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).

Table H-1: Public Comments Index

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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)
  (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.

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 MMBBT.

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.

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](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](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 MMBBT 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


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 permissible 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-64 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](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 openeness 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

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APPENDIX H: RESPONSE TO COMMENTS

National Cemetery Administration

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) Leq(h). 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...
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.
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...
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.
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
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.
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 operators as well as business
expansion opportunities contributes significantly to the region’s economic viability, 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 530,000 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-664 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
design; 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 1-664 from Route 164 to Bowes Hill) along with improvement to the Bowes 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. Surls  Co-Chairman
HRTPO Freight Transportation Advisory Committee

Delegate Arthur W. Melon, Jr  Co-Chairman
HRTPO Freight Transportation Advisory Committee
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 position 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/KB6/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
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.
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

19 September 2016

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

RE: Hampton Roads Crossing Study

Dear Mr. Smirk:

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 active crossing it will not have the needed effect to draw traffic to this alternative due to the increased travel time and tolls. 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-64 in Norfolk to I-664 our region will have greatly improved total crossing capacity. The goal must be met to

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 HRTP and HRTAC, informed CTB’s decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTP 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 HRTP 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 Smilk
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 it 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,

[Signature]

Earl P. Haled 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.
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.

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.

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.

<table>
<thead>
<tr>
<th>Alternatives Evaluation Matrix (DRAFT) — City of Norfolk</th>
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<tbody>
<tr>
<td><strong>Need</strong></td>
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<tr>
<td>Accommodate Travel Demand</td>
</tr>
<tr>
<td>Improve Transit Access</td>
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<tr>
<td>Increase Regional Accessibility</td>
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<tr>
<td>Address Geometric Deficiencies</td>
</tr>
<tr>
<td>Improve Strategic Military Connectivity</td>
</tr>
<tr>
<td>Enhance Emergency Evacuation</td>
</tr>
<tr>
<td>Increase Access to Port Facilities</td>
</tr>
</tbody>
</table>

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 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, HRTP 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.
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 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 sustaining 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 analyst 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 LEQPA 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.
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.

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
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”. HRTP 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 HRTP 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).
- HRTP’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.

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.

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.

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:

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

ratio between the uncongested travel time and average actual travel time. The HRCS TTTTR 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 TTTTR. 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 TTTTR 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.
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, Office of City Manager, cont.

Figure 3.3 Existing (2016) Traffic Conditions on Crossing Segments

Source: Google Maps, 9/14/16
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.
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 vphd. This volume would result in a volume/capacity ratio for this link of under 1.0 (uncongested)

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.

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.

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

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.

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.
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
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.
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
improvement could meet a need. This could not be further from the truth. The specific location 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
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
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
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 (commutes) 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
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, demand capacity in this corridor. We also have to consider inclusively the vulnerability of the evacuation routes themselves.

Increase Access to Port Facilities
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.

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
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.
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 included in Alternatives B, C, and D in the Draft SEIS.
City of Norfolk, Office of City Manager, cont.

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 HRTP, 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
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.
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.

4.3.3 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) benefited 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
descriptor 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 5+ 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.
City of Norfolk, Office of City Manager, cont.

Figure 4.3: Travel Distance Comparison Examples

Comparisons of Key Travel Distances With and Without I-564/F-644 Connector (OIS 10 and 11)
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 HRPO 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 258 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 MMIB.

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 those 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 those 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.
City of Norfolk, Office of City Manager, cont.

Figure 4.5 Distances of Alternate Routes

Route Distances as Alternates to HRBT

HRBT
12 Miles

C, D
15 Miles

E, F
3.8 Miles
City of Norfolk, Office of City Manager, cont.

Figure 4.6: Relative Reliability Impacts of Alternatives

- Westbound HHP Corridor
  - PM Peak Period
- Northbound I-664 Corridor,
  - Bowers Hill to Bridge Rd.
  - PM Peak Period

APPENDIX H: RESPONSE TO COMMENTS
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 3.7 contains an illustration of areas with Environmental Justice communities derived from analysis conducted by the HRITPO. 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

The SEIS Purpose statement includes the phrase “in a manner that improves accessibility, transit...” Regional Transit Planning, whether originating with HRT, the HRITPO 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 26, 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

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

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.
City of Norfolk, Office of City Manager, cont.
4.6. Resilience

Norfolk is a leader in the region in addressing resilience issues, particularly related to sea-level rise. We believe that the needs of this study should be closely tied to resilience issues as well. The HRTO 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

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 dollars annually.

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, 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.
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

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 “Titik” alternative, “D with Transit from C”, in order to provide an alternative that meets all of the needs. It is repeated below.

<table>
<thead>
<tr>
<th>HRCS Draft SEIS Alternatives Evaluation Matrix – City of Norfolk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Need</strong></td>
</tr>
<tr>
<td>Accommodate Travel Demand</td>
</tr>
<tr>
<td>Improve Transit Access</td>
</tr>
<tr>
<td>Increase Regional Accessibility</td>
</tr>
<tr>
<td>Address Geometric Deficiencies</td>
</tr>
<tr>
<td>Improve Strategic Military Connectivity</td>
</tr>
<tr>
<td>Enhance Emergency Evacuation</td>
</tr>
<tr>
<td>Increase Access to Port Facilities</td>
</tr>
</tbody>
</table>

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.
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

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/HRTBT 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 second priority must be improving strategic military connectivity by strengthening STRANET 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/HRTBT 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 HRTBT 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/I664 Connector. There are no other segments that meet these needs. By applying this strategic analysis-decision process, we have determined that the I-564/I664 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/HRTBT travel market (to at least the same degree as the proposed Alternative A), we need to add capacity between the I-564/I664 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.

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 I-64. 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 HRBT 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-664/I-64 Connector and MMIBRT, 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.
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:

- 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/HRT 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
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.
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
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

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 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:

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-664 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 alternative.

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.
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.
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.
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 HRTP 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.
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.

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

Cc: Patrick G. Roberts, City Manager
    Scott Mills, Deputy City Manager
    Sherry B. Earley, P.E., Public Works Engineering Manager
City of Virginia Beach

City of Virginia Beach

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 (HRPTO) recently performed and presented to the HRPTO Board on September 15, 2016. City staff supports the HRPTO staff analysis because the segments proposed with all four Build-alternatives would be physically located within several of the HRPTO 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 HRPTO and HRTAC, informed CTB’s decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRPTO LRTP (HRPTO 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 HRPTO, 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 Virginia Beach, cont.

Mr. Scott Snellik  
Hampton Roads Crossing Study Supplemental Environmental Impact Statement  
City of Virginia Beach Review Comments  
September 10, 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 companion 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 HRPPO 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 watersway; 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 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 stated, 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 its analysis of the HRCS SEIS by HRPPO staff. The recommended Preferred Alternative will be communicated to the CTB prior to their consideration of the Least Environmentally Damaging Practicable Alternative (LEDPA).
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) 385-2007 or bsolis@vbgov.com

Respectfully,

[Signature]

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 Leathy III, P.E., Deputy City Manager
    Robert Matthias, Assistant to the City Manager
    J. Jerry 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
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
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 Historic Resources, cont.
Dear Mr. Smitk:

As a cooperating agency in the re-evaluation of the Hampton Roads Crossing Supplemental Environmental Impact Statement (SEIS), Commander, Navy Region Mid-Atlantic (CNRMNA) 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 communities to be distributed more evenly along transportation corridors throughout Hampton Roads. Consequently, this would reduce congestion and ultimately improve strategic military connectivity beyond the current roadway system.

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

1. The proposed alignment of the I-64 Connector identified in Alternatives B, C, and D would negatively impact planned, maritime-critical infrastructure at the Creasy 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 alignment would impact the Navy’s property. The Navy requires unimpeded access to all of its facilities at Creasy Island.

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

3. Further coordination with the U.S. Navy and U.S. Army Corps of Engineers will be required to consider the alignment of a future tunnel beneath Norfolk Harbor Ranch with respect to anticipated future 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
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
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.

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Diagram of the Navy, cont.
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
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.
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.
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
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.
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.
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 51: 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. 1-19 (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

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.

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

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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.
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.
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 MMBBT (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
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.
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

September 19, 2016

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

Re: HRTP0 Staff Comments Regarding the HRCS Draft SEIS

Dear Mr. Smitsik:

On behalf of the Hampton Roads Transportation Planning Organization (HRTP0), the designated Metropolitan Planning Organization for the Hampton Roads metropolitan planning area in southeastern Virginia, please find attached HRTP0 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. Cameila Ravambert at 757-420-8300.

Sincerely,

Robert A. Comn, Jr.
Executive Director

Attachment
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 HRTP and HRTAC, informed CTB’s decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRTP LRTP (HRTP 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
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
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 addresses 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 the list of stations in Section 1.4.3 of the Final SEIS.
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
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.
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.
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.
Hampton Roads Transportation Planning Org., cont.

- 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.”

- 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.”

- Page 3-47, Section 3.6 Air Quality, Methodology, Interchanges
  - 2nd bullet – For clarity, recommend using “Route 468/Granby St.” in the place of “Route 460”.
  - For all bullets – For clarity, recommend adding Exit Numbers for each of the interchanges.

- 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.

- 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.”

- Page 3-48, Section 3.6 Air Quality, Methodology, Mobile Source Air Toxics
  - 2nd 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.

- 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.”
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
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”.

Other Comments (on main SEIS Document)

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 “IA” 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 $6.68. 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.

54. In the map, “VA 258” should be referred to as “US 258”.

55. 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
Hampton Roads Transportation Planning Org., cont.

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.

   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.
Final Supplemental Environmental Impact Statement
APPENDIX H: RESPONSE TO COMMENTS

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.

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.

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.

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?

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 2A...”

Page 1-25, Section 1.4.4 Increase Regional Accessibility
- In the second paragraph, second sentence, the word “irregular” should be removed.

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.
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.
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).
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
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 personal vehicle 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.
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
Alternatively 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.
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.
September 19, 2016

Mr. Scott Smuzik
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 DSEIS 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 Alternative A, B, C and D have been developed and defined in their ability to satisfy the project’s purpose and 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 02080200) 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), require 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
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
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.

Sincerely,

David L. O'Brien
Fisheries Biologist
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. 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 HRS 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.
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
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 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...
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,
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.
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 activities 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,
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.
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 ½ 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.
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
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.

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Noise Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>6,953</td>
</tr>
<tr>
<td>B</td>
<td>1,987</td>
</tr>
<tr>
<td>C</td>
<td>1,014</td>
</tr>
<tr>
<td>D</td>
<td>2,548</td>
</tr>
</tbody>
</table>

- 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.

- 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/](http://www.humanimpact.org/new-to-hia/faq/)

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

22. During the development of the Draft SEIS, VDOT met with the Virginia Department of Health and other agencies and groups that

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 System 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.
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.

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Historic Resources</th>
<th>Archaeology Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>C</td>
<td>10</td>
<td>26</td>
</tr>
<tr>
<td>D</td>
<td>16</td>
<td>33</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Navigable waters (acres)</th>
<th>Floodplains (acres)</th>
<th>Subaquatic Vegetation (SAV) (acres)</th>
<th>EFH (acres)</th>
<th>Wetlands (acres)</th>
<th>Stream (lin ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>147.3</td>
<td>112.6</td>
<td>1.8</td>
<td>138.4</td>
<td>7.8</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>215.6</td>
<td>213.3</td>
<td>1.8</td>
<td>214.3</td>
<td>72.6</td>
<td>0</td>
</tr>
<tr>
<td>C</td>
<td>369.9</td>
<td>213.3</td>
<td>1.8</td>
<td>565.4</td>
<td>111.5</td>
<td>547.9</td>
</tr>
<tr>
<td>D</td>
<td>480.9</td>
<td>313.3</td>
<td>1.8</td>
<td>636.3</td>
<td>119.9</td>
<td>547.9</td>
</tr>
</tbody>
</table>

- 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.

- 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 non-tidal resources or mudflats with vegetated wetlands.

- 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

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
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 permittee-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.
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
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.
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
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.
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 to 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.
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.
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 required 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 used 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's 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
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.

- 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.

§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

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.
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 1900's and early 1900's), pollution, sedimentation, and blockade of access to spawning areas by dams (Gilbert, 1969, Barbour and Jenkies, 1991, Mantie and Coastal Species Information System, 1996). In the Chesapeake Bay and elsewhere in the range, hypoxic events have increased and may degrade nursery habitat for Atlantic sturgeon (Stern and Gundersen, 1997). Habitat loss due to dam construction and water pollution are thought to be major factors impeding full recovery of populations (Smith, 1996, cited by Johnson et al., 1997; Gilbert, 1999). 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 (VDGF).

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, wherever possible, its associated habitat, 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 5, which represents a site of general significance. The natural heritage resources of concern at the Hampton Roads Bridge Tunnel Conservation Site are:

- Acanthopagrus yrigoyeni 
- Sphyraena viridensis
- Gobiodon nebulosus
- Thaleissemus maximus
- Thaleissemus challengeri

The Craney Island Conservation Site has been given a biodiversity significance ranking of B, which represents a site of moderate significance. The natural heritage resources of concern at the Craney Island Conservation Site are:

- Sterna antillarum
- Himantopus mexicanus
- Circus cyaneus

In addition, the Least tern (Sternula antillarum) and the Atlantic sturgeon have been documented within the project site on Willsburg Spit and the Atlantic sturgeon has been documented within the project area.

Furthermore, there is potential for Loggerhead sea turtle (Caretta caretta, G2/S2B/NL/LE/LT) and Kemp’s ridley sea turtle (Lepidochelys kempi, G1/X2B/NL/LE/LT) 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...
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;
According to the information currently in our files, the bird colonies are located within the Craney Island Conservation Site.

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 rating of B5, which represents a site of general significance. The natural heritage resources of concern at this site are:

- **Crotalus horridus**
- **Canebrake rattlesnake**
- GA/S1/NL/LI

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 yellowish (*Gibbons and Dorcas, 2005*). In Virginia, it is found in the piedmont and mountains 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 edges and glades of swampy areas (*Mitchell and Schowah, 1991*). Canebrake rattlesnakes are generally terrestrial and feed on a variety of small animals including small mammals, birds, and amphibians (*Mitchell & Schowah, 1991*).

The primary threats to the Canebrake rattlesnake are the loss of habitat due to development activities and persecution by humans (*Mitchell, 1996*). 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 eliotii*, GA/S1/NL/LI) 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 panicule or corymb of flower heads with purplish-blue ray and white disc flowers in mid-late summer. In Virginia, this rare plant is known from tidal marshes, tidal swamps, and intertidal meadows from the cities of Chesapeake and Virginia Beach (*Wealdon 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 rod (*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@dfc.virginia.gov or 804-376-6206 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. Strict 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...
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 vessels, 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.
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.
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.


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.
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 Alternatives 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 who get to pay for the project—it would prove to be little more than a highly expensive band-aid which would accomplish virtually nothing in addressing the root causes of our daily intra-regional 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
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
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.
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)
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 Snailak
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
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-016
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
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
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 Wick, 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

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The Society of the War of 1812

Mary Ellen N. Hodges
District Preservation Program Coordinator
Commonwealth of Virginia
Department of Transportation
500 East Broad Street
Richmond, VA 22219

Re: Route Number: 1-64, I-664, I-564; Project Number: 0964-965-001, P101; UFC: 106724; BHR 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.

August 3, 2016

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,

[Signature]

Peter E. Broadbent, Jr.
Historian, Society of the War of 1812 in Virginia.

#2000354
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.
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, support the military and link 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.

Alternative 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,

S. Ryan Stephens
President & CEO
Hampton Roads Chamber

APPENDIX H: RESPONSE TO COMMENTS
Hampton Roads Public Transportation Alliance

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
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](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
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.
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.

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 site 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.

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 MMBT.
- Alternative B does not improve one of the two evacuation crossings between the Peninsula and the Southside: i.e., I-664 and the MMBT.
- 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 STRANET facilities in the Study Area other than I-64.
- Alternative B would enhance capacity along two STRANET 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 STRANET corridor: i.e., I-664 and the MMBT.
- Alternative C would enhance capacity along two STRANET corridors: 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 STRANET corridor: i.e., I-64 and the HRBT.
- Alternative D is the only alternative that would enhance capacity along all three of the STRANET 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 NT, as well as the CIGMAA Terminals and VPI 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 MMBT.
- Alternative C would expand interstate capacity to enhance the movement of freight in the region in and out of NT, as well as the CIGMAA Terminals and VPI Terminals and provide new connections between these expanded facilities while improving access to
Greater Norfolk Corporation, cont.

Mr. Scott Smulik  
Page 4

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 CD MMA 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-664/I-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
Hampton University

Dear Mr. Smizik:

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 located on the grounds of Hampton University. The reasons related to our opposition are detailed in the February correspondence.

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,

John W. Haysbert
Chancellor and Provost
Hampton University
Hampton, Virginia 23668
757-721-5201
john.haysbert@hamptonu.edu

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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.
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
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

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.
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.
of the Hampton Roads crossings. 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. 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.” 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.

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 “it is of equal importance in planning for transportation needs in the Hampton Roads area is environmental protection and enhancement.” 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

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. 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.

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.

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1. Draft SEIS at 1-1.
3. 2001 Final EIS at 8.
4. See Draft SEIS at 3-04.
5. Id at 3-04. see also 3-105 to 3-106.
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 HRST crossing). 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/I-58 interchange at Bowlers 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

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 Channelcatted Catalina, 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/I-58 interchange area.14 As noted above, it is difficult to justify construction of either of these two segments given the significant

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 focal point 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.
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...
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).
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.
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.
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.
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...
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 irretreivable 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

September 19, 2016

Mr. Scott Smeltz
Project Manager - Environmental Division
1401 East Broad Street
Richmond, Virginia 23219-2000

Dear Mr. Scott Smeltz:

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 members believe in moving 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 commute to another city to work. In Norfolk, largely due to the Naval Base, 97,000 people commutes into the city. Looking at our region on a map it appears that there is one 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 this 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 (HRPTO) as major projects and begin advancing them.

TBA believes that Alternative D meets that need and will allow for connectivity to the Peninsula.

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 HRPTO and HRTAC, informed CTB’s decision. HRTAC set aside $4.031 Billion, in year of expenditure dollars, for a Preferred Alternative in the HRPTO LRTP (HRPTO 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 HRPTO 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.

Tidewater Builders Association, cont.

Sincerely,

Joshua Clark
VP of Government Relations
Tidewater Builders 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 0864-965-081, P101; UFC: 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 HBBT 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 564 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 HBBT;
- 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 HBBT contribute to congestion;
- Enhance emergency evacuation capability – increase capacity for emergency evacuation, particularly at the HBBT;
- 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 shipbuilding 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 $30,800 jobs in Virginia, in excess of $98 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

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 Cooperator Agencies (the USACE, 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 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.
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-
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 HRTP, 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.