribed by CEQ in their recently released guidance for addressing GHG emissions. Per Section V of CEQ Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA (August, 2016), the CEQ Guidance should be applied to all newly initiated NEPA studies. The Guidance does not apply

USEPA, cont.

retroactively to completed EAs and EISs while ongoing EAs and EISs can be subjected to the guidance at the lead federal agency's discretion. Since the Draft SEIS was signed before CEQ's guidance was issued, the EIS did not address the guidance. On April 5, 2017, CEQ rescinded its newly issued guidance. Regardless, EPA's comments regarding GHG emissions are addressed herein.

The SEIS includes a qualitative analysis of climate change impacts from construction and operation from the Build Alternatives including a qualitative discussion on climate change impacts and mitigation measures to adapt to climate change and reduce Project related GHG emissions. Please refer to **Section 3.6** of the SEIS. Specific design details regarding GHG mitigation and climate change resiliency and adaptation measures could not be adequately assessed at the level of design used to compare alternatives. However, following a ROD, and during detailed design, specific design details to reduce GHG emissions and climate change impacts would be evaluated further.

Furthermore, as shown in **Section 3.6**, VMT was used as a surrogate for GHG emissions to draw conclusions about the Build Alternatives. A review of the VMT for the Build Alternatives shows there was not a significant difference to confidently discern or identify the alternative with the greatest increase in GHG emissions. What can be discerned is the VMT associated with the Preferred Alternative is expected increase the least among the Build Alternatives when compared to the No-Build Alternative. In addition, the average vehicle speed is expected to increase and travel times are expected to decrease for the Preferred Alternative compared to the No-Build Alternative which will help to mitigate any expected increases in GHG emissions along with EPA vehicle fuel efficiency standards which are expected to result in lower GHG emissions due to cleaner engine standards and fleet turnover.

USEPA, cont.

47. Sea level rise is the primary potential change discussed in the SEIS. **Chapter 3.6** discusses a 2008 USDOT Center for Climate Change and Environmental Forecasting study, *The Potential Impacts of Global Sea Level Rise on Transportation Infrastructure,* was designed to produce high level estimates of the net effect of sea level rise and storm surge on the transportation network. The study evaluated nine scenarios of sea level rise between 6 and 59 centimeters. For each scenario, regularly inundated areas and at-risk areas for the transportation system were estimated. Based on the analysis, the majority of the HRCS study area corridors fall outside of the potentially regularly inundated and at-risk areas due to sea level rise and storm surge for all scenarios. However, two portions of the corridors fall within regularly inundated areas under the higher sea level rise scenarios: I-64 (in Hampton) and the VA 164 Connector (along the eastern edge of CIDMMA).

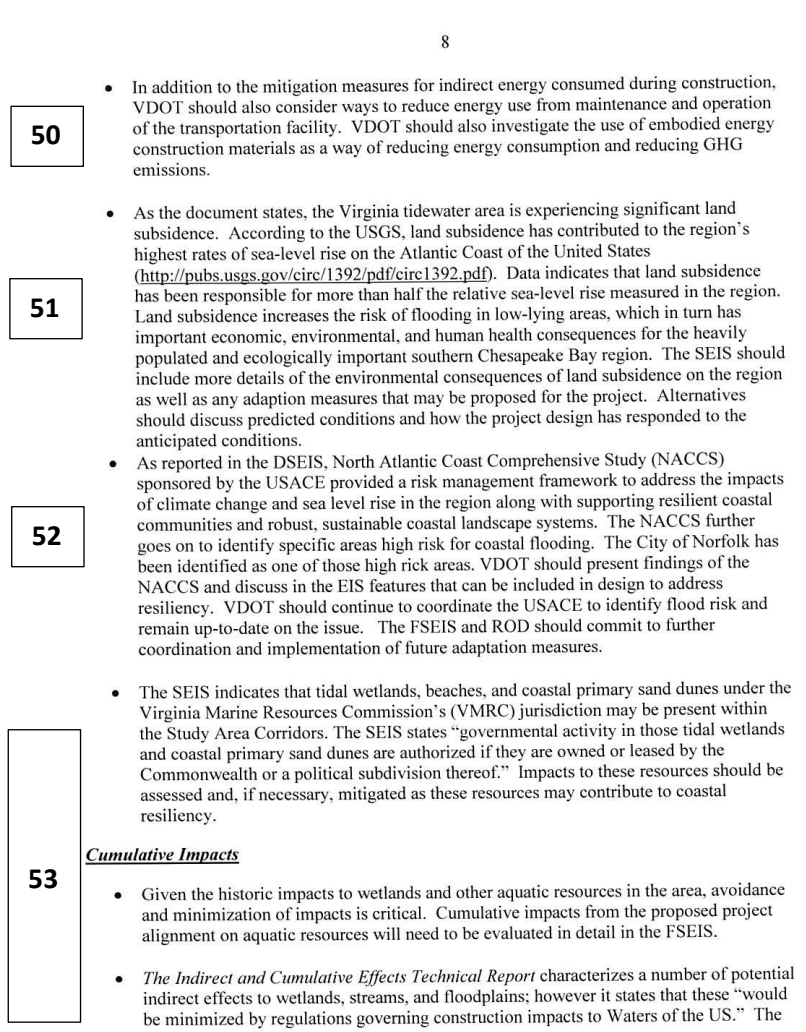
Any proposed bridges would include a vertical clearance above water relative to NAVD of 18 feet, which includes 1 foot of clearance above the 100-year design wave crest elevation (elevation 12 feet relative to NAVD 88 plus 1 foot) per, plus an assumed 5 feet for potential sea level rise over the next century. Design Criteria from Section 6 of the *HRCS Alternatives Technical Report* as referenced from the 2009 AASHTO Guidelines have been referenced in the Climate Change discussion as an adaptation measure.

Furthermore, specific design details regarding GHG mitigation and climate change resiliency and adaptation measures could not be adequately assessed at the level of design used to compare alternatives. However, following a ROD, and during detailed design, measures to reduce GHG emissions and climate change impacts would be evaluated further.

48. See response to USEPA comment number 46.

49. See response to USEPA comment number 46.

USEPA, cont.



8

- In addition to the mitigation measures for indirect energy consumed during construction, VDOT should also consider ways to reduce energy use from maintenance and operation of the transportation facility. VDOT should also investigate the use of embodied energy construction materials as a way of reducing energy consumption and reducing GHG emissions.

50

- As the document states, the Virginia tidewater area is experiencing significant land subsidence. According to the USGS, land subsidence has contributed to the region's highest rates of sea-level rise on the Atlantic Coast of the United States (http://pubs.usgs.gov/circ/1392/pdf/circ1392.pdf). Data indicates that land subsidence has been responsible for more than half the relative sea-level rise measured in the region. Land subsidence increases the risk of flooding in low-lying areas, which in turn has important economic, environmental, and human health consequences for the heavily populated and ecologically important southern Chesapeake Bay region. The SEIS should include more details of the environmental consequences of land subsidence on the region as well as any adaption measures that may be proposed for the project. Alternatives should discuss predicted conditions and how the project design has responded to the anticipated conditions.

51

- As reported in the DSEIS, North Atlantic Coast Comprehensive Study (NACCS) sponsored by the USACE provided a risk management framework to address the impacts of climate change and sea level rise in the region along with supporting resilient coastal communities and robust, sustainable coastal landscape systems. The NACCS further goes on to identify specific areas high risk for coastal flooding. The City of Norfolk has been identified as one of those high rick areas. VDOT should present findings of the NACCS and discuss in the EIS features that can be included in design to address resiliency. VDOT should continue to coordinate the USACE to identify flood risk and remain up-to-date on the issue. The FSEIS and ROD should commit to further coordination and implementation of future adaptation measures.

52

- The SEIS indicates that tidal wetlands, beaches, and coastal primary sand dunes under the Virginia Marine Resources Commission's (VMRC) jurisdiction may be present within the Study Area Corridors. The SEIS states "governmental activity in those tidal wetlands and coastal primary sand dunes are authorized if they are owned or leased by the Commonwealth or a political subdivision thereof." Impacts to these resources should be assessed and, if necessary, mitigated as these resources may contribute to coastal resiliency.

Cumulative Impacts

53

- Given the historic impacts to wetlands and other aquatic resources in the area, avoidance and minimization of impacts is critical. Cumulative impacts from the proposed project alignment on aquatic resources will need to be evaluated in detail in the FSEIS.

- *The Indirect and Cumulative Effects Technical Report* characterizes a number of potential indirect effects to wetlands, streams, and floodplains; however it states that these "would be minimized by regulations governing construction impacts to Waters of the US." The

50. Such decisions would be made during the development of detailed design, MOT plans, and construction practices. These activities would occur following the issuance of a ROD. The Preferred Alternative has the least amount of new infrastructure of the alternatives considered and therefore would be require the least amount of energy to construct, maintain and operate.

51. Final SEIS has been updated to include a discussion on "Land Subsidence" in **Section 3.6**, per the reference provided by EPA.

52. The North Atlantic Coast Comprehensive Study and other similar reports were identified during the development of the Draft SEIS. These guidance documents provide insight and direction into issues that would not necessarily differentiate between alternatives in a NEPA document but could be use following the issuance of a ROD when more detailed cost estimates and designs are advanced. VDOT would continue to coordinate with USACE, localities, and the public on this issue and the overall project throughout the final design and permitting phases of the study after the issuance of a ROD.

53. The SEIS indicates that tidal wetlands, beaches, and coastal primary sand dunes under the VMRC jurisdiction may be present within the Study Area Corridors. During the permitting phase that would follow a ROD and more detailed design, impacts to these resources would be assessed and, if necessary, mitigated as these resources may contribute to coastal resiliency.

VMRC's jurisdiction for these resources is defined in Chapters 12-14 of Title 28.2 of the Code of Virginia. The enactment of the Tidal Wetlands Act of 1972 gave the VMRC the responsibility for issuing tidal wetlands permits. In addition, the VDEQ under Chapter 13 - Wetlands (28.2-1300 thru 28.2-1320) activities only require a separate Virginia Water Protection permit if §401 Certification is required. VDEQ provides the

USEPA, cont.

54 specific measures taken to avoid and minimize these impacts should be provided with the preferred alternative. These measures should include bridging, maintaining natural stream bottoms, and reducing the roadway footprint and median width, incorporating wildlife passage, maintaining patterns of hydrology, and a number of others.

- *The Indirect and Cumulative Effects Technical Report* states "Under the No-Build Alternative, the existing fragmented and limited wildlife habitat existing within and adjacent to the Study Area Corridors would continue to degrade." The proposed alternative should offset impacts by proposing improvements that could be incorporated into the project; for example, modifying or upgrading existing crossings to provide wildlife passage, improving buffers between the highway and habitat, increase habitat when possible, e.g. for pollinators.

55

- The EIS mentions numerous times that many of the natural resources are already impacted by the developed project area, it is important to note that this area has very diverse aquatic and terrestrial habitats that provides many functions such as meeting life stages of listed species and other species of concern, buffers from storm events, etc. While some of these areas may be considered degraded, they are the only areas available to wildlife species in the area. In addition, these resources have potentially been impacted by many other projects over time and could be in the future. Every effort should be made to avoid and minimize these impacts.

56

§401 Certification through issuing a Virginia Water Protection permit.

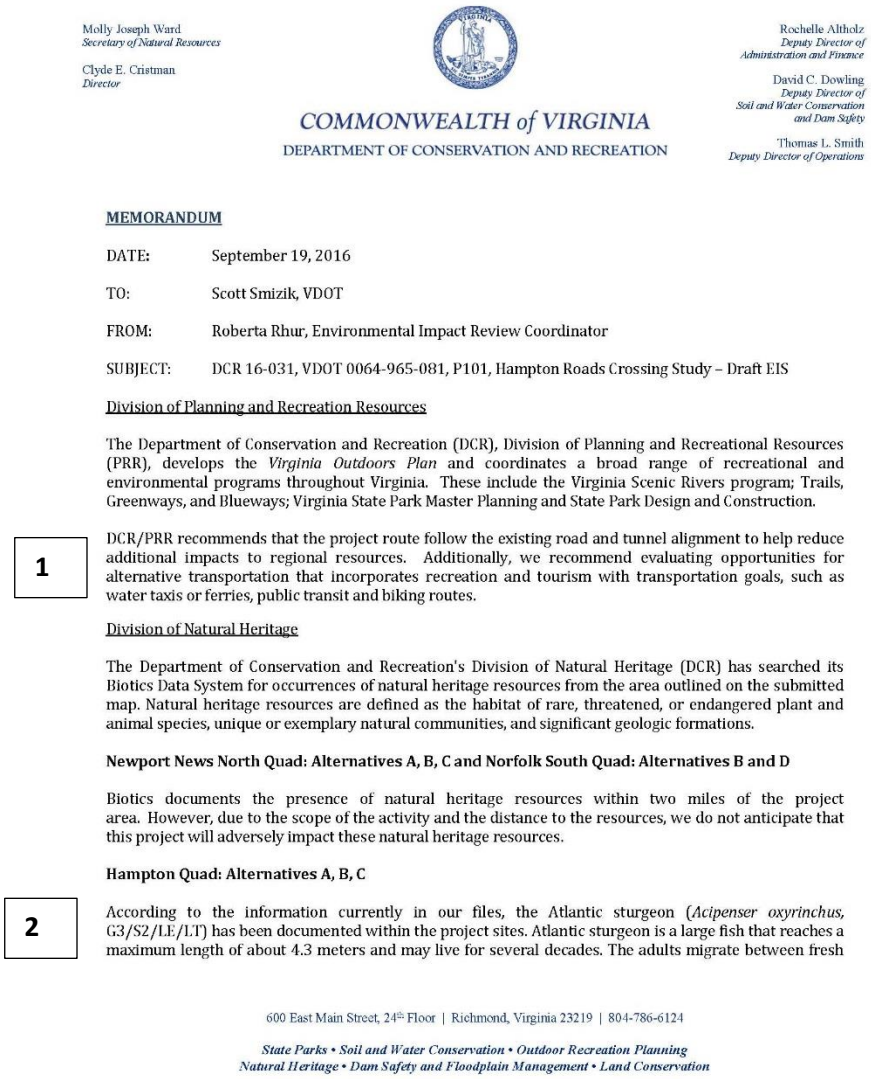
During the project's water quality permitting process, the tidal wetlands both "Nonvegetated wetlands" and "Vegetated wetlands" along with beaches, and coastal primary sand dunes under the VMRC jurisdiction will be delineated and an impact assessment to these resources would be performed. At that time, the VMRC and VDEQ, if a Section 401 Certification is required, would apply their regulations of each agency during the permit authorization decisions.

54. The *Indirect and Cumulative Effects Technical Report* discussed avoidance, minimization, and offsetting measures for indirect impacts in **Section 2.7 STEP 7: Assess Consequences and Develop Mitigation** and cumulative effects in **Section 3.5**. The Final SEIS discusses these types of measures in **Section 3.15.2 Indirect Effects** and **Section 3.15.3.3 Cumulative Impacts**. The measures considered, including those referenced in the comment, cannot be fully evaluated or applied with the limited level of engineering that is developed to compare alternatives in the NEPA document. Following the issuance of a ROD from FHWA, VDOT could advance with more detailed engineering and analysis of the Preferred Alternative to determine the best means of avoiding and minimizing impacts. This would include coordination with regulatory agencies during the permitting process.

55. See response to USEPA comment number 54.

56. The importance of the diversity and functions of wildlife habitat in the highly developed Study Corridors is addressed in the Final SEIS in **Sections 3.8.3, 3.8.4, 3.15.2** and **3.15.3.3.** Impacts to natural resources associated with the Preferred Alternative are included in **Section 3.8** of the Final SEIS. Every reasonable and feasible opportunity to avoid, minimize, and mitigate impacts to natural resources will be taken prior to construction of the Preferred Alternative.

Virginia Department of Conservation and Recreation



Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
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COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of Administration and Finance

David C. Dowling
Deputy Director of Soil and Water Conservation and Dam Safety

Thomas L. Smith
Deputy Director of Operations

MEMORANDUM

DATE: September 19, 2016

TO: Scott Smizik, VDOT

FROM: Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT: DCR 16-031, VDOT 0064-965-081, P101, Hampton Roads Crossing Study – Draft EIS

Division of Planning and Recreation Resources

The Department of Conservation and Recreation (DCR), Division of Planning and Recreational Resources (PRR), develops the *Virginia Outdoors Plan* and coordinates a broad range of recreational and environmental programs throughout Virginia. These include the Virginia Scenic Rivers program; Trails, Greenways, and Blueways; Virginia State Park Master Planning and State Park Design and Construction.

1 DCR/PRR recommends that the project route follow the existing road and tunnel alignment to help reduce additional impacts to regional resources. Additionally, we recommend evaluating opportunities for alternative transportation that incorporates recreation and tourism with transportation goals, such as water taxis or ferries, public transit and biking routes.

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Newport News North Quad: Alternatives A, B, C and Norfolk South Quad: Alternatives B and D

Biotics documents the presence of natural heritage resources within two miles of the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

Hampton Quad: Alternatives A, B, C

2 According to the information currently in our files, the Atlantic sturgeon (*Acipenser oxyrinchus*, G3/S2/LE/LT) has been documented within the project sites. Atlantic sturgeon is a large fish that reaches a maximum length of about 4.3 meters and may live for several decades. The adults migrate between fresh

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State Parks • Soil and Water Conservation • Outdoor Recreation Planning
Natural Heritage • Dam Safety and Floodplain Management • Land Conservation

Response:

1. During the development of the HRBT DEIS in 2012, ferry ridership was evaluated for its effects on I-64 traffic specific to the area of the HRBT. The results of these studies indicate that ferry ridership would remove between 600 and 1,100 vehicles per day from I-64. This reduction would not remove enough general purpose vehicle trips from I-64 to meet either the existing or design year 2040 capacity needs for traffic on I-64. Ferry service would not increase capacity, improve accessibility, address geometric deficiencies, enhance emergency evacuation, improve military connectivity, or increase access to ports.

The Preferred Alternative would accommodate transit through expanded mainline capacity and the potential for managed lanes such as HOV or HOT lanes that could provide transit with a travel time advantage over personal vehicles in the general purpose lanes. The CTB did not recommend a management strategy as part of its identification of a Preferred Alternative, but reserved the opportunity to be briefed on and approve such a concept should it be identified during more detailed design and funding reviews following the issuance of a ROD.

Because of the cost associated with construction a separated pedestrian/bicycle shared-use path across Hampton Roads; the environmental and social impacts associated with these accommodations, particularly at Hampton University, the Phoebus Historic District, and to adjacent residences; and the concerns associated with including a separated pedestrian/bicycle shared-use path in an approximately 7,400 feet long tunnel with grades that exceed ADA criteria, separated bicycle and pedestrian facilities were not included as part of the Preferred Alternative; however, this does not preclude pedestrian or bicycle improvements on other roadways.

VDCR, cont.

water spawning areas and salt water non-spawning areas. They feed primarily on benthic invertebrates and small fishes as available.

Stocks on the Atlantic slope have been severely reduced by overfishing (mainly late 1800s and early 1900s), pollution, sedimentation, and blockage of access to spawning areas by dams (Gilbert 1989, Burkhead and Jenkins 1991, Marine and Coastal Species Information System 1996). In Chesapeake Bay and elsewhere in the range, hypoxic events have increased and may degrade nursery habitat for Atlantic sturgeon (Secor and Gunderson 1997). Habitat loss due to dam construction and water pollution are thought to be major factors impeding full recovery of populations (Smith 1985, cited by Johnson et al. 1997; Gilbert 1989). A late maturation age and use of estuaries, coastal bays, and upstream areas of rivers for spawning and juvenile development make stocks vulnerable to habitat alterations in many areas (NatureServe 2012). Please note that this species is currently classified as endangered by the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) and threatened by the Virginia Department of Game and Inland Fisheries (VDGIF).

3

Norfolk North Quad: Alternatives A, B & D

According to the information currently in our files, these sites are located within the Hampton Roads Bridge Tunnel Conservation Site and the Craney Island Conservation Site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Hampton Roads Bridge Tunnel Conservation Site has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resources of concern at the Hampton Road Bridge Tunnel Conservation Site are:

Acipenser oxyrinchus	Atlantic sturgeon	G3/S2/LE/LE
Rynchops niger	Black skimmer	G5/S2B,S1N/NL/NL
Gelochelidon nilotica	Gull-billed tern	G5/S2B/NL/LT
Thalasseus maximus	Royal tern	G5/S2B/NL/NL
Thalasseus sandvicensis	Sandwich tern	G5/S1B/NL/NL

The Craney Island Conservation Site has been given a biodiversity significance ranking of B4, which represents a site of moderate significance. The natural heritage resources of concern at the Craney Island Conservation Site are:

Sterna antillarum	Least Tern	G4/S2B/NL/NL
Himantopus mexicanus	Black-necked Stilt	G5/S1B/NL/NL
Circus cyaneus	Northern harrier	G5/S2S2B,S3N/NL/NL

In addition, the Least tern (*Sternula* [=*Sterna*] *antillarum*, G4/S2B/NL/NL) has been documented within the project site on Willoughby Spit and the Atlantic sturgeon has been documented within the project area.

Furthermore, there is potential for Loggerhead sea turtle (*Caretta caretta*, G3/S1B,S1N/LE/LT) and Kemp's Ridley sea turtle (*Lepidochelys kempii*, G1/S1N/LE/LE) to occur in the project area.

Newport News South Quad: Alternatives B, C & D

2. As indicated in **Section 3.8.4** of the Final SEIS, the Atlantic sturgeon does not reside in the Study Area Corridors, but rather uses it as a migration corridor during spawn migrations primarily in the deep water habitats such as the federally maintained channels, though foraging habitat is present throughout Hampton Roads. No individuals in early life stages are expected to be present in the vicinity of the Study Area Corridors since they cannot withstand exposure to salinity. The physical disturbance of sediments and entrainment of associated benthic resources could reduce the availability of Atlantic sturgeon prey, but the impacted benthic habitat represents an insignificant amount of the available habitat in the region, and recolonization of the opportunistic benthic species would occur quickly making impacts to Atlantic sturgeon habitat and prey negligible. The mobility and ability of adult and sub-adult sturgeon to avoid the low intake velocities of dredge equipment makes impingement unlikely. The majority of the waterway would be unaffected by the sound of driving bridge piles and Atlantic sturgeon would be able to avoid the affected area since Hampton Roads is approximately 3.5 miles wide at this point. Coordination with the NOAA Fisheries has been ongoing and they are in agreement with the methodologies used to assess the sturgeon in the SEIS. Further coordination will be required with NOAA Fisheries to avoid impact to either the species or the proposed critical habitat.

3. Both of these Conservation Sites are addressed in the Terrestrial Wildlife/Habitat section and the Waterbird Nesting section of **Section 3.8** in the Final SEIS.

All of the build alternatives have the potential to impact one or both of the Conservation Sites. At the HRBT Conservation Site (Alternatives A, B, D, and Preferred), which includes the Gull-billed tern, proposed construction would occur within current breeding habitat for expansion of the island. Any construction activity on the island that generates noise or sediment may reduce the quality of the breeding

VDCR, cont.

habitat and possibly render portions of it unsuitable for future use due to fragmentation and impacts to the habitat. However, the colonies have demonstrated the ability to persist at this location amid regular disturbances from cars, boats, airplanes, constant shipping traffic, as well as coastal storms. The expansion of the island would also likely increase the potential suitable nesting habitat for these waterbirds.

Habitat is present for the Gull-billed tern and other waterbirds within the Study Area Corridors of all 5 build alternatives. All estuarine intertidal emergent wetlands (E2EM) and estuarine, intertidal, unconsolidated shore (E2US) were identified as having foraging potential. A large portion of this wetland type is heavily vegetated with dense coverage of phragmites, saltmeadow cordgrass (*Spartina patens*) or smooth cordgrass (*Spartina alternifolia*). The wetlands dominated by phragmites unsuitable for foraging in its current vegetative state. In addition, the majority of the intertidal foraging areas have been fragmented or altered by the presence of the current roadways and development. Mudflats are generally limited to a few fragmented areas. It is anticipated that the majority of these estuarine areas would be bridged; therefore, the proposed activities would have minimal impact on the foraging habitat that is present.

The VA 164 Connector could potentially disrupt the nesting waterbirds associated with the Craney Island Conservation Site, and other nesting bird species and foraging behaviors, but would not increase fragmentation as the VA 164 Connector traverses the eastern edge of the island. The alternatives that will pass over/adjacent to the island will introduce greater noise and general disturbance than is currently experienced. The birds would be expected to avoid areas of active construction, but this would most certainly affect foraging behavior at least temporarily. Colony locations can vary from year to year, particularly depending on where active dredge disposal is occurring;

VDCR, cont.

According to the information currently in our files, these sites are located within the Craney Island Conservation Site.

4

Bowers Hill Quad: Alternatives B, C and D

According to the information currently in our files, the Great Dismal Swamp: Northwest Section Conservation Site is located within the project area. Great Dismal Swamp: Northwest Section Conservation Site has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resources of concern at this site are:

Crotalus horridus Canebrake rattlesnake G4/S1/NL/LE

Timber and Canebrake rattlesnakes are two forms of the same species (*Crotalus horridus*). The species is widespread throughout eastern United States ranging from New England to Minnesota and south to Florida and Texas. The forms differ in appearance and habitat distribution but share enough genetic similarities that they are the same species (NatureServe, 2009). The Timber rattlesnake is typically darker or yellow-ish (Gibbons and Dorcas, 2005). In Virginia, it is found in the piedmont and mountainous regions. The Canebrake rattlesnake is typically lighter in color, often pinkish, and is found in more coastal areas, including the northern limit of its range in the southeastern counties of the coastal plain of Virginia (Gibbons and Dorcas, 2005).

Canebrake rattlesnakes in Virginia inhabit hardwood and mixed hardwood-pine forests, cane thickets and the ridges and glades of swampy areas (Mitchell and Schwab, 1991). Canebrake rattlesnakes are generally terrestrial and feed on a variety of small animals including small mammals, birds, and amphibians (Mitchell & Schwab, 1991).

The primary threats to the Canebrake rattlesnake are the loss of habitat due to development activities and persecution by humans (Mitchell, 1994). Please note that the coastal plain populations of the Canebrake rattlesnake are currently classified as endangered by the Virginia Department of Game and Inland Fisheries (VDGIF).

Additionally, Elliott's Aster (*Symphyotrichum elliottii*, G4/S1/NL/NL) has been historically documented within the project area. Elliott's Aster is a perennial, colonial aster that grows up to 1.5 meters tall. Numerous stiff, thick leaves are found on the erect stems which terminate in a panicle or corymb of flower heads with pink or lilac ray flowers in mid-fall. In Virginia, this rare plant is known from tidal marshes, tidal swamps, and interdune swales from the cities of Chesapeake and Virginia Beach. (Weakley, et al., 2012). As of 2014, the Virginia Natural Heritage Program has documented 4 occurrences of this state rare plant, 1 extant and 3 historic. The plant is threatened by sea-level rise and competition with the common reed (*Phragmites australis*), an invasive grass that can choke out native species.

Due to the potential for this site to support populations of Elliott's Aster, DCR recommends an inventory for the resource within the project areas in Goose Creek and Bailey Creek. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

DCR-Division of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact J. Christopher Ludwig, Natural Heritage Inventory Manager, at chris.ludwig@dcr.virginia.gov or 804-371-6206 to discuss arrangements for field work.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. To avoid and minimize impacts to sea turtles, DCR

however, the primary threat to the bird colonies is red foxes, though predator control programs have proven effective. The dredging operations provide a variety of habitats attractive to a widely diverse group of birds by managing cells for nesting, migrating, and wintering species through habitat creation, managing water depths, and vegetation and predator control.

Close coordination with the VDCR, Virginia Department of Game and Inland Fisheries (VDGIF), and USACE will be required to minimize impacts to the species associated with the Conservation Sites. Srict adherence to time-of-year restrictions and erosion and sediment control measures, as well as surveys to locate existing waterbird colonies will also be required. While beach disturbance during construction may temporarily or permanently make areas unacceptable for nesting waterbirds, all five Build Alternatives could ultimately augment the existing beach habitat, providing an opportunity for increased suitable nesting habitat.

As noted in Threatened and Endangered Species section of **Section 3.8.4** in the Final SEIS, no habitat assessments were performed for the Loggerhead sea turtle and Kemp's Ridley sea turtle. Their natural history and a discussion of construction concerns are presented in the Threatened and Endangered Species section of the Natural Resources Technical Report.

Both Loggerhead sea turtles and Kemp's Ridley sea turtles do visit the Hampton Roads area, primarily in the warmer months, though neither one nests in the vicinity of the Study Area Corridors. The physical disturbance of sediments and entrainment of associated benthic resources could reduce the availability of sea turtle prey, but the impacted benthic habitat represents an insignificant amount of the available habitat in the region, and recolonization of the opportunistic benthic species would occur quickly, making impacts to sea turtle

VDCR, cont.

recommends adherence to time-of-year restrictions from 01 April – 30 November of any year. DCR recommends avoidance of the nesting sites for the Least Tern (April 15-August 1) and Black-necked Stilt (April 15-July 15). Due to the legal status of the Gull-billed tern and the Canebrake rattlesnake, DCR recommends coordination with Virginia's regulatory authority for the management and protection of these species, the VDGIF, to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570). Furthermore due to the legal status of the Atlantic sturgeon, DCR also recommends coordination with VDGIF and NOAA Fisheries to ensure compliance with protected species legislation. Finally, due to the legal status of Loggerhead sea turtle and Kemp's Ridley sea turtle, DCR recommends coordination with USFWS and VDGIF to ensure compliance with protected species legislation.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov. This project is located within 2 miles of documented occurrences of state listed and state and federally listed animals. Therefore, DCR recommends coordination with the U.S. Fish and Wildlife Service (USFWS) and VDGIF, Virginia's regulatory authority for the management and protection of these species to ensure compliance with endangered species legislation.

Should you have any questions or concerns, feel free to contact me at (804) 692-0984. Thank you for the opportunity to comment on this project.

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

Cc: Amy Ewing, VDGIF
Troy Andersen, USFWS
Christine Vaccaro, NOAA

habitat and prey negligible. Turbidity effects to sea turtles from dredging at the HRBT expansion should be insignificant. Sea turtles breathe air and increased suspended sediments are not likely to have an effect on turtle respiration. The most likely effect is if a sediment plume causes a barrier to normal behaviors. As sea turtles are highly mobile, they are likely to be able to avoid any sediment plume, and they typically only last for a short duration near the bottom after the dredge passes. Depending upon the type of dredging equipment employed to dredge the tunnel for the HRBT expansion, direct impacts to sea turtles by entrainment or impingement are possible, though sea turtles are strong enough swimmers to avoid most dredge equipment. Sea turtles are susceptible to vessel strikes, however dredges, barges, and support vessels that would be used for the project move at slow speeds (i.e., on average 8-10 knots) and have shallow drafts (NMFS, 2014a). Thus, it is extremely unlikely for sea turtles to be struck by vessels during construction. Like Atlantic sturgeon, sea turtles can be adversely affected by noise; however, sea turtles have a higher threshold for behavior disturbance and would be able to avoid the affected area since Hampton Roads is approximately 3.5 miles wide at this point. Further coordination will be required with NOAA Fisheries and USFWS to avoid impact to sea turtles through potential time-of-year-restrictions, using certain dredging methods, restricting the speed of construction vesssels, staging pile driving activities, and using bubble curtains to reduce underwater noise.

4. The Great Dismal Swamp: Northwest Section Conservation Site is addressed in the Terrestrial Wildlife/Habitat section while Canebrake rattlesnake is addressed in the Threatened and Endangered Species section of **Section 3.8.4** in the Final SEIS.

Two general locations within the Study Area Corridors contain suitable Canebrake rattlesnake habitat and are shown on maps in Appendix G

VDCR, cont.

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of the *Natural Resources Technical Report*. One area is located south of Craney Island and north of Route 164, within Alternatives B, C and D. The majority of the habitat is located along I-664 south of the MMMBT and extends south to the interchange with Military Highway, within Alternatives C and D. A portion of this habitat area is located within the Conservation Site. Proposed construction activities would reduce the large forested track south of Craney Island to < 100 acres, which is the minimal threshold for suitable Canebrake rattlesnake habitat. It would also serve as a barrier for them to access forested habitat on either side of the highway. This habitat area is currently isolated from adjacent forested land by heavy development, and in its current condition could not support a viable population long term. In addition, the current habitat area was completely clear cut in 1990, which left no suitable habitat within the Study Area Corridor or vicinity at the time. It is highly unlikely that any Canebrake rattlesnakes, if present at the time of the clearing, would have remained or survived at this location. Therefore, it is unlikely that construction activities here would adversely affect the species.

Impacts to the margins of Canebrake rattlesnake habitat on the east and west side of I-664 could occur. The existing roadway corridors have caused fragmentation of the habitat and act as a barrier to migration between the habitat areas. It does not appear that construction would increase fragmentation of the habitat, or that any corridors connecting the forested habitat on each side of I-664 currently exist. The I-664 and U.S. 58 interchange at the southern terminus of the alternative is within the Conservation Site, though the forested areas are already fragmented by the roadways in the interchange. Construction activities here should not reduce the overall quality of Canebrake rattlesnake habitat within the vicinity.

VDCR, cont.

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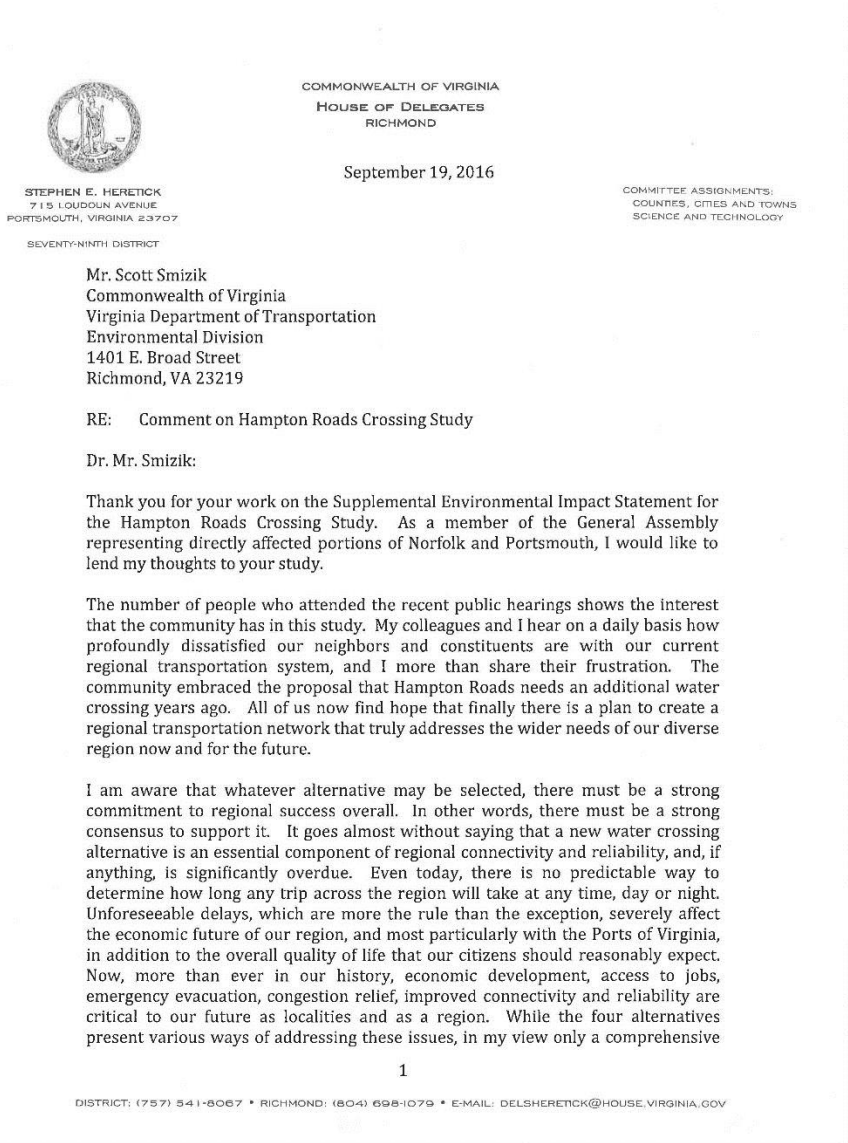
Continued coordination with VDGIF regarding potential construction restrictions and awareness campaigns will occur throughout the design and permitting phases after a ROD is issued. The extant and historic occurrences of Elliott's Aster is noted. Having no legal status, an inventory is not planned. Continued coordination would continue throughout detailed design and permitting phases after a ROD is issued.

Habitat is present for the Gull-billed tern and other waterbirds within the Study Area Corridors of all build alternatives. All estuarine intertidal emergent wetlands (E2EM) and estuarine, intertidal, unconsolidated shore (E2US) were identified as having foraging potential. A large portion of this wetland type is heavily vegetated with dense coverage of phragmites, saltmeadow cordgrass (*Spartina patens*) or smooth cordgrass (*Spartina alternifolia*). The wetlands dominated by phragmites unsuitable for foraging in its current vegetative state. In addition, the majority of the intertidal foraging areas have been fragmented or altered by the presence of the current roadways and development. Mudflats are generally limited to a few fragmented areas. It is anticipated that the majority of these estuarine areas would be bridged; therefore, the proposed activities would have minimal impact on the foraging habitat that is present.

Virginia House of Delegates – Stephen Heretick



COMMONWEALTH OF VIRGINIA
HOUSE OF DELEGATES
RICHMOND

September 19, 2016

STEPHEN E. HERETICK
715 LOUDOUN AVENUE
PORTSMOUTH, VIRGINIA 23707

SEVENTY-NINTH DISTRICT

COMMITTEE ASSIGNMENTS:
COUNTIES, CITIES AND TOWNS
SCIENCE AND TECHNOLOGY

Mr. Scott Smizik
Commonwealth of Virginia
Virginia Department of Transportation
Environmental Division
1401 E. Broad Street
Richmond, VA 23219

RE: Comment on Hampton Roads Crossing Study

Dr. Mr. Smizik:

Thank you for your work on the Supplemental Environmental Impact Statement for the Hampton Roads Crossing Study. As a member of the General Assembly representing directly affected portions of Norfolk and Portsmouth, I would like to lend my thoughts to your study.

The number of people who attended the recent public hearings shows the interest that the community has in this study. My colleagues and I hear on a daily basis how profoundly dissatisfied our neighbors and constituents are with our current regional transportation system, and I more than share their frustration. The community embraced the proposal that Hampton Roads needs an additional water crossing years ago. All of us now find hope that finally there is a plan to create a regional transportation network that truly addresses the wider needs of our diverse region now and for the future.

I am aware that whatever alternative may be selected, there must be a strong commitment to regional success overall. In other words, there must be a strong consensus to support it. It goes almost without saying that a new water crossing alternative is an essential component of regional connectivity and reliability, and, if anything, is significantly overdue. Even today, there is no predictable way to determine how long any trip across the region will take at any time, day or night. Unforeseeable delays, which are more the rule than the exception, severely affect the economic future of our region, and most particularly with the Ports of Virginia, in addition to the overall quality of life that our citizens should reasonably expect. Now, more than ever in our history, economic development, access to jobs, emergency evacuation, congestion relief, improved connectivity and reliability are critical to our future as localities and as a region. While the four alternatives present various ways of addressing these issues, in my view only a comprehensive

1

DISTRICT: (757) 541-8067 • RICHMOND: (804) 698-1079 • E-MAIL: DELSHERETICK@HOUSE.VIRGINIA.GOV

Response:

On September 27, 2016, VDOT recommended Alternative B to the USACE as the Preferred Alternative. This recommendation was informed by comments from the USACE on September 19, 2016 which stated "*If Alternatives A and B also meet the project purpose and need, have less adverse impacts [than Alternative C or D] on the aquatic ecosystem, and do not significantly impact other natural ecosystems, then USACE may determine that it can only permit one of these less damaging options as the LEDPA.*" From among Alternative A and Alternative B, VDOT considered Alternative B the least impactful alternative that fully addressed the purpose statement in the Draft SEIS.

HRTPO and HRTAC unanimously endorsed Alternative A as their Preferred Alternative on October 20, 2016. VDOT subsequently updated their recommendation of a Preferred Alternative to Alternative A on November 14, 2016, and requested USACE's concurrence that Alternative A can be considered the preliminary LEDPA. USACE concurred on VDOT's recommendation for Alternative A as the Preferred Alternative on December 2, 2016. USACE based their concurrence on information in the Draft SEIS which demonstrated that Alternative A sufficiently meets the HRCS Purpose and Need and would have less environmental impacts than the other build alternatives in the Draft SEIS, including Alternative B. USACE also found no reason to disagree that Alternative A may be considered the preliminarily LEDPA.

Virginia House of Delegates – Stephen Heretick, cont.

transportation network can provide any truly meaningful solution for the current systemic weaknesses which plague us and hinder our growth.

My views of each of these Alternative is summarized as follows:

Alternative A. Like many, I am concerned that Alternative A would accomplish little to reduce our daily traffic problems or to enhance connectivity between the Peninsula and the Southside localities. Focusing our resources on this single option would do little more than to further concentrate traffic through the HRBT corridor, and would do little to alleviate everyday commercial and commuter traffic between our localities. While this option may appear attractive in terms of enhancing seasonal tourism access to the beach areas, to those of us who live here—and get to pay for the project—it would prove to be little more than a highly expensive bandaid which would accomplish virtually nothing in addressing the root causes of our daily intraregional traffic flow. Further, by the time construction is complete, our problems would remain in relatively the same condition as they exist today. In sum, this Alternative really accomplishes little that is meaningful to those of us to actually live and work here.

Alternative B. Alternative B is particularly concerning to me. This Alternative does not create a direct water crossing to I-664, but would instead route heavy industrial traffic to Craney Island, and then funnel it through the heavily-populated residential Churchland area of Portsmouth. A new crossing must connect directly to I-664 and move people out of the area without impacting residential communities. This added traffic will place an enormous burden on the citizens who live in the 164 corridor, and will only further add to the port-related traffic congestion related to the Virginia International Gateway and Portsmouth Marine Terminal facilities. You should expect significant local public and legislative opposition to this Alternative.

Alternative C. Alternative C is problematic because it simultaneously fails to address the immediate need of improving conditions at the HRBT, and at the same time fails to address the improvements that will be needed on the 164 corridor in Churchland resulting from the additional traffic coming in through Craney Island.

Alternative D. Alternative D is the only well-thought-out, long-term plan to create a transportation system that will truly serve the needs of our regional community. This Alternative includes each of the major projects that our region has tried to build for the last 25 years. This Alternative simultaneously expands needed capacity on the HRBT, creates a meaningful use via the third crossing to the MMMBT, and enhances infrastructure through Craney Island and Churchland, which would in turn support the development and operations of the port facilities there without unduly compromising the integrity of the residential communities nearby. While ultimately this Alternative will prove the most expensive to build, the comprehensive approach to planning will better position Hampton Roads for future "shovel ready" federal highway infrastructure funding which both presidential

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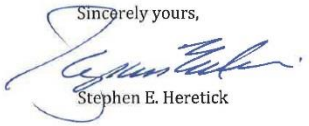
Virginia House of Delegates – Stephen Heretick, cont.

candidates have promised to make available. For these reasons, and many others, this Alternative has my personal support.

As is usually the case, this correspondence should only serve as an abstract of my thoughts and concerns about the various Alternative proposed. I would welcome any needed follow up from your office to elaborate on these proposals, and to support your evaluation in any way.

As always, I sincerely appreciate your continuing service to the Commonwealth of Virginia and its people.

Sincerely yours,



Stephen E. Heretick

3

Department of the Interior

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Custom House, Room 244
200 Chestnut Street
Philadelphia, Pennsylvania 19106-2904

IN REPLY REFER TO:

September 20, 2016

9043.1
ER 16/0438

Edward Sundra
Federal Highway Administration
Virginia Division
400 North 8th Street, Suite 750
Richmond, VA 23219-4825

Subject: Draft Section 4(f) Evaluation and Supplemental Environmental Impact Statement – Hampton Roads Crossing Study, Virginia.

Dear Mr. Sundra:

The Department of the Interior (Department) has reviewed the draft Section 4(f) Evaluation and Supplementary Environmental Impact Statement for the Hampton Roads Crossing Study, which seeks to relieve congestion at the I-64 Hampton Roads Bridge Tunnel. Four action alternatives are being considered, in addition to the no-action alternative; no preferred alternative has been identified at this time. We offer the following comments on this project for your consideration.

Section 4(f) Evaluation Comments

The Department appreciates that you have coordinated with various agencies regarding this project and the development of the Section 4(f) Evaluation. We encourage continued coordination with these parties throughout the life of this project.

Although, there is no preferred alternative currently identified, we note that each alternative results in a proposed *de minimis* finding for Section 4(f). We appreciate and encourage continued interagency communication as you move through the process of finalizing the EIS, and selecting a preferred alternative. Should the Section 4(f) findings change as a result of agency coordination and/or public comment, we request that you resubmit the 4(f) evaluation finding for Departmental comment.

Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

Modifications to the Preferred Alternative have resulted in avoidance of all properties protected under Section 4(f), with the exception of two *de minimis* Section 4(f) impacts. Therefore, no further Section 4(f) analysis or coordination is required. More detail on the design modifications since the Draft SEIS are provided in **Section 3.12**. Updates to the Section 4(f) Report are included in **Appendix E**.

Department of the Interior, cont.

Supplementary Environmental Impact Statement Comments

We have no comments at this time; we will consider further specific comments upon the selection of a preferred alternative.

We appreciate the opportunity to provide these comments.

Sincerely,

Lindy Nelson
Regional Environmental Officer

cc: SHPO-VA (Julie.langan@dhr.virginia.gov)

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Virginia Marine Resources Commission

COMMONWEALTH of VIRGINIA

Marine Resources Commission
2600 Washington Avenue
Third Floor
Newport News, Virginia 23607

Molly Joseph Ward
Secretary of Natural Resources

John M.R. Bull
Commissioner

September 21, 2016

Mr. Scott Smizik
VDOT Environmental Division
1401 East Broad Street
Richmond, VA 23219

Re: Hampton Roads Crossing Study
Draft SEIS

Dear Mr. Smizik:

This letter will respond to the request for comments on the Hampton Roads Crossing Study Draft Supplemental Environmental Impact Study (DSEIS). Including the No Build Alternative, five alternatives have been selected to carry forward for further analysis. The purpose of the project is to relieve congestion at the I-64 Hampton Roads Bridge Tunnel in a manner that improves traffic movement along the primary transportation corridors in the Hampton Roads region.

As you know, in past letters, our agency has conveyed our concerns for the project's potential to impact marine resources in the Hampton Roads project area. Those concerns remain unchanged and include the need to recognize and protect the lower James River as a highly productive and utilized marine environment. For this area, we are primarily focused on the extensive shellfish beds and our recreational and commercial blue crab and finfish fisheries.

To gauge project impacts on these natural resources, we note that the Virginia Institute of Marine Science (VIMS) is currently evaluating the project's potential impact on flow, estuarine circulation, and sediment transport. This is consistent with our past recommendations to update past circulation studies that address impacts to shellfish larvae settlement, sediment transport, water quality, dissolved oxygen, total suspended solid loads, re-suspension of contaminated sediments and salinity. The DSEIS further indicates that the complete assessment by VIMS will not be undertaken until the Preferred Alternative is identified.

An Agency of the Natural Resources Secretariat
www.mrc.virginia.gov
Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD

Response:

During the development of the methodologies for the HRCS SEIS, the FHWA, VDOT, and the Cooperating Agencies agreed that the hydrodynamic study (VIMS Study) could be published after the Draft SEIS and before the Final SEIS. The understanding was that the findings of the study would most likely not have an influence on the identification of a Preferred Alternative but influence the future design and permitting of the Preferred Alternative. The VIMS Study (January 2017) provides planning-level analysis of the potential impact on surface water elevation, flow, salinity, and bottom shear stress related to the No-Build and Build Alternatives. The VIMS Study has been made available to the public of the study website with the publication of the Final SEIS. A summary of the findings is presented in **Section 3.8.1.6** of the Final SEIS.

VMRC, cont.

Mr. Scott Smizik
September 21, 2016
Page Two

Inasmuch as this study and the full design of the alternatives are incomplete, we have no further comment at this time than that provided in our previous correspondence. As you continue to work with the federal cooperating agencies towards the selection of the Preferred Alternative, we strongly encourage you to consider the Commission's collective concerns noted to date in that deliberation.

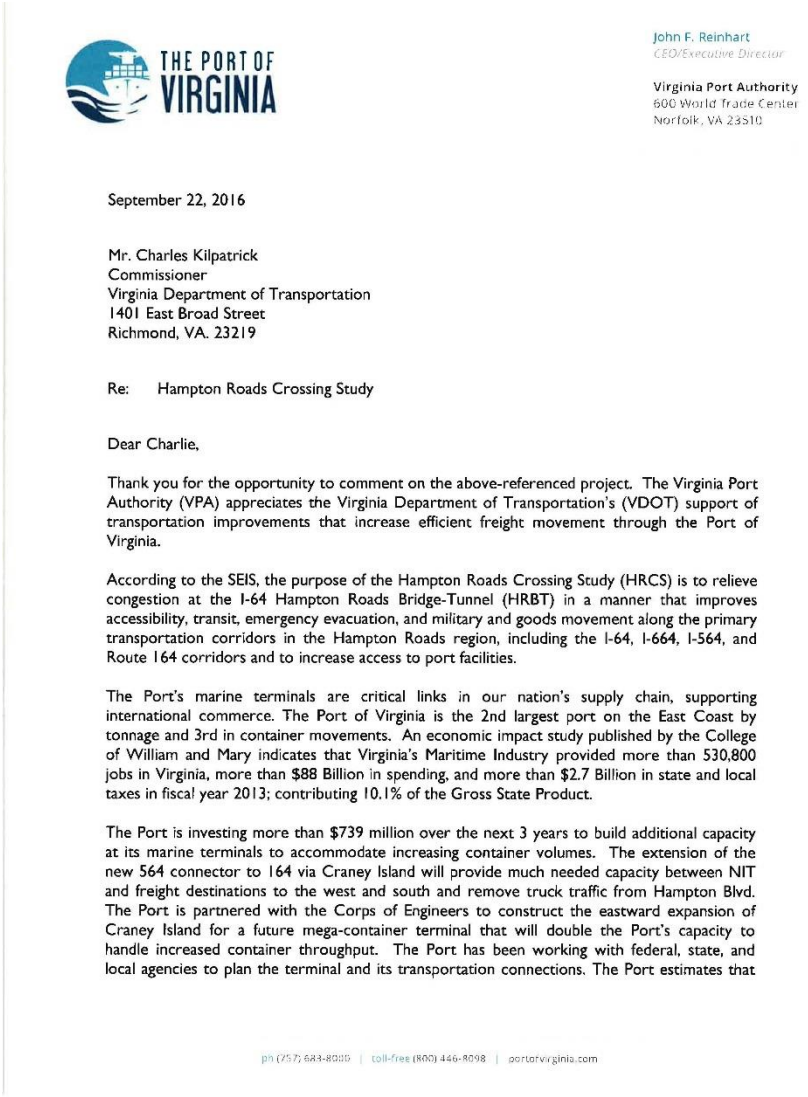
Lastly, any jurisdictional impacts will be reviewed by VMRC during the Joint Permit Application process. Additional concerns and comments may arise during the development of the Final SEIS. Thank you for the opportunity to comment.

Sincerely,

Tony Watkinson
Chief, Habitat Management

TW/RO:blh
HM
cc: John M.R. Bull, Commissioner
The Honorable Molly Ward, Secretary of Natural Resources
John Wells, Director, Virginia Institute of Marine Science
Bettina Sullivan, Department of Environmental Quality

Port of Virginia



THE PORT OF VIRGINIA

John F. Reinhart
CEO/Executive Director

Virginia Port Authority
600 World Trade Center
Norfolk, VA 23510

September 22, 2016

Mr. Charles Kilpatrick
Commissioner
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA. 23219

Re: Hampton Roads Crossing Study

Dear Charlie,

Thank you for the opportunity to comment on the above-referenced project. The Virginia Port Authority (VPA) appreciates the Virginia Department of Transportation's (VDOT) support of transportation improvements that increase efficient freight movement through the Port of Virginia.

According to the SEIS, the purpose of the Hampton Roads Crossing Study (HRCS) is to relieve congestion at the I-64 Hampton Roads Bridge-Tunnel (HRBT) in a manner that improves accessibility, transit, emergency evacuation, and military and goods movement along the primary transportation corridors in the Hampton Roads region, including the I-64, I-664, I-564, and Route 164 corridors and to increase access to port facilities.

The Port's marine terminals are critical links in our nation's supply chain, supporting international commerce. The Port of Virginia is the 2nd largest port on the East Coast by tonnage and 3rd in container movements. An economic impact study published by the College of William and Mary indicates that Virginia's Maritime Industry provided more than 530,800 jobs in Virginia, more than $88 Billion in spending, and more than $2.7 Billion in state and local taxes in fiscal year 2013; contributing 10.1% of the Gross State Product.

The Port is investing more than $739 million over the next 3 years to build additional capacity at its marine terminals to accommodate increasing container volumes. The extension of the new 564 connector to 164 via Craney Island will provide much needed capacity between NIT and freight destinations to the west and south and remove truck traffic from Hampton Blvd. The Port is partnered with the Corps of Engineers to construct the eastward expansion of Craney Island for a future mega-container terminal that will double the Port's capacity to handle increased container throughput. The Port has been working with federal, state, and local agencies to plan the terminal and its transportation connections. The Port estimates that

ph (757) 683-8000 | toll-free (800) 446-8098 | portofvirginia.com

Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the USCG), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by

Port of Virginia, cont.

full build out of the Craney Island Marine Terminal would generate approximately 15,000 daily trips, assuming that 63% of the container freight would be transported by trucks. Alternative B aligns best with Port requirements because it provides a direct connection between the existing and future marine terminals and the surface transportation system and also removes significant truck traffic from Hampton Blvd. It also follows years of planning among federal, state and local agencies on a needed connection to the future Craney Island Marine Terminal. In addition, a large percentage of freight traffic from within and outside Hampton Roads reaches our marine terminals and areas to the west/southwest of the region, and as such, Operationally Independent Segments VIII (Route 164 Connector), X (Route 164), and II (Route I-664 from Route 164 to Bower's Hill) along with improvement to the Bower's Hill interchange support the Purpose and Need related to future Port growth and regional economic vitality.

Maritime related freight movement, from both day to day operations as well as business expansion opportunities contribute significantly to the region's economic vitality, and regional commerce is greatly improved by a reliable transportation network that is resilient, accommodates freight and provides alternative routes in the event of unplanned incidents.

Finally, it is recommended that the order of construction be appropriately sequenced to provide adequate capacity and a reliable network between Southside Hampton Roads and the Peninsula to minimize economic impacts during construction. It is our hope that you would consider the feasibility of constructing both water crossings concurrently as the most efficient way to improve safety, accessibility and congestion relief. If that is not feasible, then we hope you will evaluate sequencing the 3rd crossing to 164 as the first priority to improve freight mobility in light of the imminent terminal construction and volume growth.

Additional transportation capacity across the harbor with a modern tunnel is an important need for continued Regional and Port growth. Thank you for the opportunity to comment and for the invitation to participate in the SEIS. If additional information is needed, please do not hesitate to contact us.

Sincerely,

John F. Reinhart
CEO and Executive Director

Cc: The Honorable Aubrey Layne
Cathie Vick, Virginia Port Authority

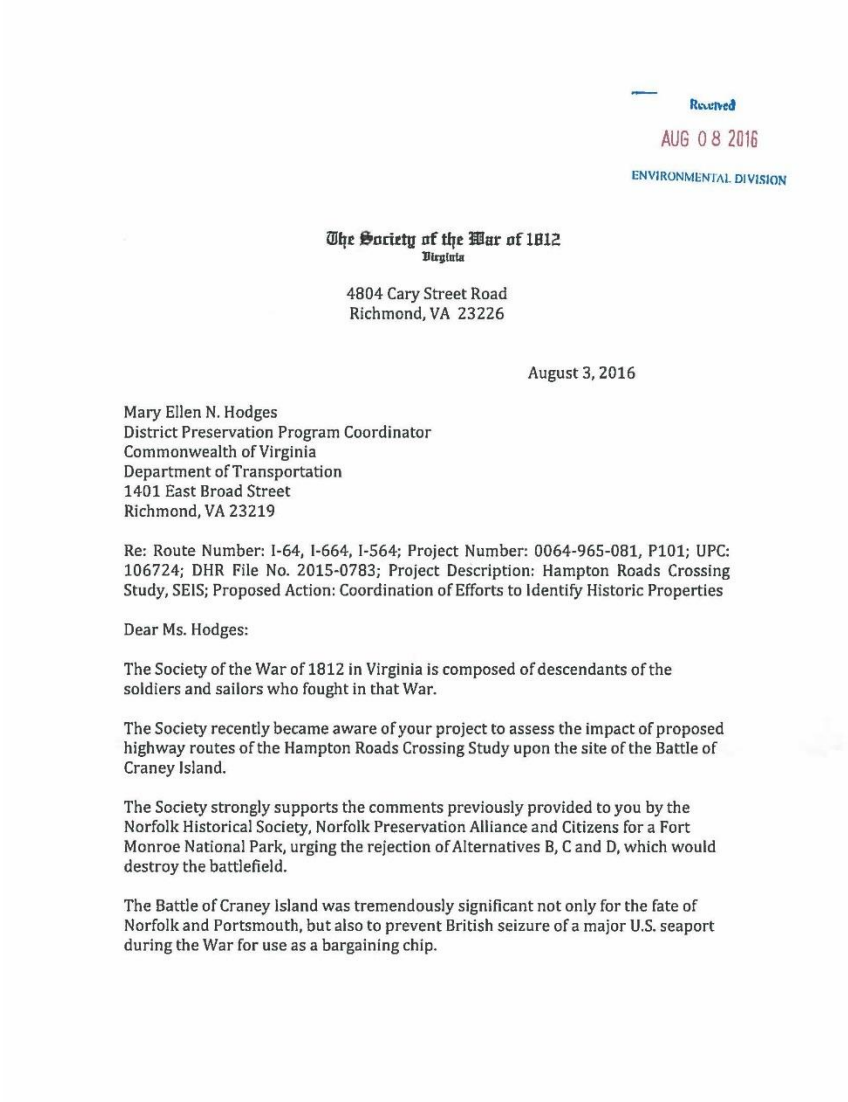
HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

APPENDIX H: RESPONSE TO LOCALITY AND REPRESENTATIVE PUBLIC STAKEHOLDER COMMENTS

TABLE OF CONTENTS

The Society of the War of 1812



Received
AUG 08 2016
ENVIRONMENTAL DIVISION

The Society of the War of 1812
Virginia

4804 Cary Street Road
Richmond, VA 23226

August 3, 2016

Mary Ellen N. Hodges
District Preservation Program Coordinator
Commonwealth of Virginia
Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Re: Route Number: I-64, I-664, I-564; Project Number: 0064-965-081, P101; UPC: 106724; DHR File No. 2015-0783; Project Description: Hampton Roads Crossing Study, SEIS; Proposed Action: Coordination of Efforts to Identify Historic Properties

Dear Ms. Hodges:

The Society of the War of 1812 in Virginia is composed of descendants of the soldiers and sailors who fought in that War.

The Society recently became aware of your project to assess the impact of proposed highway routes of the Hampton Roads Crossing Study upon the site of the Battle of Craney Island.

The Society strongly supports the comments previously provided to you by the Norfolk Historical Society, Norfolk Preservation Alliance and Citizens for a Fort Monroe National Park, urging the rejection of Alternatives B, C and D, which would destroy the battlefield.

The Battle of Craney Island was tremendously significant not only for the fate of Norfolk and Portsmouth, but also to prevent British seizure of a major U.S. seaport during the War for use as a bargaining chip.

Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

On December 29, 2016 the Virginia SHPO concurred with VDOT's determinations that the project would have either no effect, no adverse effect, or a conditioned no adverse effect on each of the 20 above-ground historic properties located within the area of potential effects for the Preferred Alternative. The property comprising the Battle of Craney Island is not located within this area of potential effects.

The Society of the War of 1812, cont.

Since much of the Battle took place on the mud flats and shallows around the original outline of the island, it seems likely that archaeological evidence may still exist, and roads should not be put through it.

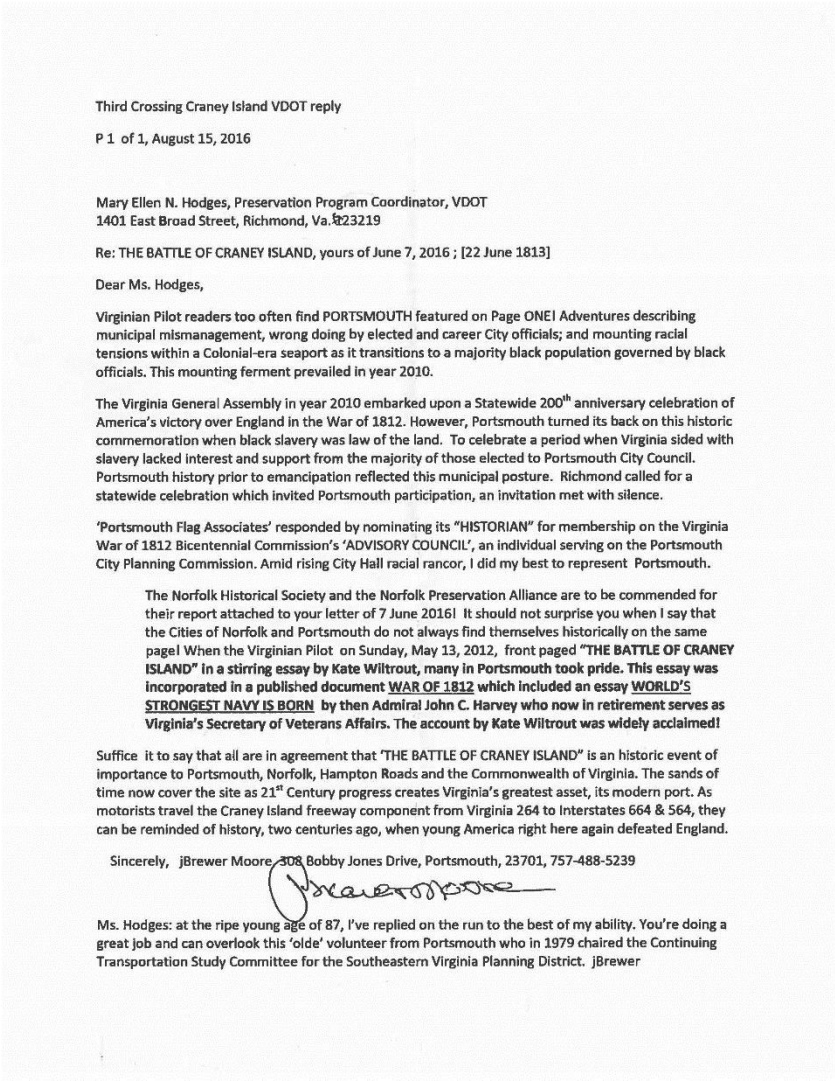
The Society urges you to select an Alternative which does the least damage to the original battlefield area, and allows for further archaeological work, and hopefully access to the site, with highway signage.

Sincerely,

Peter E. Broadbent, Jr.
Historian, Society of the War of 1812 in Virginia.

#2000354

J. Brewer Moore



Third Crossing Craney Island VDOT reply

P 1 of 1, August 15, 2016

Mary Ellen N. Hodges, Preservation Program Coordinator, VDOT
1401 East Broad Street, Richmond, Va. 23219

Re: THE BATTLE OF CRANEY ISLAND, yours of June 7, 2016 ; [22 June 1813]

Dear Ms. Hodges,

Virginian Pilot readers too often find PORTSMOUTH featured on Page ONE! Adventures describing municipal mismanagement, wrong doing by elected and career City officials; and mounting racial tensions within a Colonial-era seaport as it transitions to a majority black population governed by black officials. This mounting ferment prevailed in year 2010.

The Virginia General Assembly in year 2010 embarked upon a Statewide 200th anniversary celebration of America's victory over England in the War of 1812. However, Portsmouth turned its back on this historic commemoration when black slavery was law of the land. To celebrate a period when Virginia sided with slavery lacked interest and support from the majority of those elected to Portsmouth City Council. Portsmouth history prior to emancipation reflected this municipal posture. Richmond called for a statewide celebration which invited Portsmouth participation, an invitation met with silence.

'Portsmouth Flag Associates' responded by nominating its "HISTORIAN" for membership on the Virginia War of 1812 Bicentennial Commission's 'ADVISORY COUNCIL', an individual serving on the Portsmouth City Planning Commission. Amid rising City Hall racial rancor, I did my best to represent Portsmouth.

> The Norfolk Historical Society and the Norfolk Preservation Alliance are to be commended for their report attached to your letter of 7 June 2016! It should not surprise you when I say that the Cities of Norfolk and Portsmouth do not always find themselves historically on the same page! When the Virginian Pilot on Sunday, May 13, 2012, front paged **"THE BATTLE OF CRANEY ISLAND" in a stirring essay by Kate Wiltrout, many in Portsmouth took pride. This essay was incorporated in a published document WAR OF 1812 which included an essay WORLD'S STRONGEST NAVY IS BORN by then Admiral John C. Harvey who now in retirement serves as Virginia's Secretary of Veterans Affairs. The account by Kate Wiltrout was widely acclaimed!**

Suffice it to say that all are in agreement that 'THE BATTLE OF CRANEY ISLAND" is an historic event of importance to Portsmouth, Norfolk, Hampton Roads and the Commonwealth of Virginia. The sands of time now cover the site as 21st Century progress creates Virginia's greatest asset, its modern port. As motorists travel the Craney Island freeway component from Virginia 264 to Interstates 664 & 564, they can be reminded of history, two centuries ago, when young America right here again defeated England.

Sincerely, jBrewer Moore, 308 Bobby Jones Drive, Portsmouth, 23701, 757-488-5239

Ms. Hodges: at the ripe young age of 87, I've replied on the run to the best of my ability. You're doing a great job and can overlook this 'olde' volunteer from Portsmouth who in 1979 chaired the Continuing Transportation Study Committee for the Southeastern Virginia Planning District. jBrewer

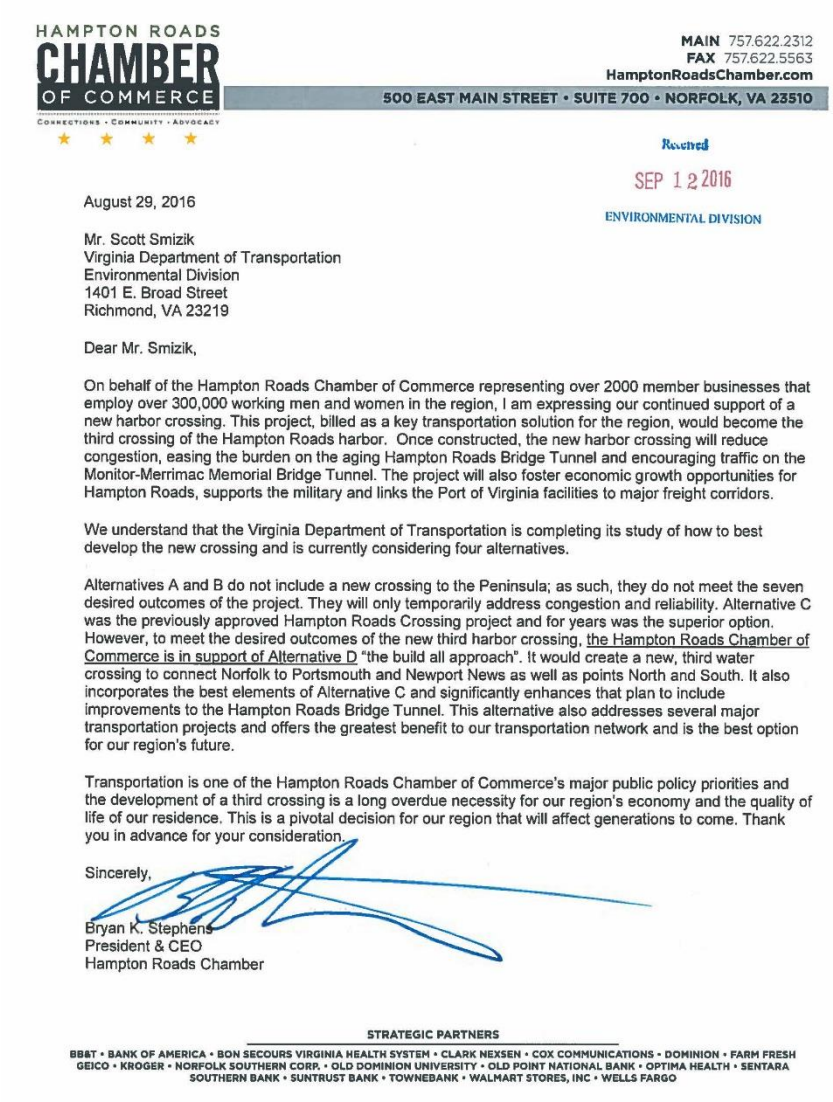
Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

On December 29, 2016 the Virginia SHPO concurred with VDOT's determinations that the project would have either no effect, no adverse effect, or a conditioned no adverse effect on each of the 20 above-ground historic properties located within the area of potential effects for the Preferred Alternative. The property comprising the Battle of Craney Island is not located within this area of potential effects.

Hampton Roads Chamber of Commerce (1)



HAMPTON ROADS CHAMBER OF COMMERCE
CONNECTIONS • COMMUNITY • ADVOCACY

MAIN 757.622.2312
FAX 757.622.5563
HamptonRoadsChamber.com
500 EAST MAIN STREET • SUITE 700 • NORFOLK, VA 23510

Received
SEP 12 2016
ENVIRONMENTAL DIVISION

August 29, 2016

Mr. Scott Smizik
Virginia Department of Transportation
Environmental Division
1401 E. Broad Street
Richmond, VA 23219

Dear Mr. Smizik,

On behalf of the Hampton Roads Chamber of Commerce representing over 2000 member businesses that employ over 300,000 working men and women in the region, I am expressing our continued support of a new harbor crossing. This project, billed as a key transportation solution for the region, would become the third crossing of the Hampton Roads harbor. Once constructed, the new harbor crossing will reduce congestion, easing the burden on the aging Hampton Roads Bridge Tunnel and encouraging traffic on the Monitor-Merrimac Memorial Bridge Tunnel. The project will also foster economic growth opportunities for Hampton Roads, supports the military and links the Port of Virginia facilities to major freight corridors.

We understand that the Virginia Department of Transportation is completing its study of how to best develop the new crossing and is currently considering four alternatives.

Alternatives A and B do not include a new crossing to the Peninsula; as such, they do not meet the seven desired outcomes of the project. They will only temporarily address congestion and reliability. Alternative C was the previously approved Hampton Roads Crossing project and for years was the superior option. However, to meet the desired outcomes of the new third harbor crossing, the Hampton Roads Chamber of Commerce is in support of Alternative D "the build all approach". It would create a new, third water crossing to connect Norfolk to Portsmouth and Newport News as well as points North and South. It also incorporates the best elements of Alternative C and significantly enhances that plan to include improvements to the Hampton Roads Bridge Tunnel. This alternative also addresses several major transportation projects and offers the greatest benefit to our transportation network and is the best option for our region's future.

Transportation is one of the Hampton Roads Chamber of Commerce's major public policy priorities and the development of a third crossing is a long overdue necessity for our region's economy and the quality of life of our residence. This is a pivotal decision for our region that will affect generations to come. Thank you in advance for your consideration.

Sincerely,

Bryan K. Stephens
President & CEO
Hampton Roads Chamber

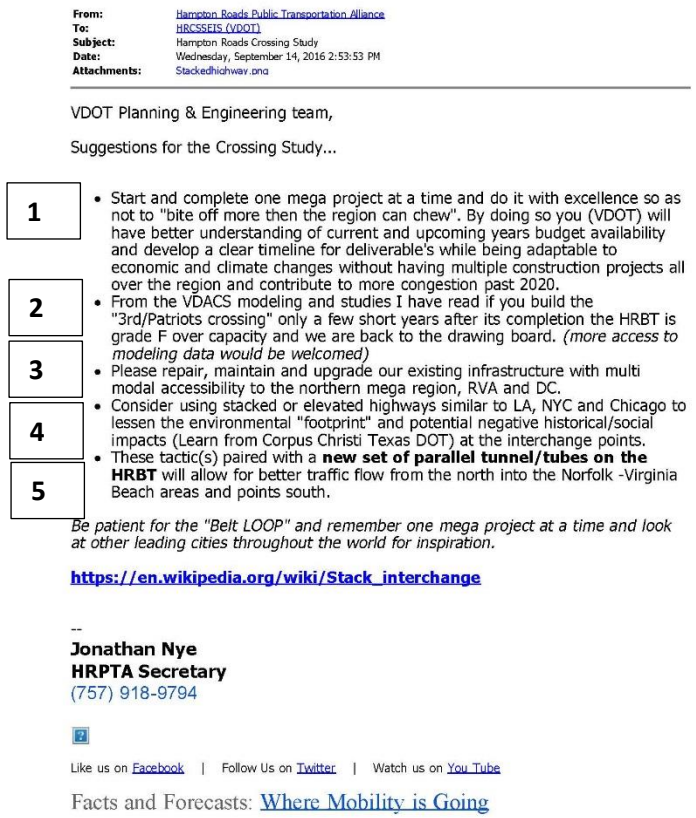
STRATEGIC PARTNERS

BB&T • BANK OF AMERICA • BON SECOURS VIRGINIA HEALTH SYSTEM • CLARK NEXSEN • COX COMMUNICATIONS • DOMINION • FARM FRESH GEICO • KROGER • NORFOLK SOUTHERN CORP. • OLD DOMINION UNIVERSITY • OLD POINT NATIONAL BANK • OPTIMA HEALTH • SENTARA SOUTHERN BANK • SUNTRUST BANK • TOWNEBANK • WALMART STORES, INC • WELLS FARGO

Response:

[August 29 letter superseded by September 21 letter, see response on Page H-212.]

Hampton Roads Public Transportation Alliance



From: Hampton Roads Public Transportation Alliance
To: HRCSSEIS (VDOT)
Subject: Hampton Roads Crossing Study
Date: Wednesday, September 14, 2016 2:53:53 PM
Attachments: Stackedhighway.png

VDOT Planning & Engineering team,

Suggestions for the Crossing Study...

1
- Start and complete one mega project at a time and do it with excellence so as not to "bite off more then the region can chew". By doing so you (VDOT) will have better understanding of current and upcoming years budget availability and develop a clear timeline for deliverable's while being adaptable to economic and climate changes without having multiple construction projects all over the region and contribute to more congestion past 2020.

2
- From the VDACS modeling and studies I have read if you build the "3rd/Patriots crossing" only a few short years after its completion the HRBT is grade F over capacity and we are back to the drawing board. *(more access to modeling data would be welcomed)*

3
- Please repair, maintain and upgrade our existing infrastructure with multi modal accessibility to the northern mega region, RVA and DC.

4
- Consider using stacked or elevated highways similar to LA, NYC and Chicago to lessen the environmental "footprint" and potential negative historical/social impacts (Learn from Corpus Christi Texas DOT) at the interchange points.

5
- These tactic(s) paired with a **new set of parallel tunnel/tubes on the HRBT** will allow for better traffic flow from the north into the Norfolk -Virginia Beach areas and points south.

Be patient for the "Belt LOOP" and remember one mega project at a time and look at other leading cities throughout the world for inspiration.

https://en.wikipedia.org/wiki/Stack_interchange

--
Jonathan Nye
HRPTA Secretary
(757) 918-9794

Like us on Facebook | Follow Us on Twitter | Watch us on You Tube

Facts and Forecasts: Where Mobility is Going

Response:

1. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

When the HRTPO endorsed Alternative A, they also identified a number of additional regional projects to be funded and developed between now and 2035.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by

Hampton Roads Public Transportation Alliance, cont.

HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

2. Improvements considered in the HRCS SEIS are designed to meet capacity needs along the study area corridors in 2040. The *HRCS Traffic and Transportation Technical Report (2016)* summarizes the traffic information gathered to inform the study. The study data projects traffic conditions to year 2040. The design year was determined in consultation with VDOT and FHWA; the interim year (2028) represents conditions in the anticipated opening year of the proposed improvements. The design year represents the year for which the adopted HRTPO land use forecasts (2034 at the time of the study), which are one of the key inputs to the travel demand model, can be used to produce reasonable forecasts. Since the identification of the Preferred Alternative, HRTPO has adopted the 2040 land use forecasts, which have been used to update forecasts and analysis in this Final SEIS.

3. The improvements suggested do not address the Purpose and Need of the HRCS. The specific needs for the HRCS were developed based on a comprehensive review of previous studies along with current traffic data compiled for this study, including information collected through numerous meetings with federal, state and local agencies; cooperating and participating agencies; project stakeholders and the public. The Purpose of the HRCS is to relieve congestion at the I-64 HRBT in a

Hampton Roads Public Transportation Alliance, cont.

manner that improves accessibility, transit, emergency evacuation, and military and goods movement along the primary transportation corridors in the Hampton Roads region.

In its action to endorse a preferred alternative for the HRCS SEIS, the HRTPO laid out a timeline in which all of the region's priority projects could be completed. This timeline is included in a presentation available here: http://www.hrtpo.org/uploads/docs/102016TPO-Presentation%2017-HRCS-SEIS%20Update%20with%20HRTAC.pdf

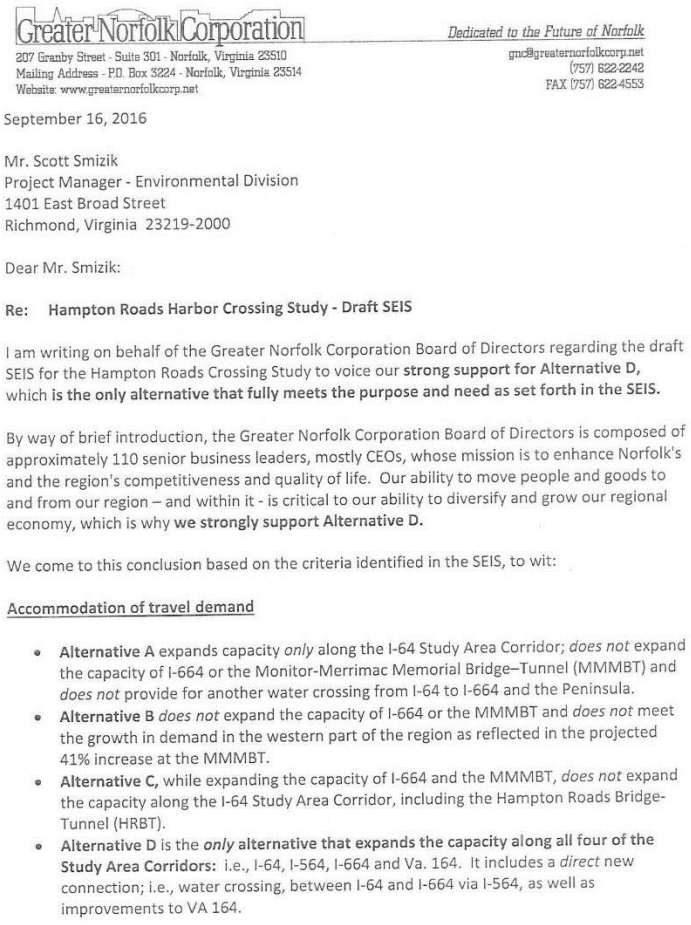
4. The NEPA study evaluates all reasonable alternatives and presents the worst-case impact for the area within the determined "Limit of Disturbance" or LOD. The LOD is designed to take into consideration potential future modifications to the alignment, including, but not limited to future stormwater management facilities and the potential to operate managed lanes. The LOD represents a worst-case scenario in terms of potential impacts. The impacts provided in the SEIS are preliminary estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. Additional efforts will be made to refine and reduce these impacts during the final design and permitting process after a ROD is issued. Design-level considerations would be made within the budget constraints.

5. Adding more than one additional bridge-tunnel crossing at the HRBT to increase the number of lanes along I-64 would result in higher environmental impacts, right-of-way impacts, and costs. During the public review of the HRBT DEIS in 2012, there was a clear lack of public and political support for the level of impacts associated with the 8- and 10-lane build alternatives. Specifically, potential impacts to Hampton University, Hampton National Cemetery, and the high number of displacements were key issues identified by the public, elected officials, and University and Veterans Affairs officials. Given the lack of support, VDOT and FHWA agreed that improvements considered along

Hampton Roads Public Transportation Alliance, cont.

the I-64 corridor in the HRCS SEIS would be confined largely to existing right of way. This has resulted in the Preferred Alternative consisting of a six-lane facility along I-64 with one bridge-tunnel structure crossing Hampton Roads. The SEIS provides preliminary impact estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. The impacts have been calculated using a worst-case scenario, or the largest potential footprint that may be required to construct the improvements, for the proposed six-lane facility on I-64. The final impacts would be determined during the final design and permitting process after a ROD is issued.

Greater Norfolk Corporation



Greater Norfolk Corporation
Dedicated to the Future of Norfolk

207 Granby Street - Suite 301 - Norfolk, Virginia 23510
Mailing Address - P.O. Box 3224 - Norfolk, Virginia 23514
Website: www.greaternorfolkcorp.net

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(757) 622-2242
FAX (757) 622-4553

September 16, 2016

Mr. Scott Smizik
Project Manager - Environmental Division
1401 East Broad Street
Richmond, Virginia 23219-2000

Dear Mr. Smizik:

Re: Hampton Roads Harbor Crossing Study - Draft SEIS

I am writing on behalf of the Greater Norfolk Corporation Board of Directors regarding the draft SEIS for the Hampton Roads Crossing Study to voice our **strong support for Alternative D,** which **is the only alternative that fully meets the purpose and need as set forth in the SEIS.**

By way of brief introduction, the Greater Norfolk Corporation Board of Directors is composed of approximately 110 senior business leaders, mostly CEOs, whose mission is to enhance Norfolk's and the region's competitiveness and quality of life. Our ability to move people and goods to and from our region – and within it - is critical to our ability to diversify and grow our regional economy, which is why **we strongly support Alternative D.**

We come to this conclusion based on the criteria identified in the SEIS, to wit:

Accommodation of travel demand

- **Alternative A** expands capacity *only* along the I-64 Study Area Corridor; *does not* expand the capacity of I-664 or the Monitor-Merrimac Memorial Bridge–Tunnel (MMMBT) and *does not* provide for another water crossing from I-64 to I-664 and the Peninsula.
- **Alternative B** *does not* expand the capacity of I-664 or the MMMBT and *does not* meet the growth in demand in the western part of the region as reflected in the projected 41% increase at the MMMBT.
- **Alternative C,** while expanding the capacity of I-664 and the MMMBT, *does not* expand the capacity along the I-64 Study Area Corridor, including the Hampton Roads Bridge-Tunnel (HRBT).
- **Alternative D** is the ***only* alternative that expands the capacity along all four of the Study Area Corridors:** i.e., I-64, I-564, I-664 and Va. 164. It includes a *direct* new connection; i.e., water crossing, between I-64 and I-664 via I-564, as well as improvements to VA 164.

Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the US EPA, the FTA, the US NOAA, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the

Greater Norfolk Corporation, cont.

Mr. Scott Smizik
Page 2

Improved transit access

- **Alternative A** provides the *least* benefit to MAX routes and only connects Hampton and Norfolk.
- **Alternative B** would expand capacity along the I-64, I-564 and VA 164 Study Area Corridors and create a new connection between I-64 and I-664 via the I-564 Connector and improvements to VA 164. As such, these improvements would improve the access and reliability of transit operations better than Alternative A.
- **Alternative C** offers superior transit access via dedicated transit lanes which would allow existing and future transit to have a competitive travel time advantage over personal vehicles.
- **Alternative D** would ***improve access and reliability of transit operations between population centers in Hampton Roads better than Alternatives A & B*** (according to the draft EIS) and contains the most existing MAX routes and thus the greatest length of improvements to MAX routes.

Increased regional accessibility

- **Alternative A** provides *limited* impact on regional access to activity centers and attractions and *limited* benefit to congestion relief and creates no new regional connections or points of access.
- **Alternative B** *does not* provide a direct water crossing connecting I-64 to I-664 and *does not* increase capacity or relieve congestion in the I-664 corridor or at the MMMBT.
- **Alternative C** *does not* provide increased capacity along the I-64 corridor, including the HRBT.
- **Alternative D** is the ***only* option** that **increases capacity and relieves congestion in all four of the Study Area corridors:** i.e., I-64, I-564, I-664 and VA 164 and as such, would **improve accessibility to regional activity centers and attractions better than any of the other alternatives.** It would also provide two new water crossings to connect I-64 with I-664, which would **reduce regional congestion in all of the aforementioned corridors.**

Addressing geometric deficiencies

- **Alternative A** *does not* address geometric deficiencies; i.e. shoulder width and vertical clearance in tunnels, in the I-664 corridor or the MMMBT.
- **Alternative B** *does not* address geometric deficiencies in the I-664 corridor or the MMMBT.
- **Alternative C** *does not* address geometric deficiencies in the I-64 corridor or the HRBT.
- **Alternative D** is the ***only* option** that **addresses geometric deficiencies in both the I-664 and I-64 corridors and both the MMMBT and the HRBT.**

I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

Greater Norfolk Corporation, cont.

Mr. Scott Smizik
Page 3

Enhanced emergency evacuation capability

- **Alternative A** *does not* improve one of the two evacuation crossings between the Peninsula and the Southside: i.e., I-664 and the MMMBT.
- **Alternative B** *does not* improve one of the two evacuation crossings between the Peninsula and the Southside: i.e., I-664 and the MMMBT.
- **Alternative C** *does not* improve one of the two evacuation crossings between the Peninsula and the Southside: i.e., I-64 and the HRBT.
- **Alternative D** is the ***only* alternative that would enhance capacity along all of the designated evacuation routes in the study area, including both crossings between the Peninsula and the Southside: i.e. I-64/HRBT and I-664/MMMBT**. It would provide two new crossings between these routes.

Improved strategic military connectivity

- **Alternative A** *does not* improve direct military connectivity to the Norfolk Naval Base and does not enhance capacity along any of the STRAHNET facilities in the Study Area other than I-64.
- **Alternative B** would enhance capacity along two STRAHNET corridors; i.e. I-64 and I-564 and in so doing, would improve military connectivity within the region, as well as direct military connectivity to the Norfolk Naval Base, but *does not* enhance capacity in the third STRAHNET corridor: i.e., I-664 and the MMMBT.
- **Alternative C** would enhance capacity along two STRAHNET corridor; i.e. I-664 and I-564 and in so doing, improve military connectivity within the region, as well as improve direct military connectivity to the Norfolk Naval Base, but *does not* enhance capacity in the third STRAHNET corridor: i.e., I-64 and the HRBT.
- **Alternative D** is the ***only* alternative that would enhance capacity along all three of the STRAHNET corridors: i.e., I-64/HRBT, I-564 and I-664/MMMBT** and provides a direct water crossing between I-64 and I-664 - improving military connectivity within the region and improving direct military connectivity to the Norfolk Naval Base.

Increased access to port facilities

- **Alternative A** *does not* increase capacity to and from any port facilities.
- **Alternative B** would expand interstate capacity to enhance the movement of freight in the region in and out of NIT, as well as the CIDMMA Terminals and VIG Terminals and provide new connections between these expanded facilities while improving access to existing and planned port facilities. It *does not* enhance capacity in the I-664 corridor or at the MMMBT.
- **Alternative C** would expand interstate capacity to enhance the movement of freight in the region in and out of NIT, as well as the CIDMMA Terminals and VIG Terminals and provide new connections between these expanded facilities while improving access to

Greater Norfolk Corporation, cont.

existing and planned port facilities. It *does not* enhance capacity in the I-64 corridor at the HRBT and does not address geometric deficiencies in the I-64 corridor/HRBT.

- **Alternative D** would expand interstate capacity to enhance the movement of freight in the region in and out of NIT, the CIDMMA Terminals and VIG Terminals, and provide new connections between these expanded facilities while improving access to existing and planned port facilities. It also **provides a direct water crossing between I-64 and I-664** and is the **only alternative that enhances capacity at both the HRBT and the MMMBT and the I-64 and I-664 corridors.**

To summarize, **Alternative D is the *only* alternative that fully meets the purpose and need as set forth in Hampton Roads Crossing Study SEIS.** It creates an additional (direct) water crossing to improve connectivity between the Peninsula and Southside; provides an alternative to the heavily congested I-64 corridor and the HRBT; addresses geometric deficiencies at both the HRBT and the MMMBT; encourages economic development and access to jobs and increases the total number of emergency evacuation routes.

While cost is an obvious challenge, Alternative D allows the region to develop a comprehensive transportation plan and to continue to advance operationally independent sections of it as funding is identified and those sections (and only those sections) are fiscally constrained. It provides maximum flexibility as the region can prioritize the sections to best meet the need and to provide the most congestion relief and travel reliability and at the same time have shovel-ready projects when federal infrastructure dollars are available.

Finally, careful attention must be given to the impact of construction on current traffic conditions. Without providing any new alternative crossing before construction on the HRBT corridor begins, the resulting gridlock would be disastrous. To avoid the devastating environmental and economic impact of such total gridlock, the I-564/664 connection must be completed *BEFORE* commencing work on expanding the HRBT. With this sequencing, moreover, two more lanes crossing the water would be open to handle traffic sooner than would be the case if the HRBT were expanded first.

Sincerely,

Charles V .McPhillips
President

cc: GNC Board of Directors
Secretary of Transportation Aubrey Layne
Commonwealth Transportation Board
Kevin Page, HRTAC
Norfolk City Council

15074144v3

Hampton University

From: JOANN.HAYSBERT@HAMPTONU.EDU
To: HRCSSEIS (VDOT)
Cc: Harvey, William; BILL.THOMAS@HAMPTONU.EDU
Subject: Hampton Roads Public Crossing Public Comment
Date: Monday, September 19, 2016 3:50:41 PM

Dear Mr. Smizik:

1 On February 12, 2013, Dr. Rodney D. Smith, Vice President for Administrative Services, wrote to express the Hampton University position on the Draft Environmental Impact Statement. Specifically, we were strongly opposed to any project which negatively impacted any University-owned property, including Strawberry Banks and all historical sites related to the life, death, struggles, successes, community and culture of African Americans, both slave and free, who lived, learned, worked, fought, raised families, and died in the Hampton, Virginia area. The reasons related to our opposition are detailed in the February correspondence.

2 This public comment statement is written to reiterate our opposition to any transportation improvement project offered to date or others recommended in the future, that would desecrate any of the world-renowned historical sites located on the grounds of Hampton University. Please know that of the four alternatives being considered, we are vehemently opposed to Alternative A and B. **However**, we support Alternative C with Alternative D as an option.

We appreciate the opportunity to express the position of Hampton university during this public comment period!

Sincerely,

JoAnn W. Haysbert
Chancellor and Provost
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Response:

1. The CTB resolution identifying Alternative A as the Preferred Alternative includes commitments to avoid all permanent impacts to Hampton University properties and to develop an agreement between VDOT and the University that addresses how temporary access can be achieved during construction. Following the publication of this Final SEIS, VDOT will request a ROD from FHWA for the Preferred Alternative and specifically ask that the ROD include the same commitments. To meet these commitments, Alternative A has been modified so that all work in the vicinity of Hampton University will occur within the existing right-of-way. These modifications include increasing the side slopes to a ratio of 2:1 and the addition of guardrail along eastbound I-64 just north of the Mallory Street interchange; reduction of the shoulder width and a retaining wall along eastbound I-64 between the Settlers Landing Road interchange and the Mallory Street interchange; and locating the proposed eastbound HRBT approach bridge in the location of existing HRBT eastbound approach bridge and shifting the existing bridge to the east (the location of the westbound bridge will not change). A Programmatic Agreement executed by FHWA, the Virginia SHPO, and VDOT pursuant to Section 106 of the National Historic Preservation Act (54 U.S.C. 306108) contains additional commitments to ensure that the Preferred Alternative will have no adverse effect on Hampton Institute Historic District and Hampton Institute National Historic Landmark. This Programmatic Agreement will be referenced in the ROD. A MOA will be prepared to specify how temporary access can be achieved along the Hampton University property during construction.

Additional details regarding the Preferred Alternative are provided in **Chapter 2** of the Final SEIS.

Hampton University, cont.

2. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional

Hampton University, cont.

bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

Norfolk Historical Society, Norfolk Preservation Alliance, and Citizens for a Fort Monroe National Park

From: perreault3@cox.net
To: HRCSSEIS (VDOT)
Cc: Peggy; carter; secins@cavtel.net; butlers.va@iluno.com; Chris Melhuish; Steve
Subject: Comments re Hampton Roads Crossing Draft SEIS
Date: Monday, September 19, 2016 10:42:57 PM

Please accept the following comments upon the Draft SEIS for the Hampton Roads Crossing from The Norfolk Historical Society, Norfolk Preservation Alliance and Citizens for a Fort Monroe National Park, all consulting parties to the undertaking involved here:

1. We strongly disagree with FHWA's and VDOT's conclusory statement that Alternatives B, C and D "would not diminish the historic characteristics of the [Craney Island] battlefield property."

2. We likewise strongly disagree with FHWA's and VDOT's conclusory statement "that none of the Build Alternatives would adversely affect the Battle of Craney Island property".

3. It is almost self evident that a multi-lane expressway passing along the eastern shore of Craney Island would have a significant (and not de minimis) adverse impact on a historic battlefield that, while no doubt altered since i813, retains at least some of its character and view shed, at least by virtue of the Elizabeth River and its western shoreline remaining, and battlefield fabric remaining to the west. The battlefield is far more than "any archeological resources .. eventually identified" but includes the land, water and view sheds that most definitely remain.

4. It is incumbent on FHWA and VDOT, should Alternatives, B, C or D be selected, to design the project to minimize any adverse effect on the Battle of Craney Island Battlefield and mitigate any adverse effects which cannot be avoided.

Respectfully submitted,

THE NORFOLK HISTORICAL SOCIETY

NORFOLK PRESERVATION ALLIANCE

CITIZENS FOR A FORT MONROE NATIONAL PARK

Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the US EPA, the FTA, the US NOAA, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

On December 29, 2016 the Virginia SHPO concurred with VDOT's determinations that the project would have either no effect, no adverse effect, or a conditioned no adverse effect on each of the 20 above-ground historic properties located within the area of potential effects for the Preferred Alternative. The property comprising the Battle of Craney Island is not located within this area of potential effects.

Southern Environmental Law Center (SELC)

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September 19, 2016

Mr. Scott Smizik
VDOT Project Manager
HRCSSEIS@VDOT.Virginia.Gov

VIA EMAIL

Re: Comments on the Hampton Roads Crossing Study Draft SEIS

Dear Mr. Smizik:

The Southern Environmental Law Center would like to provide the following comments on the Draft Supplemental Environmental Impact Statement (SEIS) for the Hampton Roads Crossing Study (HRCS). SELC is a non-partisan, non-profit organization that works throughout Virginia to promote transportation and land use decisions that protect our natural resources, strengthen our communities, and improve our quality of life.

The Draft SEIS shows—as did the recent VTrans Multimodal Transportation Plan (VMTP) 2025 Needs Assessment—that Hampton Roads currently faces considerable traffic congestion, and that changes to the existing system are needed to prevent these conditions from deteriorating in the future. These reviews have also made it clear that an effective solution to address these issues must include significant improvements to the region's multimodal system to provide residents with greater transportation options and help reduce the number of vehicles traveling along the region's major highways.

1 As shown in prior environmental documents for the HRCS and the Hampton Roads Bridge Tunnel (HRBT), making large-scale improvements to the highway system in this area has the potential to cause severe adverse impacts. This includes direct impacts to aquatic resources, wildlife habitat, and historic sites, as well as indirect effects from induced growth spurred by expanded highway capacity. Thus, it is critical that these impacts are carefully reviewed and remain a central consideration in the evaluation of alternatives in this review.

We appreciate the considerable work that has gone into the preparation of this Draft SEIS, and the extensive analysis included therein. In the comments below, we highlight a number of key findings from this analysis regarding impacts to environmental and community resources and the relative merits of alternatives being considered. However, we also identify a number of areas where important considerations are missing from the Draft SEIS's analysis, where additional information may be needed to better inform the public and decision-makers' review of the project, and concerns about the proposed process for consultation under the Endangered Species Act.

I. PURPOSE AND NEED

2 The Draft SEIS's updated purpose and need statement covers a broad range of transportation issues relevant to this review. In particular, we applaud the inclusion in this Draft SEIS of a specific element related to the critical need to "improve transit access" in the vicinity

Response:

1. Environmental impacts were considered in accordance with all Federal laws and regulations governing the preparation of an Environmental Impact Statement.

The HRBT DEIS (2012) evaluated a range of alternatives within the I-64 HRBT Study Area Corridor. The build alternatives in the HRBT DEIS included an 8-lane and a 10-lane facility along I-64. During the public review of the HRBT DEIS, there was a clear lack of public or political support for the level of impacts associated with the 8- and 10-lane build alternatives. Specifically, potential impacts to the historic district at Hampton University, Hampton National Cemetery, and the high number of displacements were key issues identified by the public, elected officials, and University and Veterans Affairs officials. Given this public opposition, a Preferred Alternative was not identified and the study did not advance. Consequently, VDOT and the FHWA have committed that improvements proposed in the HRCS SEIS to the I-64 corridor would be largely confined to existing right-of-way. To meet this commitment, the Build Alternatives in the HRCS SEIS consist of a six-lane facility along I-64.

The Draft SEIS provides existing conditions and environmental consequences for each resource in the Study Area Corridors. This document was approved and signed by the FHWA and VDOT on July 25, 2016, indicating that the Draft SEIS meets all Federal requirements for an Environmental Impact Statement. Further, the study was prepared with support and review from 11 federal and local Cooperating Agencies, including the USACE and the USEPA. The Cooperating Agencies were provided the opportunity to comment on the Draft SEIS, all comments have been responded to in the Final SEIS.

SELC, cont.

of the Hampton Roads crossings.[1] The recent VMTP 2025 Needs Assessment for the Hampton Roads Region found that connectivity problems at the region's water crossings are "exacerbated by limited mode choice," and that many of the region's key activity centers lack adequate access to public transit.[2] The Draft SEIS likewise notes that "[w]ith the expected increase in population and travel demand, mass transit across Hampton Roads will become even more important in mitigating congestion and travel delay."[3] While there are various options to improve transit access (discussed further in Section III below), there is no doubt that substantial transit improvements must be included for any alternative to effectively meet the transportation needs of this area.

3

In contrast, we are disappointed that the Draft SEIS's purpose and need statement has eliminated an element specific to environmental protection that was listed in previous reviews for the HRCS. After identifying needs related to improving traffic conditions and accessibility, the 2001 Final EIS stated that "[o]f equal importance in planning for transportation needs in the Hampton Roads area is environmental protection and enhancement."[4] Since that time, the importance of environmental stewardship in planning for this region has only increased, with the recent enactment of the historic Chesapeake Bay Total Maximum Daily Load, continuing deterioration of wildlife habitat and aquatic resources from new development, and increasing recognition of the threat posed by a changing climate. We urge you to add this element back into the project's purpose and need, and to ensure that it continues to guide this review.

II. ENVIRONMENTAL IMPACTS

The Draft SEIS indicates, once again, that making substantial improvements to the highway system in the vicinity of the Hampton Roads crossings could have considerable negative impacts on the region's natural environment and communities. It is therefore imperative that the avoidance and minimization of these impacts are a central consideration in the evaluation of alternatives for this project. This is particularly important in the review of the designated "Operationally Independent Sections," some of which are reported to have far greater impacts than others.

A. Aquatic Resources

4

Aquatic resources are a particular concern for this project, given that each of the Build Alternatives would require a major new or expanded crossing and considerable dredging of Hampton Roads. The Draft SEIS reports that each of the major waterbodies in the project area (including Hampton Roads, the James River, the Elizabeth River, and the Chesapeake Bay) are impaired—failing to meet multiple water quality standards.[5] It also notes the various water quality impacts that may result from construction of the Build Alternatives, including increased erosion and sedimentation and the release of contaminated soils from dredging activities.[6]

[1] Draft SEIS at 1-1.
[2] VMTP 2025 Needs Assessment, Hampton Roads Region at 57-58, *available at* http://www.vtrans.org/resources/vmtp_oct2015/DRAFT_HamptonRoadsNeedsProfile_093015.pdf.
[3] Draft SEIS at 1-31.
[4] 2001 Final EIS at 8.
[5] *See* Draft SEIS at 3-93.
[6] *Id.* at 3-94; *see also* 3-105 to 3-106.

2

The Preferred Alternative would result in the least overall impacts to all natural and historic resources when compared to the retained build alternatives analyzed in the Draft SEIS. Impacts would be minimized to the extent possible by following best management practices and commitments outlined in the *Natural Resources Technical Report*, the Programmatic Agreement, and Final SEIS, as well as through more detailed designs done after the NEPA process is complete to inform the permitting process.

2. With the exception of a few differences, Alternative C was the alternative from the 2001 ROD. Since it had transit-only lanes at that time, those transit-only lanes were maintained for this study. While only Alternative C specifically included transit-only lanes, each of the Build Alternatives retained in the Draft SEIS had the capacity to include transit (see Chapter 2 of the Draft SEIS). The Preferred Alternative would widen I-64 from four to six lanes. Buses that use this route would benefit from the decrease in congestion and increased mobility. Transit would be considered and further accommodated in the managed lane option. Details on the transit options for the Final SEIS Preferred Alternative are included in **Section 2.7**.

In their comments on the Draft SEIS, DRPT provided recommendations for how BRT could be accommodated in a Preferred Alternative. In its resolution of December 7, 2016, CTB indicated that the board would be briefed on and have the opportunity to endorse a managed lane concept should it be identified by the region (HRTPO and HRTAC) and the appropriate analysis and financial plans are in place. As of the publication of this Final SEIS, a managed lane strategy for the Preferred Alternative, such as HOT or HOV lanes, has not yet been determined and the HRTPO LRTP does not rely on toll revenues to construct the project. Should a management strategy be selected, it is anticipated that the managed lanes would accommodate transit such as BRT, as recommended in the DRPT November 16, 2015 letter to VDOT.

SELC, cont.

These impacts are likely to vary widely by alternative. For example, Alternatives C and D (involving new crossings parallel to the Monitor Merrimac Memorial Bridge Tunnel (MMMBT) and connecting to I-564 in Norfolk) are anticipated to require the dredging of *over five times* the amount of sediment as Alternative A (limited to the vicinity of the existing HRBT crossing).[7] The Draft SEIS reports a similar discrepancy between these alternatives regarding the total acreage of disturbance from construction.[8]

There is also considerable variation in the level of impacts to wetlands, particularly for the proposed "Operationally Independent Sections" (OIS). The Draft SEIS identifies large contiguous wetland areas in the area of Craney Island and U.S. Coast Guard Base Portsmouth, as well as along I-664 south of the MMMBT (in Suffolk and Chesapeake).[9] Wetlands in these areas would be heavily impacted by two OISs in particular—OIS I and OIS X. The Draft SEIS's *Natural Resources Technical Report* estimates that OIS I (a small segment in the vicinity of the I-664/US 58 interchange at Bowers Hill, included in Alternatives C and D) would alone impact 23.6 acres of wetlands.[10] Even more problematic, it estimates that OIS X (the "VA 164 Connector" running along Craney Island, included in Alternatives B, C, and D) would impact 61.6 acres of wetlands in an area that has been designated as a high priority for conservation.[11] The severe impacts that would result from building either of these two OISs cannot be justified based on the relatively limited benefits they would provide, particularly in light of their additional impacts on important wildlife habitat, as discussed further below.

B. Habitat and Endangered Species

5

The Draft SEIS also indicates that the Build Alternatives have the potential to impact significant wildlife habitat, including suitable habitat for many threatened and endangered species, such as the Canebrake rattlesnake and various shorebirds and bats.[12] Much of this habitat is included within the "Craney Island" and "Great Dismal Swamp: Northwest Section" Conservation Sites.[13] The Draft SEIS estimates that the most significant impacts to habitat for threatened and endangered species would occur through construction of OIS X (the VA 164 Connector) in the vicinity of Craney Island and the U.S. Coast Guard base, with substantial impacts also anticipated from building OIS I in the I-664/US 58 interchange area.[14] As noted above, it is difficult to justify construction of either of these two segments given the significant

[7] *See id.* at 3-105 (reporting that Alternative A would require the dredging of 1.2 million cubic yards, compared to 4.1 million for Alternative B, 7.1 million for Alternative C, and 6.1 million for Alternative D).
[8] *See id.* at 3-95 to 3-96 (reporting 291 total acres of disturbance for Alternative A, 708 acres for Alternative B, 1,568 acres for Alternative C, and 1,748 acres for Alternative D).
[9] *See, e.g.*, Draft SEIS at 3-87 to 3-88.
[10] Draft SEIS, *Natural Resources Technical Report* at A-9 (hereinafter "*Natural Resources Technical Report*"). The relevant table refers to "Alignment Segments" rather than "OISs," but in comparing the Alignment Segment and OIS maps, "Alignment Segment 1" basically corresponds to "OIS I" and "Alignment Segment 13" corresponds to "OIS X." In some of the Build Alternatives, OIS X is encompassed within larger OISs. *See* Draft SEIS at 2-53.
[11] *Natural Resources Technical Report* at A-9; *see also* Draft SEIS at 3-114 (noting that wetlands in the Craney Island Conservation Site have a "wetlands conservation prioritization ranking" of 3 ("high")).
[12] *See* Draft SEIS at 3-132 to 3-133.
[13] *See, e.g.*, *Natural Resources Technical Report* at 71-73.
[14] *See id.* A-9 (estimating that "Alternative Segment 13"—corresponding to OIS X—would impact 101.7 acres of threatened and endangered species habitat, with the next highest being "Alternative Segment 1"—corresponding to OIS I—at 22.2 acres).

3

3. Because 15 years had passed between the 2001 FEIS and the 2016 Draft SEIS, the needs for the study were updated and modified as necessary; however, the key need elements and purpose of the project remain the same: to improve accessibility, mobility, and goods movement in the Hampton Roads area. As indicated in the Draft SEIS, VDOT, FHWA, and federal agencies that have jurisdiction by law on FHWA/VDOT projects are developing an agreement to merge the NEPA/Section 404 process. While this agreement is still being developed, FHWA and VDOT agreed to use the basic framework of that agreement for the HRCS. As such, the Purpose and Need elements were reviewed and concurred upon by the Cooperating Agencies before the study advanced to the refinement of alternatives. During this review, some Cooperating Agencies indicated that including a need element related to environmental protection and enhancement could arbitrarily limit the range of alternatives considered in the study. It was also recognized that environmental protection and enhancement isn't a transportation need; it doesn't represent a transportation-related problem or deficiency that requires a transportation solution. Instead, environmental protection and enhancement is a goal to be achieved regardless of the alternatives considered. Therefore, the goal of reducing environmental impacts was a focus of the study.

Although a need element specific to environmental protection is not presented in the SEIS Purpose and Need statement, the SEIS has included an assessment of environmental impacts as a critical component of the alternatives evaluation. As documented in the Draft SEIS and the Final SEIS, the Preferred Alternative (Alternative A) would have the least environmental impact of any of the build alternatives. Moreover, VDOT and FHWA, in coordination with USACE, the VDHR and other environmental regulatory agencies, have proposed mitigation measures in **Chapter 3** of this Final SEIS that would address environmental impacts of the Preferred Alternative.

SELC, cont.

(and disproportionate) impacts they would have on important natural resources. Further, we have concerns with the process outlined in the Draft SEIS for consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service regarding impacts to threatened and endangered species, as discussed further in Section IV below.

C. Induced Growth

6

In addition to direct impacts, the proposed Build Alternatives have the potential to cause substantial *indirect* impacts through induced growth encouraged by adding significant new highway capacity. Under NEPA, agencies are required to consider a project's "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."[15]

The Draft SEIS identifies "induced growth study areas" as generally encompassing "feeder roads a distance of 1 mile from existing interchanges on all study corridors and a 1,000-foot buffer either side of the feeder roads," with this distance extending to 2 miles along I-664 in Southside (which is less-developed today).[16] Within these areas, the Draft SEIS identifies considerable additional natural resources that could be impacted by future induced growth from the project, especially within the induced growth areas of Alternative C (encompassing 490 acres of wetlands and 167,048 linear feet of streams) and Alternative D (encompassing 511 acres of wetlands and 211,837 linear feet of streams).[17]

While the potential indirect effects identified by the Draft SEIS are considerable, it is likely that the document significantly underestimates the induced growth potential of this project. The interstates and highways implicated by this project are major commuter routes, and the proposed Build Alternatives would substantially expand the capacity of these roadways, and according to the Draft SEIS, substantially increase travel speeds along a number of these corridors.[18] Given the long distances frequently traveled by commuters in the region, the assumption that induced growth from the project will be limited to one or two miles from existing interchanges is unreasonably limited, particularly in the case of Southside localities in the vicinity of I-664, which the Draft SEIS notes are less-developed today.[19]

D. Climate Change

7

Another important issue related to the HRCS is the project's climate change-related effects, given the project's potential to substantially increase vehicle miles traveled (VMT) along the region's highways, as well as the impact of climate change on the project given threats of sea level rise and storm-related flooding facing Hampton Roads—one of the nation's most vulnerable coastal areas. While we appreciate the Draft SEIS's inclusion of a section on climate

[15] 40 C.F.R. § 1508.8(b).
[16] Draft SEIS at 3-186.
[17] *Id.* at 3-211 and 3-216.
[18] *See, e.g., id.* at 2-44 to 2-50.
[19] *See id.* at 3-187; *see also Senville v. Peters*, 327 F. Supp. 2d 335, 365-69 (D. Vt. 2004) (finding FHWA's NEPA review inadequate in part due to its failure to adequately consider induced growth effects on outlying towns not directly adjacent to a proposed highway).

4

During the public review of the HRBT DEIS in 2012, there was a clear lack of public or political support for the level of impacts associated with the 8- and 10-lane build alternatives. Specifically, potential impacts to Hampton University, Hampton National Cemetery, and the high number of displacements were key issues identified by the public, elected officials, and University and Veterans Affairs officials. Given this public opposition, VDOT and FHWA agreed that improvements considered along the I-64 corridor in the HRCS SEIS would be confined largely to existing right of way. This has resulted in the Preferred Alternative consisting of a six-lane facility along I-64 with one bridge-tunnel structure crossing Hampton Roads. The SEIS provides preliminary impact estimates based on the current planning-level engineering which is appropriate for the NEPA analysis. The impacts have been calculated using a worst-case scenario, or the largest potential footprint that may be required to construct the improvements, for the proposed six-lane facility on I-64. The final impacts would be determined during the final design and permitting process after a ROD is issued. An MOA will be prepared to specify how temporary access along the Hampton University property would be provided during construction.

4. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. The identification of the Preferred Alternative was based, in part, on comments received from USACE suggesting that, "If Alternatives A and B also meet the project purpose and need, have less adverse impacts on the aquatic ecosystem [than Alternative C or D], and do not significantly impact other natural ecosystems, then USACE may determine that it can only permit one of these less damaging options as the LEDPA. This direction, provided in Alternative D of the Final SEIS, and the identification of the Preferred Alternative, have avoided the segments with the highest

SELC, cont.

change, there are a number of areas where this discussion should be strengthened to more fully address the issues related to this project, and better comply with the Council on Environmental Quality's (CEQ) recent final guidance on the inclusion of climate change issues in the review of projects under the National Environmental Policy Act (NEPA).[20]

In its final guidance, CEQ recommends using estimated greenhouse gas (GHG) emissions as a proxy for the estimated climate change impacts of a project,[21] and provides that "an agency should compare the anticipated levels of GHG emissions from each alternative—including the no-action alternative—and mitigation actions to provide information to the public and enable the decision maker to make an informed choice."[22] While the Draft SEIS includes some discussion of estimated VMT (and related GHG) increases from the project, its evaluation is limited to a general comparison of the Build Alternatives as a group compared to the No-Build scenario.[23] This provides little guidance as to the relative GHG contributions of the Build Alternatives, which seem likely to vary based on the wide range of projected VMT increases between these alternatives.[24] A more direct comparison of alternatives based on their relative impacts on VMT (and by extension, GHG emissions) should be included in this SEIS, particularly as the relevant VMT figures are readily available in the Draft SEIS document.

Also relevant to the evaluation of alternatives is the relative resiliency of the options under consideration. While the Draft SEIS includes a lengthy discussion on recent risk management analyses completed for the Hampton Roads region, it includes little on potential mitigation measures or avoidance options to address these issues. In relation to alternatives, it simply notes that "[i]t is expected that Build Alternatives could be developed to adapt to the effects of climate change," and that additional study will be completed in final design to inform refinements to the Preferred Alternative.[25] This is another area where comparison of the Build Alternatives relative to each other would be helpful for decision-makers and the public to make an informed decision regarding which option to advance. As noted by CEQ, "[a]gency decisions are aided when there are reasonable alternatives that allow for comparing…the risk from—and resilience to—climate change inherent in a proposed action and its design."[26] Once a Preferred Alternative is selected, many avoidance and mitigation options have already been foreclosed.

In addition, an important missing element from the Draft SEIS's discussion is the Build Alternatives' potential impacts on environmental resources that contribute to the natural resilience of the region to the effects of climate change. As discussed above, the direct and indirect impacts of some of the Build Alternatives—and certain OISs in particular—include the destruction of large wetland areas. The Build Alternatives could also have substantial impacts

[20] CEQ, "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 Fed. Reg. 51866 (Aug. 5, 2016) (hereinafter "CEQ Final Guidance").
[21] *Id.* at 10.
[22] *Id.* at 15.
[23] *See, e.g.*, Draft SEIS at 3-54 to 3-55.
[24] *See, e.g.*, *id* at 3-53 to 3-54 (estimating in Table 3-24 that building Alternative A would result in an increase of 124.2 million annual vehicle miles traveled over the No-Build, whereas the more comprehensive Alternative D would result in an increase of 413 million).
[25] *Id.* at 3-59 to 3-60.
[26] CEQ Final Guidance at 15.

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impacts to wetlands and other aquatic resources. More detailed information on impacts to aquatic resources are provided in the VIMS Study (January 2017) which provides planning-level analysis of the potential impact on surface water elevation, flow, salinity, and bottom shear stress related to the No-Build and Build Alternatives. The VIMS Study has been made available to the public of the study website with the publication of the Final SEIS. A summary of the findings is presented in **Chapter 3.8.1.6** of the Final SEIS.

5. As shown in the Draft SEIS and the Final SEIS, the Preferred Alternative would have the least amount of impact to wildlife habitat and endangered species when compared to the other build alternatives retained in the Draft SEIS.

6. Alternative A, the Preferred Alternative, would result in the least amount of induced growth when compared to the other build alternatives retained in the Draft SEIS. Alternatives B, C and D, which pass through relatively undeveloped areas is where induced growth would be more likely to occur. The improvements under the Preferred Alternative are confined to I-64 between I-664 and I-564; this area is heavily built out with little room for induced growth.

The potential for induced growth along major feeder roads was evaluated within 2 miles of interchanges. The decision to evaluate the potential for induced growth along major feeder roads to existing interchanges along I-664 and VA 164 was based on land use progression in those areas being less advanced than in Hampton, Newport News, and Norfolk. The *HRCS Indirect and Cumulative Effects (ICE) Technical Report* acknowledges that although this 2-mile distance is less than the maximum recommended by the North Carolina Department of Transportation guidance that informed this analysis, it is within the range recommended by that guidance, and is appropriate because of the maturity of the existing transportation infrastructure in the area (see Figure 2-11 in the ICE Technical Report).

SELC, cont.

on forested habitat, eliminating carbon sinks that help to mitigate the region's GHG pollution. Discussion of the relative impacts of the Build Alternatives on these natural resources is clearly relevant to the public and decision-makers, and should be included in the analysis of climate change.

E. Historic Resources

8

The Draft SEIS also identifies important historic and cultural resources in the vicinity of the Build Alternatives, including many historic schools, cemeteries, and battlefields, as well as a number of historic districts and national historic trails.[27] While we recognize that much of the project area is already well-developed, the substantial highway expansions being proposed nonetheless have the potential to exacerbate existing impacts on many of these resources. We therefore urge you to continue to carefully consider the additional direct and indirect effects that the Build Alternatives may have on these resources, as well as measures to effectively avoid these negative impacts, such as keeping any improvements along I-64 north of the HRBT (which runs alongside the Hampton Institute, the Hampton National Cemetery, and multiple historic districts) within the existing right-of-way.

III. ALTERNATIVES ANALYSIS

It is critical that the alternative that is ultimately selected for this project includes substantial and effective improvements to the region's public transit system, and that serious consideration is given to the potentially-significant environmental and community impacts of each proposed alternative and individual segment relative to its anticipated benefits.

A. Public Transit

9

The importance of expanding modal options in addressing congestion problems in the Hampton Roads region has been highlighted in a number of recent transportation studies, and is reiterated once again in the Draft SEIS. In addition to the recent VMTP 2025 Needs Assessment discussed above, the 2011 *Hampton Roads Regional Transit Vision Plan* found that greater multimodal transit options will be needed to address future traffic conditions, including light and commuter rail, as well as bus rapid transit.[28] It also recommended that "any new harbor or river crossings include dedicated facilities for transit," specifically referring to a potential new Third Crossing of Hampton Roads or upgrades to the HRBT in this respect.[29] Along these lines, each of the Candidate Build Alternatives evaluated in the HRCS's 2001 Final EIS incorporated a dedicated multimodal tube to accommodate HOV, passenger rail, or bus facilities.[30]

With these considerations in mind, we are disappointed that the Draft SEIS only incorporates dedicated multimodal facilities into one of the four proposed Build Alternatives (Alternative C), and that light and passenger rail have been eliminated from consideration—leaving only high-capacity bus rapid transit (BRT) and enhanced bus service for potential

[27] *See* Draft SEIS at 3-139 to 3-140.
[28] DRPT et al., *Hampton Roads Regional Transit Vision Plan* at ES-8 (2011); *see also* Draft SEIS at 1-31.
[29] *Hampton Roads Regional Transit Vision Plan* at ES-7; *see also* Draft SEIS at 1-31.
[30] 2001 Final SEIS at 32-37.

6

7. The SEIS includes a qualitative analysis of climate change impacts from construction and operation from the Build Alternatives including a qualitative discussion on climate change impacts and mitigation measures to adapt to climate change and reduce Project related GHG emissions. Please refer to **Section 3.6** of the SEIS. Specific design details regarding GHG mitigation and climate change resiliency and adaptation measures could not be adequately assessed at the level of design used to compare alternatives. However, following a ROD, and during detailed design, specific design details to reduce GHG emissions and climate change impacts would be evaluated further.

Furthermore, as shown in **Section 3.6**, VMT was used as a surrogate for GHG emissions to draw conclusions about the Build Alternatives. A review of the VMT for the Build Alternatives shows there was not a significant difference to confidently discern or identify the alternative with the greatest increase in GHG emissions. What can be discerned is the VMT associated with the Preferred Alternative is expected increase the least among the Build Alternatives when compared to the No-Build Alternative. In addition, the average vehicle speed is expected to increase and travel times are expected to decrease for the Preferred Alternative compared to the No-Build Alternative which will help to mitigate any expected increases in GHG emissions along with EPA vehicle fuel efficiency standards which are expected to result in lower GHG emissions due to cleaner engine standards and fleet turnover.

8. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. The Preferred Alternative has been modified so that all improvements in the vicinity of Hampton Institute Historic District and Hampton Institute National Historic Landmark will occur within the existing right-of-way.

SELC, cont.

inclusion in the project.[31] We urge you to give greater consideration to options that would incorporate dedicated multimodal facilities into each of the Build Alternatives, including alternatives in which the proposed additional lanes on the HRBT (in Alternatives A, B, and D) would be dedicated solely for multimodal use. While dedicated facilities would clearly be more effective in addressing the region's transit needs, we also urge you to evaluate options that would incorporate HOT lanes into each alternative, which would at the very least make public transit a more competitive option for commuters.

B. Congestion Pricing

10 In addition, reiterating our comments included in a December 21, 2015 letter on the scope of alternatives for this Draft SEIS,[32] we continue to urge you to consider congestion pricing as a stand-alone alternative and in combination with multimodal improvements. Charging drivers a toll during peak travel periods at the HRBT and MMMBT has been discussed for over a decade, and previous studies have indicated that tolls could virtually eliminate congestion by shifting the behavior of only 10% of drivers during peak periods.[33] Tolls could be imposed only during peak travel periods (with the facilities left free-of-charge the remainder of the time), and be set at the level required to relieve congestion by inducing enough drivers to travel at less congested times. Imposing tolls on the existing facilities could be a far more cost-effective, and far less environmentally damaging, alternative than building the multi-billion dollar bridge-tunnel expansions now being considered. It would also provide an opportunity to gauge the traveling public's willingness to pay the tolls that may well be required to fund the type of large-scale improvements proposed in the Build Alternatives.

C. Relative Impacts, Costs, and Benefits

11 In comparing the environmental impacts, costs, and anticipated benefits of the Draft SEIS's proposed Build Alternatives and OISs, it is apparent that some proposed Build Alternatives and individual segments are difficult to justify. As noted above, the environmental impacts of the four proposed Build Alternatives vary widely, with Alternatives B, C, and D anticipated to cause far greater impacts in nearly every category than Alternative A (which would focus only on the HRBT crossing area).[34] This includes anticipated impacts from induced growth, as Alternative A is less likely to spur additional development in Southside localities in the western reaches of the region that remain largely undeveloped today. Anticipated project costs are similarly skewed, with Alternative A estimated to cost $3.3 billion, compared to $6.6 billion for Alternative B and upwards of $12 billion for Alternatives C and D.[35] Yet traffic analyses completed for the HRCS indicate that much of the travel time savings expected to be achieved from the Build Alternatives at both the HRBT and the MMMBT would be captured by

[31] *See* Draft SEIS at 2-11.
[32] Letter from Trip Pollard & Travis Pietila, SELC to Scott Smizik, VDOT (Dec. 21, 2015).
[33] *See* Presentation by Dwight Farmer & Molly Ward, Hampton Roads Transportation Planning Organization (HRTPO) to the Commonwealth Transportation Board (Apr. 17, 2013); *see also* James Bacon, "Congestion Tolls Coming to Hampton Roads?" (Apr. 17, 2013), *available at* http://www.baconsrebellion.com/2013/04/congestion-tolls-coming-to-hampton-roads.html (summarizing and quoting from HRTPO's presentation).
[34] *See id.* at S-6, Table S-1 ("Impact Matrix").
[35] *Id.* at S-8.

7

On December 29, 2016 the Virginia SHPO concurred with VDOT's determinations that the project would have either no effect, no adverse effect, or a conditioned no adverse effect on each of the 20 above-ground historic properties located within the area of potential effects for the Preferred Alternative. The property comprising the Battle of Craney Island is not located within this area of potential effects.

A Programmatic Agreement executed by FHWA, the Virginia SHPO, and VDOT for the Preferred Alternative pursuant to Section 106 of the National Historic Preservation Act (54 U.S.C. 306108) contains commitments supporting these effects determinations and is included in **Appendix I**.

The Preferred Alternative could have been a combination of operationally independent sections from the different alternatives under consideration in order to balance cost, impacts, and the alternative's ability to meet the Purpose and Need, resulting in a hybrid alternative not evaluated as a stand-alone alternative in the Draft SEIS. The SEIS presents information for the build alternatives by alignment segment in **Appendix A**.

During the initiation of the HRCS SEIS, the Virginia DRPT and HRT Agency provided preliminary ridership projections for rail and bus transit along the Study Area Corridors. As a result of this preliminary analysis, DRPT recommended that dedicated light rail transit should not continue to be studied. DRPT also noted that the results of the preliminary analysis supported continued study of high frequency BRT service in a fixed guideway or in shared HOV or HOT lanes. This report is included in **Appendix D** of the Final SEIS.

Additionally, DRPT provided comments on the Draft SEIS, which are included in this Appendix under Response to Agency Comments, expressing support for the study's purpose and need and preferential treatment of transit services.

SELC, cont.

building Alternative A alone,[36] raising serious questions about the reasonableness of pursuing the more expansive Build Alternatives.

The discrepancy between environmental impacts and expected benefits is even more striking at the OIS level. As mentioned above, two OISs located outside of the main MMMBT and HRBT crossing areas—OIS I representing a small segment at the I-664/US 58 interchange, and OIS X representing the proposed VA 164 Connector—would result in far greater impacts to wetlands and habitat for threatened endangered species than all of the other proposed OISs combined. Based on the considerable impacts that would result from building either of these two segments and the limited benefits they would provide in meeting the project's purpose and need, we recommend excluding them from further consideration. And with these examples in mind, we urge you to carefully review the relative impacts, costs, and benefits of each individual OIS to help limit unnecessary impacts on valuable natural and community resources.

IV. CONSULTATION UNDER THE ENDANGERED SPECIES ACT

12

Lastly, we have serious concerns with the process outlined in the Draft SEIS for consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service under Section 7 of the Endangered Species Act (ESA). Section 7 consultation is required when a proposed action is likely to have adverse effects on endangered or threatened species.[37] This section further provides that once the consultation process is initiated, the federal agency or applicant "shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures" that would avoid adverse effects to the relevant threatened or endangered species.[38] Federal courts have noted that Congress enacted this requirement to ensure that large financial investments are not used to improperly "steamroll" an activity to completion regardless of its impacts on protected species.[39]

Instead of completing the consultation process in connection with the Draft SEIS, the document includes a list of "commitments" for the process going forward,[40] the first two of which are particularly problematic under the Section 7 standards cited above. The first states that "Section 7 consultation will be completed before any irreversible or irretrievable commitments of resources are made *expressly for construction activities*."[41] While we agree that construction should not begin before consultation is complete, this commitment should include many pre-construction activities as well. As written, it would apparently allow unlimited

[36] *See id.* at 2-44 to 2-50.
[37] 16 U.S.C. § 1536(a)(3).
[38] *See id.* at § 1536(d); *see also* 50 C.F.R. § 402.09; *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 603 (1992) (Blackmun, J., dissenting).
[39] *See North Slope Borough v. Andrus*, 486 F. Supp. 332, 356 (D.D.C. 1980) (stating further that "Congress enacted § 7(d) to preclude the investments of large sums of money in any endeavor if (1) at the time of the investment there was a reasonable likelihood that the project, at any stage of development, would violate § 7(a)(2), and (2) that investment was not salvageable (i.e. it could not be applied to either an alternative approach to the original endeavor or to another project"), *aff'd in part, rev'd in part*, 642 F.2d 589 (D.C. Cir. 1980); *see also Nat'l Wilderness Inst. v. U.S. Army Corps Eng'rs*, 2005 WL 691775 at *16 (D.C. Cir. Mar. 23, 2005).
[40] Draft SEIS at 1-131.
[41] *Id.* (emphasis added).

8

Managed lane options are under consideration as part of the study, although the final determination has not yet been made by the CTB. HOT lanes are one of the options being considered. HOT lanes are HOV lanes that also allow lower occupancy vehicles to gain access to the lanes by paying a toll. HOT lanes optimize the number of people and vehicles that travel on the lanes, managing demand through a user fee. The Preferred Alternative would not preclude the implementation of HOT lanes. For the purposes of this Final SEIS, a "worst case scenario" has been identified and discussed in the Worst-Case Traffic Analysis and Impact to Air Quality and Noise Analysis Memo (**Appendix G** of this Final SEIS).

In their comments on the Draft SEIS, the Department of Rail and Public Transportation (DRPT) provided recommendations for how bus rapid transit (BRT) could be accommodated in a Preferred Alternative. In its resolution of December 7, 2016, CTB indicated that the board would be briefed on and have the opportunity to endorse a managed lane concept should it be identified by the region (HRTPO and HRTAC) and the appropriate analysis and financial plans are in place. Such action would most likely occur after a ROD has been issued and VDOT can advance with more detailed design and procurement activities. As of the publication of this Final SEIS, a managed lane strategy for the Preferred Alternative, such as HOT or HOV lanes, has not yet been determined and the HRTPO LRTP does not rely on toll revenues that may be generated from a managed lane concept to construct the project. Should a management strategy be selected, it is anticipated that the managed lanes would accommodate transit such as BRT, as recommended in the DRPT November 16, 2015 letter to VDOT.

10. A managed lane option that includes tolls could be implemented under the Preferred Alternative. Section 1512(a) of the Moving Ahead for Progress in the 21st Century Act (MAP-21) allows for the tolling of newly constructed lanes on existing toll-free Interstate highway as long as the facility maintains the same number of toll-free lanes after construction.

SELC, cont.

spending on activities such as final design and the purchase of right-of-way for a particular alignment before consultation is completed. These costs could easily reach tens of millions of dollars for a project of this scale, which would put significant pressure on proceeding to construction and effectively foreclose the genuine consideration of less harmful options developed during the consultation process. This commitment should be modified.

Similarly, the second commitment states that "FHWA's anticipated location decision represented by its NEPA approval *would not change* based on the results of the Section 7 consultation."[42] Careful review of "reasonable and prudent alternative measures" to avoid impacts to threatened and endangered species is a key component of the consultation process, and for a highway project such as this, the review of alternative locations and alignments would undoubtedly be a major part of this analysis. As such, foreclosing the option of reconsidering FHWA's location decision could seriously undermine the consultation process, as well as the intent of the ESA. We urge you to remove this commitment from the SEIS.

CONCLUSION

Similar to past environmental reviews for the HRCS, this Draft SEIS indicates that expanding major highways in the vicinity of Hampton Roads could result in considerable adverse effects on the region's communities and environmental resources. These impacts are clearly greatest in the larger-scale Build Alternatives under consideration (Alternatives B, C, and D), and are particularly troubling in the case of two proposed individual highway segments (OIS I and OIS X) whose impacts far outweigh their limited potential benefits. We urge you to not pursue improvements to these segments further. In addition, we have identified a number of areas where greater analysis is needed in this SEIS, including the project's potential induced growth and climate change-related effects, as well as alternatives that would incorporate dedicated transit facilities or implement tolls on existing crossings during peak periods. We also strongly recommend that the proposed process for consultation under the Endangered Species Act be modified.

Thank you for your consideration of our comments, and we look forward to continuing to participate in this environmental review process as it moves forward.

Sincerely,

Trip Pollard
Senior Attorney

Travis Pietila
Staff Attorney

[42] *Id.* (emphasis added).

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Therefore, under a managed lane scenario the existing facilities would remain toll free and only the new capacity would be tolled. Tolls for managed lanes could be fixed price or variable based on congestion pricing. The final determination on toll pricing or any other managed lane option would be made after the NEPA process has been completed. The NEPA process does not provide the detailed level of information that would be developed as part of a Traffic and Revenue Study, which would be the basis for regional planning agencies (HRTPO, HRTAC, and CTB) to approve any managed lane option.

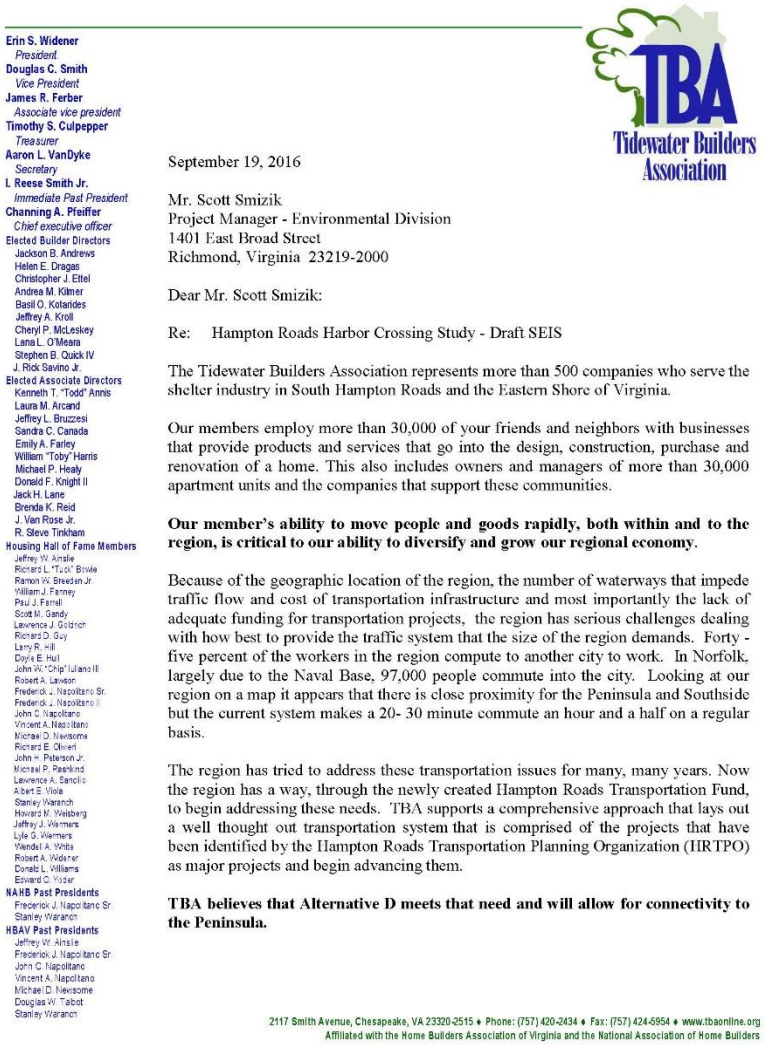
11. Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the US EPA, the FTA, the US NOAA, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP. The Preferred Alternative would result in the least overall impacts to all natural resources when compared to the retained build alternatives analyzed in the Draft SEIS.

12. The information and level of detail needed to enter into Section 7 consultation, if warranted, isn't normally available during the NEPA process. This includes information on construction methodology and limits of disturbance that the FWS and NOAA need to participate in consultation. In their January 23, 2017, letter, NOAA stated that they were "unable to provide substantive recommendations until the means, methods and materials of construction of various project elements have been determined." NOAA adds that as "project planning and design advance", they "reserve the right to provide conservation recommendations in the future." The FWS has taken a similar approach recommending

SELC, cont.

consultation be deferred until after NEPA. Experience from other projects in the region has showed that any concerns over effects on endangered and threatened species can be adequately addressed with conservation measures and restrictions employed during construction. A couple of recent projects addressed ESA requirements well after the NEPA process was completed. On the Gilmerton Bridge project, ESA requirements were addressed after the sturgeon was listed late in the construction of the project. On the Chesapeake Bay Bridge Tunnel project, coordination with the NOAA was initiated after the construction contract was awarded when the means, methods, and materials of construction were known. Given the nature of the marine species and the extent of their habitat, the Preferred Alternative is not likely to adversely affect endangered and threatened species. Further, there will not be any irreversible or irretrievable commitment of resources with respect to the agency action that has the effect of foreclosing the formulation or implementation of any reasonable alternative measures that would avoid adverse effects to endangered and threatened species.

Tidewater Builders Association



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TBA
Tidewater Builders Association

September 19, 2016

Mr. Scott Smizik
Project Manager - Environmental Division
1401 East Broad Street
Richmond, Virginia 23219-2000

Dear Mr. Scott Smizik:

Re: Hampton Roads Harbor Crossing Study - Draft SEIS

The Tidewater Builders Association represents more than 500 companies who serve the shelter industry in South Hampton Roads and the Eastern Shore of Virginia.

Our members employ more than 30,000 of your friends and neighbors with businesses that provide products and services that go into the design, construction, purchase and renovation of a home. This also includes owners and managers of more than 30,000 apartment units and the companies that support these communities.

Our member's ability to move people and goods rapidly, both within and to the region, is critical to our ability to diversify and grow our regional economy.

Because of the geographic location of the region, the number of waterways that impede traffic flow and cost of transportation infrastructure and most importantly the lack of adequate funding for transportation projects, the region has serious challenges dealing with how best to provide the traffic system that the size of the region demands. Forty - five percent of the workers in the region compute to another city to work. In Norfolk, largely due to the Naval Base, 97,000 people commute into the city. Looking at our region on a map it appears that there is close proximity for the Peninsula and Southside but the current system makes a 20- 30 minute commute an hour and a half on a regular basis.

The region has tried to address these transportation issues for many, many years. Now the region has a way, through the newly created Hampton Roads Transportation Fund, to begin addressing these needs. TBA supports a comprehensive approach that lays out a well thought out transportation system that is comprised of the projects that have been identified by the Hampton Roads Transportation Planning Organization (HRTPO) as major projects and begin advancing them.

TBA believes that Alternative D meets that need and will allow for connectivity to the Peninsula.

2117 Smith Avenue, Chesapeake, VA 23320-2515 ♦ Phone: (757) 420-2434 ♦ Fax: (757) 424-5954 ♦ www.tbaonline.org
Affiliated with the Home Builders Association of Virginia and the National Association of Home Builders

Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA Administration, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B

Tidewater Builders Association, cont.

Smizik Continued
September 19, 2016

The proposed I-564/I-664 connector will provide 4 new travel lanes with only a 4 mile increase in travel. Adding that to the HRBT will give us 10 travel lanes when the expansion is done at the HRBT. Nothing will have a greater impact on our region than these 2 projects.

Alternative D also allows us to plan for future needs because of the inclusion of the expansion of I-664 and the MMMBT as well as expansion of the High Rise Bridge and access to the future Port on Craney Island. Alternative D is our strategic transportation plan.

TBA believes that Alternatives A, B and C do not provide the connectivity to the Peninsula that will unlock this region.

They do not provide increased capacity to provide for emergency evacuation of the region, will hinder economic development, and will impact the desirability of our area as a major tourism area. Alternatives A and B do not include the not to distant need for improvements on I-664 and the MMMBT while Alternative C fails to address the HRBT. These are key components of a successful transportation network.

For 62 years TBA has worked to provide the infrastructure needed to support the housing and commercial needs of citizens. What is lacking is the ability of those residents to have a reliable, dependable way to move around the region. It is our hope that the region continues to grow and prosper. Not meeting these transportation needs seriously limits that ability and seriously challenges the desirability of living in our region.

This decision as to how Hampton Roads unlocks our region will have far reaching and lasting impacts.

We now have the opportunity to create the transportation system that will support our businesses and provide a quality lifestyle for our residents. We must be bold and forward thinking. In the 1950's President Eisenhower dreamed of a transportation network to connect our Nation and had the courage to bring it into being - step by step or mile by mile. Hampton Roads is asking for that same vision to ensure the quality of life here for our children and grandchildren and their children.

Sincerely,

Joshua Clark
VP of Government Relations
Tidewater Builders Association

would only provide marginal benefit for relieving congestion on the I-64 HRBT corridor relative to Alternative A despite its higher cost. The

CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

Virginia Maritime Association

VIRGINIA MARITIME
ASSOCIATION

September 19, 2016

Mr. Scott Smizik
VDOT Environmental Division
1401 East Broad Street
Richmond, VA. 23219

Re: Hampton Roads Crossing Study Draft Supplemental Environmental Impact Statement
VDOT Project Number 0064-965-081, P101; UPC: 106724

Dear Mr. Smizik:

The Virginia Maritime Association (VMA) is the trade association representing over 400 businesses, employing over 70,000 people, directly and indirectly engaged in the flow of waterborne commerce through Virginia's ports. As the "Voice of Port Industries" representing these interests, we thank you for the opportunity to comment on the Hampton Roads Crossing Study (HRCS) Draft Supplemental Environmental Impact Statement (SEIS).

According to the SEIS, the purpose of the HRCS is to relieve congestion at the I-64 HRBT in a manner that improves accessibility, transit, emergency evacuation, and military and goods movement along the primary transportation corridors in the Hampton Roads region, including the I-64, I-664, I-564, and Route 164 corridors. The HRCS is to address the following needs:

- Accommodate travel demand – capacity is inadequate on the study area alignments, contributing to congestion at the HRBT;
- Improve transit access – there is a lack of transit access across the Hampton Roads waterway;
- Increase regional accessibility – limited number of water crossings and inadequate highway capacity and severe congestion decrease accessibility;
- Address geometric deficiencies – insufficient vertical and horizontal clearance at the HRBT contribute to congestion;
- Enhance emergency evacuation capability – increase capacity for emergency evacuation, particularly at the HRBT;
- Improve strategic military connectivity – congestion impedes military movement and missions; and,
- Increase access to port facilities – inadequate access to interstate highway travel in the study area impacts regional commerce.

Virginia's ports are a critical link in our nation's supply chain, supporting domestic and international commerce. The Port of Virginia is the 2nd largest port on the East Coast by tonnage, 3rd in container movements, and home to the largest ship building and ship repair industrial complex in the nation. An economic impact study published by the College of William and Mary revealed Virginia's Maritime Industry produced or facilitated over 530,800 jobs in Virginia, in excess of $88 Billion in spending, and more than $2.7 Billion in state and local taxes in fiscal year 2013; contributing 10.1% of the Gross State Product. The Port of Virginia has the deepest water on the East Coast and is moving forward with plans to dredge the main channels to 55 feet and the Southern Branch of the Elizabeth River to 45 feet. With expanding marine terminals, and efficient roads and rail systems connecting our ports to importers and

P. O. BOX 3487 ♦ NORFOLK, VIRGINIA 23514-3487 ♦ PHONE (757) 622-2639 ♦ VAMaritime.com

Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-

Virginia Maritime Association, cont.

VIRGINIA MARITIME
ASSOCIATION

exporters, Virginia's ports will play an even more significant role in the efficiency and security of the nation's supply chain and in terms of its economic contributions. Quite simply, there is a direct correlation between the amount of freight that can be moved by highway to and from Virginia's ports and the strength of Virginia's economy.

VMA has examined the alternatives proposed in the draft SEIS, including a No Build option. Alternative A includes two additional lanes in the I-64 corridor between I-664 and I-564, including the Hampton Roads Bridge Tunnel corridor at a total estimated cost of $3.3 billion. Alternative B includes Alternative A and a four-lane east-west bridge connection from I-564 to Craney Island and then south to Route 164 serving Craney Island, with an expanded four-to-six lane segment to I-664 at a total estimated cost of $6.6 billion. Alternative C includes improvements to I-664 from I-64 to the proposed I-564/I-664 connection to eight travel lanes plus two transit-only lanes, the connection between I-564 and I-664 and improvements to Route 164 with four travel lanes plus two transit-only lanes, widening of I-664 south of Hampton Roads from four lanes to six lanes but no improvements to the Hampton Roads Bridge Tunnel at a total estimated cost of $12.5 billion. Alternative D, at a total estimated cost of $11.9 billion, includes all components of Alternatives B and C, absent the mass transit-only lanes of Alternative C.

VMA finds that the No Build option, Alternative A, and Alternative C are insufficient in capacity and fail to meet the purpose and needs identified in the SEIS. These should be removed from further consideration.

VMA finds that Alternative B adds new capacity at the Hampton Roads Bridge Tunnel and by creating a new east-west connection from I-564 to Route 164 and then to I-664 while remaining fiscally constrained. However, Alternative D provides for the greatest capacity and most fully meets the purpose and needs identified in the SEIS but is not a fiscally constrained alternative.

Therefore, VMA supports proceeding with Alternative B as the fiscally constrained elements of a transportation system better defined by Alternative D, while maintaining Alternative D as part of the transportation planning process for Hampton Roads. VMA strongly recommends construction of the proposed improvements be sequenced to maintain maximum reliability and capacity and to minimize the negative impacts of construction that could otherwise cripple our already overburdened transportation system.

We look forward to working with VDOT toward achieving the necessary and long overdue construction of additional transportation capacity across the Hampton Roads harbor.

Very truly yours,

Arthur W. Moye, Jr.
Executive Vice President

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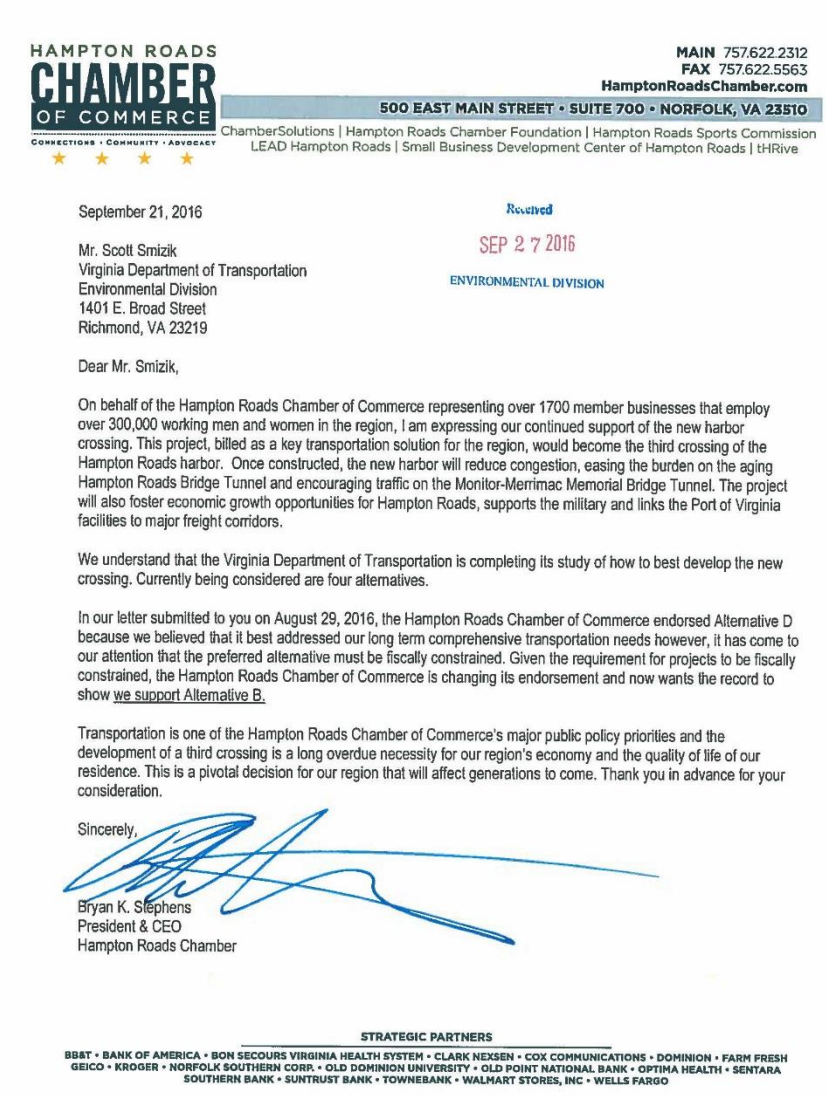
64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.

Hampton Roads Chamber of Commerce (2)



HAMPTON ROADS CHAMBER OF COMMERCE
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September 21, 2016

Received
SEP 27 2016
ENVIRONMENTAL DIVISION

Mr. Scott Smizik
Virginia Department of Transportation
Environmental Division
1401 E. Broad Street
Richmond, VA 23219

Dear Mr. Smizik,

On behalf of the Hampton Roads Chamber of Commerce representing over 1700 member businesses that employ over 300,000 working men and women in the region, I am expressing our continued support of the new harbor crossing. This project, billed as a key transportation solution for the region, would become the third crossing of the Hampton Roads harbor. Once constructed, the new harbor will reduce congestion, easing the burden on the aging Hampton Roads Bridge Tunnel and encouraging traffic on the Monitor-Merrimac Memorial Bridge Tunnel. The project will also foster economic growth opportunities for Hampton Roads, supports the military and links the Port of Virginia facilities to major freight corridors.

We understand that the Virginia Department of Transportation is completing its study of how to best develop the new crossing. Currently being considered are four alternatives.

In our letter submitted to you on August 29, 2016, the Hampton Roads Chamber of Commerce endorsed Alternative D because we believed that it best addressed our long term comprehensive transportation needs however, it has come to our attention that the preferred alternative must be fiscally constrained. Given the requirement for projects to be fiscally constrained, the Hampton Roads Chamber of Commerce is changing its endorsement and now wants the record to show we support Alternative B.

Transportation is one of the Hampton Roads Chamber of Commerce's major public policy priorities and the development of a third crossing is a long overdue necessity for our region's economy and the quality of life of our residence. This is a pivotal decision for our region that will affect generations to come. Thank you in advance for your consideration.

Sincerely,

Bryan K. Stephens
President & CEO
Hampton Roads Chamber

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Response:

Since publication of the Draft SEIS, the CTB identified Alternative A as the Preferred Alternative for the HRCS. Collaboration among VDOT, FHWA, and the Study's Federal Cooperating Agencies (the USACE, the USEPA, the FTA, the US NOAA, the US Navy, and the US Coast Guard), as well as unanimous support by HRTPO and HRTAC, informed CTB's decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTPO LRTP (*HRTPO January 19, 2017 Board Meeting Notes, Item #13)*. FHWA can only issue a ROD to complete the NEPA process for improvements that are fully funded for construction in the region's LRTP.

The HRCS involved a process for identifying the Preferred Alternative that merged requirements of the NEPA and the CWA. As such, identification of Alternative A as the Preferred Alternative considered a broad range of factors that included: 1) Purpose and Need; 2) impacts to environmental resources relevant to determining the preliminary LEDPA, per CWA Section 404(b)(1) guidance; 3) input from Cooperating Agencies; and 4) cost in light of regional funding priorities and funding availability.

As described in **Chapter 2** of this Final SEIS, Alternative A does not meet all elements of the study Purpose and Need as well as other alternatives in the HRCS SEIS; however, it does acceptably balance these factors. Although Alternatives C and D would meet the Purpose and Need better than Alternative A and B, the cost of those two alternatives exceeds available funding and would prevent other transportation-related funding priorities in the region identified by HRTPO from being addressed. Alternatives C and D would also result in substantially greater environmental impacts and therefore could not be the LEDPA, per direction from the USACE. Finally, Alternative B would only provide marginal benefit for relieving congestion on the I-

Hampton Roads Chamber of Commerce, cont.

64 HRBT corridor relative to Alternative A despite its higher cost. The CTB, informed by input from the public, the localities, the regional bodies of HRTAC and HRTPO, and the Study's Federal Cooperating Agencies, found Alternative A would cost significantly less to construct ($3.3 billion) and, coupled with the relatively limited environmental impacts, formally adopted it as the Study's Preferred Alternative.

Alternative A does not propose improvements to I-564, I-664, VA 164, or the Bower's Hill Interchange (I-664 / I-264 / I-664 / US 460), which were included in Alternatives B, C, and D in the Draft SEIS. Alternatives B, C, and D also affect the CIDMMA and US Navy facilities. Impacts to CIDMMA would require additional federal approval and permits. Future plans for CIDMMA and surrounding military facilities are uncertain; therefore, potential impacts to the sites are not clear. Given this uncertainty, HRTPO and HRTAC have set aside funding to continue to study these other corridors which were considered in the HRCS Draft SEIS. These future decisions will be the subject of separate feasibility and NEPA studies.