COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
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Charles A. Kilpatrick, P.E.
Commissioner

August 26, 2016

Ms. Jessie Yung
Acting Division Administrator
Federal Highway Administration
400 North 8th Street, Suite 750
Richmond, Virginia 23219-4825

SUBJECT: **Request for Record of Decision**
Interstate 64 Peninsula Study Environmental Impact Statement
From: Approximately I-295 Collector-Distributor Lane Northbound Bridge over I-64, Exit 200
To: Approximately Route 33/249 Bridge over I-64, Exit 205
State Project No 0064-M11-002, P101; UPC 92212
Federal Project Number: NHS-064-3(479)
FEIS Date: November 26, 2013

Dear Ms. Yung:

The Federal Highway Administration (FHWA), in accordance with provisions of the National Environmental Policy Act of 1969, as amended, (NEPA) and 23 CFR 771, approved a Final Environmental Impact Statement (FEIS) on November 26, 2013 for the proposed project, which involves the construction of additional general purpose lanes along Interstate 64 (I-64) between the City of Richmond and the City of Hampton (Attachment 5). The FEIS covered the full 75 miles of the study corridor.

The FEIS identified the preferred alternative as Alternative 1. At full build conditions, the preferred alternative would add one to three additional general purpose lanes along the corridor, depending on the identified capacity needs (Attachment 5). The FEIS also prescribed a means by which Alternative 1 could be implemented in operationally independent sections, as funding is identified. Operationally independent sections can be built and function as a viable transportation facility even if the rest of the work described in the FEIS is never built. As stated in the FEIS, the decision to widen to the outside or inside of the existing corridor would be made on a section by section basis.

The FEIS goes on to state that a Record of Decision (ROD) would be issued for each operationally independent section that is identified along the 75 mile corridor. The FEIS does not place any restrictions on the phasing for construction purposes for the operationally independent sections. As an operationally independent section is advanced, the environmental analysis in the FEIS would be updated as necessary and, provided that the section has met the transportation planning and air quality requirements, FHWA would issue a ROD for that section. This information was presented at VDOT's

February 2014 federal partnering meeting, and the partners had no objections or substantive comments.

On July 8, 2016, the Richmond Metropolitan Planning Organization amended its Fiscal Year 2015-2018 Transportation Improvement Program to include Section A. The proposed section also was approved for inclusion in the Statewide Transportation Improvement Program on July 13, 2016. Formal action to include funding for construction of the proposed section in the region's Long Range Transportation Plan is scheduled for early October. We are aware that FHWA will not issue a ROD until that action is taken and we will notify your office as soon as the appropriate documentation is available.

This proposed section is approximately five miles with termini located at approximately the I-295 Collector-Distributor Lane Northbound Bridge over I-64, Exit 200 in the west and approximately the Route 33/249 Bridge over I-64, Exit 205 in the east. These locations provide logical termini, and improvements would tie back into the existing facility. The widening is mostly to occur in the median of the existing interstate, avoiding impacts to existing interchanges. Attachment 1 demonstrates the proposed section meets the definition of an operationally independent section. The attachment also documents VDOT's intent to generally widen to the inside median. The attachments also demonstrate that the proposed operationally independent section has met the transportation planning and air quality requirements (Attachment 2).

This Request for Record of Decision (Request) also includes two separate projects that are intended to be implemented at the same time as the proposed section. These projects include extending the acceleration and deceleration lanes at the truck weigh station along the proposed section (UPC 107459) and restriping of the lanes at the western terminus of the proposed section (UPC 107461). Both projects fall within the area analyzed in the FEIS. While these projects would qualify for Programmatic Categorical Exclusions to comply with NEPA, our offices have agreed that they can be included in this Request. The potential impact of these projects is considered in the attachments to support this request.

Given the amount of time that has passed since the approval of the FEIS[1], our offices have concurred that providing this letter and attachments meet the required needs for updated environmental analyses. This Request has been prepared in accordance with the guidance prescribed in the FEIS. While the FEIS assessed environmental consequences at a study corridor level, this Request assesses the environmental consequences resulting from implementing the proposed section to determine if those environmental consequences result in significant environmental impacts not already considered in the FEIS (Attachment 2). Overall, conditions in the study corridor have changed very little since November 2013 when the FEIS was approved. Based on the reviews of existing data, VDOT has concluded that the implementation of the proposed section would not result in additional significant impacts not already considered in the previously approved FEIS.

[1] Previous NEPA documentation is available at http://www.virginiadot.org/projects/hamptonroads/i-64_peninsula_study.asp .

Funding has been identified for the project. With this submission, VDOT is requesting a Record of Decision for this operationally independent section from FHWA. If you have any questions or need any further information, please contact Scott Smizik at 804-371-4082 or by email at Scott.Smizik@VDOT.Virginia.gov.

Thank you for your attention to this matter.

Sincerely,
VIRGINIA DEPARTMENT OF TRANSPORTATION

Angel D. Deem
VDOT Environmental Division Director

cc: John Simkins, FHWA
Cheng Yan, FHWA
Robert Cary, VDOT
Jason Williams, VDOT
Palmer Stearns, VDOT
Scott Smizik, VDOT

Attachments

1) Description of the Proposed Section
2) Issues Evaluation Checklist
3) Indirect and Cumulative Effects Analysis
4) Relevant Communication Following the FEIS
5) Figures

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Attachment 1: Description of the Proposed Section

This proposed section is approximately five miles with termini located at approximately the I-295 Collector-Distributor Lane Northbound Bridge over I-64, Exit 200 in the west and approximately the Route 33/249 Bridge over I-64, Exit 205 in the east. These locations provide logical termini, as improvements will tie back into the existing facility. The widening is mostly to occur in the median of the existing interstate, avoiding impacts to existing interchanges.

This section also meets the definition of an operationally independent section. As noted in the FEIS and defined in FHWA guidance *Operational Independence and Non-concurrent Construction*, an operationally independent section can be built and function as a viable transportation facility even if the rest of the work described in the FEIS is never built. The proposed improvements would add one (1) additional general purpose lane eastbound and one (1) additional general purpose lane westbound to I-64. This would achieve a partial build condition recommended in the FEIS. The full build condition recommended in the FEIS includes two (2) additional lanes eastbound and one (1) additional lane westbound.

These recommendations are based on analysis included in the Traffic Technical Report associated with the FEIS, which found the need for one additional lane to be added to the majority of the overall study corridor, with the termini in more urbanized areas requiring additional capacity. Outside of these urbanized areas, the need for a second additional eastbound lane is limited to the proposed section. This section would contribute to this defined need by adding the required capacity within the limits of the section before transitioning transition back into existing mainline conditions. To further fulfill the definition of an operationally independent section, the environmental commitments made in the FEIS, specifically those documented in Appendix L, would be adhered to for this section.

VDOT proposes to generally widen the interstate to the inside median. During early coordination regarding the proposed section, the U.S. Army Corps of Engineers (USACE) supported the plan to widen to the median to reduce impacts to resources under its purview. Widening to the inside of the median was selected for the proposed section based on the following:

- Reduces property impacts; and,
- Reduces impacts to natural and cultural resources.

The proposed section also includes two separate projects that are intended to be implemented at the same time as the proposed section. These projects include extending the acceleration and deceleration lanes at the truck weigh station along the proposed section (UPC 107459) and restriping of the lanes at the western terminus of the proposed section (UPC 107461). Both projects fall within the area analyzed in the FEIS. While these projects would qualify for Programmatic Categorical Exclusions to comply with NEPA, FHWA and VDOT have agreed that they can be included in this Request for Record of Decision for the proposed section. The potential impact of these projects is considered in the attachments to support this request.

The following actions have been taken to include this proposed section in the appropriate planning documents:

1) July 8 2016 – the Richmond Regional Transportation Planning Organization Transportation Improvement Program is amended to include the proposed section.
2) July 13, 2016 – the Statewide Transportation Improvement Program is amended to include the proposed section.
3) October 6, 2016 – the Long Range Transportation Plan is scheduled to be formally updated to include construction funding for the proposed section.

Attachment 2: Issues Evaluation Checklist

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Transportation				
Traffic Volumes/Patterns/Time	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	Implementation of the proposed section would improve traffic conditions and would contribute to the purpose and need of the FEIS. More detailed traffic analysis would be developed as part of the final design to confirm LOS C would be achieved. See Attachment 1 for updates to transportation planning documents.
Transportation Plan	☐ Yes ☒ No ☐ N/A			
Socioeconomics and Land Use				
Land Use Conversion	☒ Yes ☐ No ☐ N/A	Review of previous NEPA documentation, aerial photo mapping, planning corridor drawings for the proposed section, and Henrico County and New Kent County Comprehensive Plans.	No	Land use has not changed within the study area that extends 500 feet from existing pavement. Land use along the corridor relatively undeveloped with some low-density residential development occurring in the central portion of the proposed section. A truck weigh station also is located on both the eastbound and westbound sides of the interstate in the central portion of the proposed section. Impacts under the proposed section are anticipated to be less than those assumed for the full build in the FEIS for this portion of the corridor.
Development	☒ Yes ☐ No ☐ N/A		No	No new developments have occurred along the proposed section since the completion of the FEIS. Zoning along much of the proposed section limits future development.
Consistent with Area's Comprehensive Plan	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The New Kent County Comprehensive Plan (2012) documents planned widening of the interstate, specifically the proposed section. The Henrico County Comprehensive Plan (2009) does not identify proposed improvements on non-county roads. Neither plan has been updated since the publication of the FEIS.
Populations	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The 2010 Census documented a 2010 population of 18,492 in New Kent County and 306,935 in Henrico County. The proposed section passes through one of the three Census Tracts that fall within the 500-foot planning corridor that runs through New Kent County. The proposed section passes through two of the eight Census Tracts that fall within the 500-foot planning corridor that runs through Henrico County. See Attachment 3 for more details on populations.

[2] New information consists of data that was not included in the FEIS. This may include new information or the presentation of data for the proposed section that was not discussed in the FEIS.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Emergency Services	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	There are no emergency service facilities located within the 500 foot planning corridor considered in the FEIS. As projected in the FEIS, improvements to the proposed section could assist in improving response times for emergency services.
Potential Relocations	☒ Yes ☐ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	Yes – Impacts in the FEIS were defined for the length of the corridor. For this Request, VDOT has focused on those properties identified in the FEIS that are located within the proposed section.	The FEIS reported 214 residential, 80 business, and 11 rural impacted parcels within the 500-foot buffer for the preferred alternative. This assumed widening to the outside. By widening to the inside, these figures were reduced to 212 residential, 80 business, and 11 rural impacted parcels. Within the proposed section, the FEIS identified 5 residential parcels (0 structures), 1 Central Business District (0 structures), and 2 rural parcels (0 structures) that could be impacted by the proposed section. These impacts are conservative and anticipated to change upon the development of detailed project design. Impacts under the proposed section also are anticipated to be less than those assumed for the full build in the FEIS for this portion of the corridor. As project design advances, and the right-of-way impacts are better understood, VDOT will develop a detailed relocation plan for all displaced residents, businesses, and non-profit organizations. The acquisition of property and any necessary relocations will be conducted in accordance with all applicable federal laws, regulations and requirements, including but not limited to 23 CFR §710, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended and its implementing regulations found in 49 CFR §24. All persons displaced on federally-assisted projects will be treated fairly, consistently, and equitably so that they do not experience disproportionate effects as a result of projects that are designed for the benefit of the public as a whole. VDOT will provide relocation resources to all residences, businesses, and non-profit organizations potentially impacted by the proposed improvement without discrimination in accordance with current VDOT Right-of-Way Manual procedures.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Environmental Justice Populations	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The proposed section passes through census tracts with environmental justice populations that are higher than that of the surrounding jurisdiction. As noted in the FEIS, the proposed general purpose lanes would be constructed along an existing corridor and, as such, improvements are not expected to have a disproportionately high and adverse effect on minority or low-income populations. The additional lanes would be constructed in the median, thereby minimizing any impacts on Environmental Justice populations as compared to constructing lanes on the outside of the existing roadway. The potential property impacts described above, as well as the construction impacts discussed later in this attachment, would impact environmental justice populations. The proposed improvements would be focused on an existing interstate that is bound by existing residential communities. As widening would occur primarily to the median, these impacts would not be disproportionately high or represent adverse effects to minority and low-income populations. See Attachment 3 for additional information on environmental justice populations.
Farmlands	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The EIS assumes no new right of way within this segment. Therefore, there would be no impact to Prime Farmland or Farmland of Statewide Importance as a result of adding an additional lane in each direction. Final impacts to these resources would be determined through final design.
Energy				
Energy	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	As stated in the FEIS, traffic volumes and capacity are projected to result in increased traffic on I-64. However, much of that is expected to be traffic that would still exist under the No-Build conditions because traffic would use other roads to avoid a severely congested I-64. The total amount of vehicles, and vehicle-miles traveled, in the region would not substantially change. In addition, the capacity of I-64 would be improved. Therefore, there would be less idling and/or reduced speeds for drivers on I-64, which in turn would result in less fuel being burned during their trip as compared to the No-Build conditions.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Air Quality				
Air Quality Criteria	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	There have been no changes to air quality criteria since the publication of the FEIS.
Conformity	☐ Yes ☒ No ☐ N/A	Review of regional financially constrained long-range transportation plans.	No	The region is in attainment of the national ambient air quality standards (NAAQS) for all criteria pollutants. Transportation conformity requirements therefore do not apply.
Air Quality Impacts	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	Yes – regulations have been modified since the publication of the FEIS.	Effective April 6, 2015, with the revocation (80 FR 12264) by EPA of the 1997 national ambient air quality standards (NAAQS) for ozone, the region is in attainment of the NAAQS for all criteria pollutants. Transportation conformity requirements, which previously applied for the region as it was in maintenance for the 1997 ozone standard, no longer apply.
Regional Compliance with the PM Standards	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The study area is located in Attainment Area for PM_{10} and $PM_{2.5}$ NAAQS.
Regional Compliance with the Ozone Standards	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The study area is located in an Attainment Area for ozone.
Air Toxic Analysis	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The results of the analysis completed for the FEIS are consistent with the national mobile source air toxics (MSAT) emission trends as predicted by MOVES 2010B from 1999-2050. The results of the analysis indicate that no meaningful increases in MSAT have been identified and are not expected to cause an adverse effect on the human environment.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Noise				
Noise Criteria Existing Noise Conditions Noise Impacts	☐ Yes ☒ No ☐ N/A ☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	Yes – Impacts in the FEIS were defined for the length of the corridor. For this Request, VDOT has focused on those properties identified in the FEIS that are located within the proposed section.	Individual receptor sites that exceeded the Noise Abatement Criteria (NAC) were documented in the FEIS and are assumed to remain the same for the purposes of this Request. The FEIS identified a total of 26 residences that would be impacted in the proposed section by the maximum decibel level that would be produced at the design year under full build conditions (2040). The analysis identified feasible but not reasonable barriers along the proposed section. These mitigation measures would be further analyzed and incorporated into the final design of the proposed section, as appropriate.
Natural Resources				
Wildlife and Wildlife Habitat	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	Yes – Impacts in the FEIS were defined for the length of the corridor. For this Request, VDOT has focused on those properties identified in the FEIS that are located within the proposed section.	As reported in the FEIS, the proposed section consists of widening along an existing corridor in a developed area. Therefore, the proposed activities would not affect any substantial forest resource and impacts to terrestrial habitat would be limited to the displacement of small sections of remaining, often disjunct, non-contiguous tracts of forests within the existing median of I-64. The existing interstate highway poses a barrier to wildlife movements that would not be substantially altered. The extension of culverts could lead to the direct loss of fish and macroinvertebrates within the construction zone and would permanently alter the available habitat in the impacted areas. However, these areas would likely be colonized again, following the construction activities. Impacts assumed in the FEIS would be less than those realized under the proposed section, as it does not achieve the full build condition.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Threatened and Endangered Species and Critical Habitat	☒ Yes ☐ No ☐ N/A	Review of previous NEPA documentation, planning corridor drawings for the proposed section, and online review of U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Consultation (IPaC) system.	No	To meet the commitments outlined in Appendix L of the FEIS, the USFWS IPaC was consulted to document any threatened or endangered species along the proposed section. As illustrated in Attachment 4, the swamp pink (*Helonias bullata*) may occur along the proposed section. The FEIS states that the only known location the swamp pink may exist within the study area is near Broadwater Creek. Impacts assumed in the FEIS would be less than those realized under the proposed section, as it does not achieve the full build condition. This creek is not located within or adjacent to the proposed section. All required survey and Section 7 coordination regarding the swamp pink would occur prior to construction. The findings of this coordination are not anticipated to alter FHWA's anticipated NEPA decision. In addition, the northern long-eared bat (*Myotis septentrionalis*) may occur along the corridor. This species was not federally listed when the FEIS was published. On January 14, 2016, the U.S. Fish and Wildlife Service (USFWS) published a rule under Section 4(d) of the Endangered Species Act. Coordination for the norther long-eared bat will be conducted with USFWS under this rule. The findings of this coordination are not anticipated to alter FHWA's anticipated NEPA decision. All coordination would occur prior to construction.
Wildlife and Waterfowl Refuges	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	No federal or local wildlife refuges exist within or adjacent to the proposed section.
Surface Waters	☒ Yes ☐ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	Yes	The proposed section is located in the Lower James River basin. The existing interstate includes three water crossings within this section: Boar Swamp, Higgins Swamp, and the Chickahominy River. The crossings are located in the western half of the proposed section. Impacts to these resources would be reduced and/or avoided through the implementation of required erosion and sediment control structures and stormwater management best management practices. Impacts assumed in the FEIS would be less than those realized under the proposed section, as it does not achieve the full build condition.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Public Water Supply	☐ Yes ☒ No ☐ N/A		Yes – Impacts in the FEIS were defined for the length of the corridor. For this Request, VDOT has focused on those properties identified in the FEIS that are located within the proposed section.	The FEIS did not identify any public water supplies within or adjacent to the proposed section.
Submerged Aquatic Vegetation	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and VIMS interactive SAV map	No	There is no submerged aquatic vegetation within the proposed section.
Floodplains	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS identified 100-year floodplains along Boar Swamp, Higgins Swamp, and the Chickahominy River. Impacts assumed in the FEIS would be less than those realized under the proposed section, as it does not achieve the full build condition.
Wetlands	☒ Yes ☐ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	Yes – Impacts in the FEIS were defined for the length of the corridor. For this Request, VDOT has focused on those properties identified in the FEIS that are located within the proposed section.	Within the proposed section, current estimates suggest the potential for 2,155 linear feet of stream impacts and 6.75 acres of wetland impacts. These impacts would be avoided and/or minimized during the design and permitting stages that would occur prior to construction. Impacts assumed in the FEIS would be less than those realized under the proposed section, as it does not achieve the full build condition.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Visual Quality				
Visual and Aesthetics	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	Yes – Impacts in the FEIS were defined for the length of the corridor. For this Request, VDOT has focused on those properties identified in the FEIS that are located within the proposed section.	Implementation of the proposed section would include basic improvements along an existing interstate highway functioning at capacity. As documented in the FEIS, the visual effects are expected to be minimal. The view of the interstate and from the interstate would not be dramatically altered since viewers already see the existing interstate. The introduction of new sound barriers could alter some views and widening to the median would result in the partial removal of established stands of trees.
Historic Properties				
Architectural Resources	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	Savage's Station Battlefield (DHR 043-0308; VA019) and Cold Harbor Battlefield (042-5017; VA062) occupy much of the property surrounding the proposed section. As documented in the FEIS, the Virginia Department of Historic Resources (DHR) has concurred that there would be no adverse effect to this resource under the Preferred Alternative.
Archaeological Resources	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS also identified six (6) archaeological sites within or adjacent to the proposed section. DHR concurred that these properties were either not eligible or potentially eligible for listing in the National Register of Historic Places. These sites would be addressed through the commitments made in the Programmatic Agreement (PA), included in the FEIS, prior to construction. The PA acknowledges that studies and consultation with the SHPO have been completed for buildings, structures, nonarchaeological districts, and objects meeting the criteria for listing on the NHPR; however, to address outstanding issues associated with archaeological resources, the PA sets forth a process whereby survey, assessment, and possible treatment of areas within the corridor would occur. VDOT is currently conducting an archaeological investigation of the land contained within the proposed section. DHR has concurred that any archaeological sites that may be present within the proposed section would be important chiefly for the information they contain.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Section 4(f) Resources				
Section 4(f)	☒ Yes ☐ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS identified the potential use of the Cold Harbor Battlefield within proposed section. As documented in the FEIS, DHR concurred that the improvements would have no adverse effect to this resource. DHR also concurred with the potential de minimis finding under Section 4(f).
Contaminated Sites				
Hazardous Waste Sites	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS did not identify any contaminated sites within or adjacent to the proposed section.
Indirect & Cumulative Impacts				
Socioeconomic Impacts	☒ Yes ☐ No ☐ N/A			See Attachment 3
Natural Resource Impacts	☒ Yes ☐ No ☐ N/A			See Attachment 3
Construction Impacts				
Construction & Operations Employment	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The Richmond Regional Transportation Planning Organization has programmed funding into its constrained long-range transportation plan for the proposed section. This level of investment is anticipated to have measurable benefit to construction and operations employment.
Air Quality	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS provides specific guidance to help minimize potential construction-related air quality and this guidance will be adhered to for the implementation of the proposed section.
Noise	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS provides specific guidance to help minimize potential construction-related noise and this guidance will be adhered to for the implementation of the proposed section.
Water Quality	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS provides specific guidance to help minimize potential construction-related water quality and this guidance will be adhered to for the implementation of the proposed section.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Maintenance & Control of Traffic	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS provides specific discussions of maintenance of traffic, include a maintenance of traffic plan, public communications plan, and transportation operations plan. This guidance will be adhered to for the implementation of the proposed section.
Health & Safety	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS recommends that the maintenance of traffic plan be designed to provide for the health and safety of the public and construction workers.
Pollution Control	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	Appendix H of the FEIS documents VDOT's commitments to pollution control.
Permits				
Section 404 Permits	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS suggests these permits may be required and this assumption remains valid for the proposed section. Permits would be obtained during the final design process. There is reasonable assurance that the Section 404 permit will be obtained based on 1) the U.S. Army Corps of Engineers supporting Alternative 1 in their comments on the FEIS, and 2) their lack of objections at the February 12, 2014 partnering meeting. According to Virginia Department of Game and Inland Fisheries mapping, there are no navigable waters within or immediately adjacent to the proposed section Therefore, Section 10 and/or Coast Guard permits are not anticipated.
Section 10 Permits	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	
Virginia Water Protection Permit	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	
Subaqueous Bed Permit	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Coast Guard Permit	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	
Coastal Barriers & Coastal Zone	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and DEQ web site.	No	The proposed section is located within the Virginia Coastal Zone. As stated in the FEIS, compliance with coastal zone requirements would be accomplished through the Joint Permit Application process.
Mitigation Measures				
Relocations	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	As discussed above, the FEIS identified 5 residential parcels (0 structures), 1 Central Business District (0 structures), and 2 rural parcels (0 structures) that could be impacted by the proposed section.. All relocations and real property acquisition would be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended and its implementing regulations found in 49 CFR §24. 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 who are displaced without discrimination.
Farmlands	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	No Prime Farmland or Farmland of Statewide Importance exist within the area of potential right of way for the proposed section.
Noise	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS identified feasible and reasonable barriers that would mitigate a high percentage of the predicted noise impacts. The noise analysis is considered preliminary, and mitigation decisions will be reconsidered in the design phase when better geometric data becomes available.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Threatened & Endangered Species	☐ Yes ☐ No ☒ N/A	Review of previous NEPA documentation, planning drawings for the proposed section, and online review of USFWS IPaC system.	No	Based on current site conditions and project plans, coordination with the U.S. Fish and Wildlife Service would be required to determine if habitat surveys were required for the swamp pink and/or the northern long-eared bat
Floodplains	☐ Yes ☐ No ☒ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	The FEIS identified 100-year floodplains adjacent to the western terminus of the proposed section.
Wetlands	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	Wetland permits and mitigation are anticipated. The mitigation measures for stream and wetland impacts would be determined as part of the permitting process during final design in consultation with the regulatory agencies. The current compensatory mitigation to impact ratios for non-tidal forested, scrub-shrub and emergent wetlands are 2:1, 1.5:1 and 1:1, respectively. The typical compensatory mitigation to impact ratio for tidal emergent wetlands is 2:1.
Water Quality	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	Stormwater management facilities will be designed in accordance with specifications set forth in Section 3.14 of the Virginia Erosion and Sediment Control Handbook (1992) and VDOT's Annual Erosion and Sediment Control and Stormwater Management Standards and Specifications, as approved by VDCR.
Aquatic Resources	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	Wetland permits and mitigation are anticipated. The mitigation measures for stream and wetland impacts would be determined as part of the permitting process during final design in consultation with the regulatory agencies. The current compensatory mitigation to impact ratios for non-tidal forested, scrub-shrub and emergent wetlands are 2:1, 1.5:1 and 1:1, respectively. The typical compensatory mitigation to impact ratio for tidal emergent wetlands is 2:1. VDOT will minimize effects to aquatic resources by following Best Management Practices (BMPs) and implementing appropriate erosion and sediment control practices in accordance with VDOT’s Road and Bridge Specifications, state, and local regulations.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Historic Properties	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	Savage's Station Battlefield (DHR 043-0308; VA019) and Cold Harbor Battlefield (042-5017; VA062) occupy much of the property surrounding the proposed section. As documented in the FEIS, the Virginia Department of Historic Resources (DHR) has concurred that there would be no adverse effect to this resource under the Preferred Alternative The FEIS also identified six (6) archaeological sites within or adjacent to the proposed section. DHR concurred that these properties were either not eligible or potentially eligible for listing in the National Register of Historic Places. These sites would be addressed through the commitments made in the Programmatic Agreement (PA), included in the FEIS, prior to construction. The PA acknowledges that studies and consultation with the SHPO have been completed for buildings, structures, nonarchaeological districts, and objects meeting the criteria for listing on the NHPR; however, to address outstanding issues associated with archaeological resources, the PA sets forth a process whereby survey, assessment, and possible treatment of areas within the corridor would occur. VDOT is currently conducting an archaeological investigation of the land contained within the proposed section. DHR has concurred that any archaeological sites that may be present within the proposed section would be important chiefly for the information they contain.
Hazardous Waste Sites	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	Any additional hazardous materials discovered during construction of the proposed section or during demolition of existing structures will be removed and disposed of in compliance with all applicable federal, state, and local regulations. All necessary remediation would be conducted in compliance with applicable federal, state, and local environmental laws and would be coordinated with the EPA, the DEQ, and other federal or state agencies as necessary. The selection of mitigation measures for specific sites would include avoidance and/or minimization of impacts through redesign or alignment shift, and remediation/closure by responsible parties prior to state acquisition of contaminated properties.

Issue/Resource	New Information?[2]	Method of Review	Have the Impacts Changed?	Comment
Maintenance & Control of Traffic	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	Maintenance of traffic along the interstate and existing secondary routes is a part of final design and will be duly considered by VDOT.
Pollution Control	☐ Yes ☒ No ☐ N/A	Review of previous NEPA documentation and planning corridor drawings for the proposed section.	No	Appendix H of the FEIS documents VDOT's commitments to pollution control.

Attachment 3: Indirect and Cumulative Effects Analysis

Appendix L of the FEIS includes a commitment to review and update the systematic process utilized to analyze indirect and cumulative effects in the Final Environmental Impact Statement (FEIS). This attachment to the Request is designed to satisfy this commitment.

Indirect Effect Analysis

The indirect effect analysis was conducted in accordance with the *Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects*, (National Cooperative Highway Research Program (NCHRP), Report 466, 2002). This report specifies an eight-step process for determining indirect effects and used as a guide to assess the potential for indirect effects for this Request. The eight steps followed are:

1) Initial Scoping
2) Identify Study Area Direction and Goals
3) Inventory Notable Features
4) Identify Impact-Causing Activities
5) Identify Potentially Significant Indirect Effects for Analysis
6) Analyze Indirect Effects
7) Evaluate Analysis Results

These steps, and the actions taken to fulfill these requirements, are described below.

1) Initial Scoping

The first step in the indirect effects analysis includes the initial scoping activities and the identification of the study area in order to set the stage for the remaining steps. An extensive scoping process was undertaken at the onset of the EIS. Given the limited time that has passed since the publication of the FEIS, and the fact that the proposed section is within the corridor of the Preferred Alternative in the FEIS, no formal scoping was necessary for this Request.

As part of the scoping process for the EIS, the study areas for each resource/feature were proposed in order to analyze a full range of potential direct and also indirect effects. Descriptions of the scoping process and the scoping meetings that were held with the resource and regulatory agencies along with the public can be found in the FEIS. In addition, in accordance with the FEIS Coordination Plan, participating agencies were given the opportunity to comment on the impact methodologies during the scoping process and none of them submitted any comments on the indirect or cumulative effect analysis impact methodologies.

Socioeconomic study areas were established to analyze neighborhoods and community facilities; environmental justice; displacements and relocations; economic activity; land use; and parks, recreation areas and open space within the proposed section. The socioeconomic study area for this Request is made up of the census tracts that border the proposed section.

Multiple resource boundaries were reviewed to assess the effects the proposed section would have on natural and physical resources. Based on readily available data from federal, state and local sources, the resources were analyzed to determine the potential for indirect effects created by the proposed section. The resources include: Waters of the United States including wetlands; surface and groundwater supply; floodplains, threatened and endangered species; wildlife and habitat; historic properties; and Section 4(f) resources. The study area for indirect effects to these resources also extends beyond the direct impact study area, in order to identify impacts occurring “downstream” from the proposed section.

2) Identify Study Area Direction and Goals

This second step in the indirect effects analysis focuses on assembling information regarding general trends and goals within the study area. The trends and goals in question are independent of the proposed transportation project and typically concern social, economic, ecological, and/or growth-related issues.

According to the NCHRP Report 466, evidence indicates that transportation investments result in major land use changes only in the presence of other factors. These factors include supportive local land use policies, local development incentives, availability of developable land, and a good investment climate. An understanding, therefore, of community goals, combined with a thorough knowledge of demographic, economic, social, and ecological trends is essential in understanding the dynamics of project-influenced changes in development location. Later in the process, it will be important to compare study area goals with potential impacts. Conflict between impacts and goals is a key determinant of impact significance and an indicator of effects that merit further analysis. The following sections describe the proposed section, along with the existing and planned land use in the immediate areas in order to provide insight as to the direction and goals for the area.

a. Proposed Section

The proposed section is approximately five miles with termini located at approximately Exit 200 (Interstate 295) in the west and at approximately Exit 205 (Bottoms Bridge) in the east (Attachment 1).

In addition to possessing logical termini, this section also meets the definition of an operationally independent section. As noted in the FEIS and defined in FHWA guidance *Operational Independence and Non-concurrent Construction*[3], an operationally independent section can be built and function as a viable transportation facility even if the rest of the work described in the FEIS is never built. The proposed improvements would add one (1) additional general purpose lane eastbound and one (1) additional general purpose lane westbound to I-64. While this would note achieve the full build as documented in the FEIS (Attachment 5), it would contribute to the purpose and need of the study. To further fulfill the definition of an operationally independent section, the environmental commitments made in the FEIS, specifically those documented in Appendix L, would be adhered to for this section.

b. Demographics

Due to changes in Census boundaries in the last couple of decades, information is unavailable to provide a detailed history of population in the socioeconomic study area. Table 1 provides a summary of the historic population changes in the socioeconomic study area and the surrounding area. Between 1990 and 2010, the New Kent County population increased by approximately 76%, while the Henrico County populations increased by approximately 41%. This trend reveals that the rural areas are growing more quickly than the suburban areas, which are already more densely developed. The estimated population growth illustrated in Table 2 further supports this finding.

[3] http://www.fhwa.dot.gov/ipd/project_delivery/resources/operational_construction/guidance_operational_independence.htm.

Table 1: Historic Population Trends, 1990-2010				
Area	**1990**	**2000**	**2010**	**Percent Change from 1990 to 2010 (%)**
New Kent County	10,445	13,462	18,429	76.4
Henrico County	217,881	262,300	306,935	40.9
Socioeconomic Study Area	**N/A**	**N/A**	**5,282**	**N/A**
Virginia	6,187,358	7,079,030	8,001,024	29.3
United States	248,709,873	281,421,906	308,745,538	24.1

Table 2: Projected Population, 2010-2030				
Area	**2010**	**2020**	**2030**	**Percent Change from 2010 to 2030 (%)**
New Kent County	18,429	23,671	29,496	60.1
Henrico County	306,935	339,703	379,041	23.5
Socioeconomic Study Area	**5,282**	**5,903***	**6,523***	**23.5**
Virginia	8,001,024	7,079,030	9,825,019	29.3
United States	308,745,538	281,421,906	363,584,435	24.1

* Extrapolated from Henrico County data by using same percent change between each decade. Henrico County data was used as it represents a larger population and a more conservative percent growth. .

c. Employment

As reported in the FEIS, the main industries in socioeconomic study area are listed in Table 3.

Table 3: Major Employers	
Area	**Employers**
New Kent County	New Kent County School Board; County of New Kent; AHS Cumberland Hospital
Henrico County	Henrico County School Board; Capital One Bank; County of Henrico; Bon Secours Richmond Health System; Anthem

d. Land Use Patterns and Plans

The counties' respective comprehensive plans identify land uses within the study area. The New Kent County Future Land Use map[4] identifies conservation and environmental buffer areas along the central portion of the proposed section. Near the eastern terminus, the proposed section is bordered by lands

[4] http://www.co.new-kent.va.us/DocumentCenter/View/762

identified for commercial use and/or economic opportunity. The Henrico County Future Land Use map[5] identifies the area around the western terminus of the proposed section as being set aside for open space and environmental protection areas. An area of commercial concentration is located just south of the proposed section. The remainder of the proposed section that falls within Henrico County is surrounded by lands designated for suburban residential or prime agriculture.

e. Environmental Regulations

There are many federal regulations intended to protect, enhance, and/or rehabilitate the natural and human environments. A number of the most pertinent regulations are summarized below.

Section 404, Clean Water Act: Section 404 regulates the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other U.S. waters. The United States Army Corps of Engineers is the federal agency authorized to issue Section 404 Permits for certain activities conducted in wetlands or other U.S. waters. The proposed section will most likely require a Section 404 permit. This permit would require the discussion of the measures employed throughout planning and design in order to avoid/minimize effects to "Waters of the U.S." The Section 404 permit application also could include a compensatory mitigation proposal, which outlines the plan to provide compensation to offset permanent losses of Waters of the U.S.
Coastal Zone Management Act: This act preserves, protects, develops, and (where possible) restores and enhances resources of the coastal zone. It is applicable to all projects significantly affecting areas under the control of the State Coastal Zone Management Agency for which a plan is approved. Projects must comply with federal consistency regulations, management measures, and the appropriate approved state plan for Coastal Zone Management Programs. The proposed section is located within the Coastal Zone.

Safe Drinking Water Act: Ensures public health and welfare through safe drinking water. The Safe Drinking Water Act regulates actions which may have a significant impact on an aquifer or wellhead protection area which is the sole or principal drinking water.

National Historic Preservation Act: Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of their actions on districts, sites, buildings, structures, and objects significant in American architecture, archeology, and culture. It also requires that the Advisory Council on Historic Preservation be given an opportunity to comment.

State

The Commonwealth of Virginia has a series of environmental plans that are implemented at both the state and local levels. These include:

Waste Management: The Division of Land Protection and Revitalization (DLPR) is responsible for implementing the Virginia Waste Management Act, as well as meeting Virginia's Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) obligations as mandated by federal policy. Under these directives, the DLPR regulates solid and hazardous waste; oversees cleanup of contaminated sites; facilitates revitalization of environmentally distressed properties; monitors groundwater resources; conducts inspections of aboveground and underground storage tank systems; etc.

Air Pollution: The Department of Environmental Quality's Air Division oversees implementation of the Virginia Air Pollution Control Law, as well as ensuring federal obligations of the Clean Air Act are met.

[5] http://henrico.us/pdfs/planning/2026plan/maps/2026-flumap.pdf

These two regulations ensure that projects conform to state and federal requirements, covering things such as industrial facilities and mobile sources (vehicle emissions).

Stormwater Management: Virginia's Stormwater Management Program requires that erosion and sediment control, as well as stormwater, be controlled during land disturbing activities and that appropriate permits be acquired. While the State provides oversight, erosion and sediment control permits are typically administered by the local municipality, and stormwater permits are administered by the Virginia Department of Environmental Quality.

3) Inventory Notable Features

The environmental screening conducted as part of this Request can be used as a tool to identify notable features, or specific valued, vulnerable, or unique elements of the environment. The study area contains notable human and natural environment features that were inventoried and described in more detail in the FEIS. The objective of this step of the process is to identify specific environmental issues within the indirect effects analysis study area against which the proposed section may be assessed. The following sections discuss the notable features that were identified as part of this Request.

a. Socioeconomics and Land Use

Neighborhoods and Community Facilities

Neighborhoods are present in various locations within the socioeconomic study area. The FEIS identified the Antioch Baptist Church south of the proposed section.

Environmental Justice

Based on 2010 Census data, none of the census tracts in the socioeconomic study area have a minority population of 29% or greater[6]. None of the census tracts within the study area had a median household income below the U.S. Department of Health and Human Services poverty guidelines for 2013 ($23,550).

b. Natural Resources

Waters of the United States, Including Wetlands

The FEIS *Natural Resources Technical Memorandum* is the source of information for the natural resources identified in this Request. The proposed section is located in the Lower James River basin. The existing interstate includes three water crossings within this section: Boar Swamp, Higgins Swamp, and the Chickahominy River.

A number of wetlands and non-tidal and tidal surface water systems (including both wetlands and stream channels) are located along the study area, as well. Additional detail on these resources is provided in Attachment 2 of this Request.

Water Quality

The FEIS did not identify any impaired waters within or adjacent to the proposed section.

Floodplains

The FEIS identified 100-year floodplains along Boar Swamp, Higgins Swamp, and the Chickahominy River.

[6] 2012 Census data indicates that 29% of Virginia's population identifies as minority

Threatened and Endangered Species
To meet the future commitments outlined in Appendix L of the FEIS, the USFWS IPaC was consulted to document any threatened or endangered species along the proposed section. As illustrated in Attachment 4, the swamp pink (*Helonias bullata*) may occur along the proposed section. In addition, the northern long-eared bat (*Myotis septentrionalis*) may occur along the corridor. This species was federally listed after the publication of the FEIS.

c. Section 4(f) Resources

The FEIS identified the potential use of the Cold Harbor Battlefield within proposed section. As documented in the FEIS, DHR concurred that the improvements would have no adverse effect to this resource. DHR also concurred with the potential de minimis finding under Section 4(f).

4) Identify Impact Causing Activities

Steps 2 and 3 of the indirect effects analysis focus on the identification of trends, goals, and notable features. The next steps involve identification and assessment of impacts that may come into conflict with these goals and features. Gaining an understanding of project design features and the range of impacts they may cause is the first step toward the identification of indirect effects. Project impact-causing activities are relevant to two of the three types of indirect effects identified in the *Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects*, (NCHRP, Report 466, 2002):

1. Encroachment-Alteration Effects – Effects that alter the behavior and functioning of the physical environment are related to project design features but are indirect in nature because they can be separated from the project in time or distance.

2. Access-Alteration Effects (Project-Influenced Effect) – Changes in traffic patterns and the alteration of accessibility attributable to the design of the project can influence the location of residential and commercial growth in the study area.

Induced growth-related effects, the third type of indirect effect, are attributable to induced growth itself not project design features.

An assessment of known project design features and their impact-causing activities has been included in Table 4; additional features and activities may be identified and refined during final design. The terms included in these columns come from similar listings in the *Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects*, (NCHRP, Report 466, 2002).

Table 4: Impact-Causing Activities and Design Features			
Impact-Causing Activities*	**Design Features***	**Present? (Yes/No/ Unknown)**	**If Yes, General Types of Impacts**
Modification of Regime	Introduction of Exotic Flora	No	
	Modification of Habitat	No	
	Alteration of Ground Cover	Yes	Groundcover within the proposed section, including the areas within the interchange improvements, would be removed to accommodate the construction of the proposed section. The precise areas and limits of removal would be determined in the final design phase of the proposed section
	Alteration of Groundwater Hydrology	No	
	Alteration of Drainage	Yes	Additional impervious areas would be created due to the additional roadway/shoulder area and drainage patterns may be altered but would be designed in accordance with VDOT's Road and Bridge Specifications and VDOT's Erosion and Sediment Control Plan
	River Control and Flow Modification	No	
	Channelization	Yes	Channelization of water resources may be necessary to accommodate the proposed section construction and would be designed in accordance with VDOT's Road and Bridge Specifications; mitigation would be approved by the resource and regulatory permitting agencies
	Noise and Vibration	Yes	Noise levels would be altered along proposed section and interchange areas as a result of new roadway and future traffic volumes. A noise assessment was conducted and preliminary abatement measures were evaluated as part of the EIS. A more detailed evaluation would be completed during final design in accordance with VDOT's Highway Traffic Noise Impact Analysis Guidance Manual
Land Transformation and Construction	New or Expanded Transportation Facility	Yes	The widening of the I-64 mainline would be designed in accordance with VDOT's Road and Bridge Specifications
	Service or Support Sites and Buildings	No	
	New or Expanded Service or Frontage Roads	No	

Table 4: Impact-Causing Activities and Design Features			
Impact-Causing Activities*	**Design Features***	**Present? (Yes/No/ Unknown)**	**If Yes, General Types of Impacts**
	Ancillary Transmission Lines, Pipelines and Corridors	No	
	Barriers, Including Fencing	Yes	Barriers and fencing such as limited access fencing and noise abatement barriers would be placed where necessary and would not limit or interfere with the safety of the traveling public
	Channel Dredging and Straightening	No	
	Channel Revetments	No	
	Canals	No	
	Bulkheads or Seawalls	No	
	Cut and Fill	Yes	Cut and fill activities would occur along the proposed section and interchange areas as a result of new roadway. A more detailed evaluation would be completed during final design in accordance with VDOT's Road and Bridge Specifications and VDOT's Erosion and Sediment Control Plan
Resource Extraction	Surface Excavation	Yes	Excavations would be conducted in accordance with VDOT's Road and Bridge Specifications
	Subsurface Excavation	Yes	Excavations would be conducted in accordance with VDOT's Road and Bridge Specifications
	Dredging	No	
Processing	Product Storage	No	
Land Alteration	Erosion Control and Terracing	Yes	Erosion control would be designed in accordance with VDOT's Road and Bridge Specifications and VDOT's Erosion and Sediment Control Plan
	Mine Sealing and Waste Control	No	
	Landscaping	Yes	Landscaping would be designed and implemented in accordance with VDOT's Road and Bridge Specification and would serve to reduce runoff and improve aesthetics along the proposed section.
	Wetland or Open Water Fill and Drainage	Yes	Wetland impacts would occur as a result of proposed section construction within the proposed section and interchange areas. Impacts would be avoided and minimized during the final design phase. Mitigation would be approved by the resource and regulatory permitting agencies.
	Harbor Dredging	No	
Resource Renewal	Reforestation	No	
	Groundwater Recharge	No	

Table 4: Impact-Causing Activities and Design Features			
Impact-Causing Activities*	**Design Features***	**Present? (Yes/No/ Unknown)**	**If Yes, General Types of Impacts**
	Waste Recycling	No	
	Site Remediation	No	
Changes in Traffic (including adjoining facilities)	Railroad	No	
	Transit (Bus)	No	
	Transit (Fixed Guideway)	No	
	Automobile	Yes	As an existing interstate highway, automobile travel would continue within the proposed section. The proposed section would result in improved travel times and automobile movements within the I-64 mainline and at the interchanges
	Trucking	Yes	As an existing interstate highway, truck travel would continue within the proposed section. The proposed section would result in improved travel times and truck movements within the I-64 mainline and at the interchanges
	Aircraft	No	
	River and Canal Traffic	No	
	Pleasure Boating	No	
	Communication	No	
	Operational or Service Charge	No	
Waste Emplacement and Treatment	Landfill	No	
	Emplacement of Spoil and Overburden	Yes	In cut and fill areas with borrow and spoil, there may be changes to the existing topography and natural environment, which would be assessed during the permitting process
	Underground Storage	No	
	Sanitary Waste Discharge	No	
	Septic Tanks	No	
	Stack and Exhaust Emission	No	
Chemical Treatment	Fertilization	Yes	Proper Erosion and Sediment Controls would be utilized in accordance with VDOT's Road and Bridge Specifications in order to minimize runoff of chemicals
	Chemical Deicing	No	

Table 4: Impact-Causing Activities and Design Features			
Impact-Causing Activities*	**Design Features***	**Present? (Yes/No/ Unknown)**	**If Yes, General Types of Impacts**
	Chemical Soil Stabilization	Yes	Proper Erosion and Sediment Controls would be utilized in accordance with VDOT's Road and Bridge Specifications in order to minimize runoff of chemicals
	Weed Control	Yes	Proper weed control measures would be utilized in accordance with VDOT's Road and Bridge Specifications in order to minimize runoff of chemicals
	Pest Control	No	
Access Alteration	New or Expanded Access to Activity Center	No	
	New or Expanded Access to Undeveloped Land	No	
	Alter Travel Circulation Patterns	No	
	Alter Travel Times between Major Trip Productions and Attractions	Yes	Improved travel times would benefit the region and the economy by encouraging travel and tourism
	Alter Travel Costs between Major Trip Productions and Attractions	Yes	Improved travel times would decrease the travel costs, therefore benefiting the region and the economy by encouraging travel and tourism

* The terms included in these columns come from similar listings in the Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects, (NCHRP, Report 466, 2002)

5) Identify Potentially Significant Indirect Effects for Analysis

The objective of this step is to compare the list of project impact-causing actions with the lists of goals and notable features to explore potential cause-effect relationships and establish which effects are potentially significant and merit subsequent detailed analysis (or, conversely, which effects are not potentially significant and require no further assessment). The following describes the potential indirect effects of the implementation of the proposed section on the notable resources/features identified through the previous steps of this analysis.

a. Socioeconomics and Land Use

The proposed section would increase traffic volumes on I-64 due to the increased capacity within the proposed section. The proposed section would not achieve the full build condition recommended in the FEIS but is still anticipated to improve traffic conditions (Attachment 2). Because additional lanes generally would be constructed in the existing median and no new interchanges are proposed as part of the proposed section, improvements are unlikely to induce development. Coordination with New Kent County to support this Request identified the Bottom's Bridge / Quinton area of the County as fastest growing area of New Kent for residential and commercial development. A majority of the property around the exit 205 interchange is zoned Business or Economic Opportunity and public utilities are readily available at the sites. The County has recently approved new commercial development in this area and is currently working on several more

commercial projects in this area. The County also is aware of a major by-right development near the exit 205 interchange that is currently under contract with an unspecified developer. The County believes this development would occur with or without the proposed section, as the development pressure is coming eastward from Richmond. The proposed section is, however, anticipated to have a positive impact on the commercial growth rate in this area as more vehicles will be able to pass along this section of interstate on a daily basis, which the County believes would make Bottom's Bridge area a more attractive location for commercial developers. The County does not anticipate the partial build of the proposed section is would influence development expectations. Henrico County identified the White Oak Technology Park located just south of the proposed section. The industrial park is bounded by U.S. Route 60 to the north, White Oak Swamp/Norfolk Southern Railroad tracts to the south, I-295 to the west, and Elko Road to the east. This 2,278-acre industrial park was established in 1996 and currently has approximately 990 acres available for development. There are currently two facilities under construction within the Park. While the County anticipates that the remaining undeveloped parcels within White Oak Technology Park will eventually be purchased and developed, the improved access and anticipated reduction in congestion resulting from the proposed section may expedite build out of this development. The County does not anticipate that the proposed section would have any impact on Henrico County's proposed land uses as included in the approved 2026 Future Land Use Map. Therefore, there is anticipated unplanned development as a result of the proposed section. Like New Kent County, the County does not believe the partial build of the proposed section would influence development expectations.

Neighborhoods and Community Facilities

Indirect effects on neighborhoods and community facilities are often seen when a project makes important community resources, such as grocery stores, social facilities, schools, or places of worship, less accessible. In this case, the proposed section would be confined to the median of an existing interstate and not physically impact existing interchanges. New Kent County agreed with the findings of the FEIS that improvements to the interstate could reduce regional traffic on local roads, specifically Route 60 and Route 249. The volume of traffic on I-64 today and the associated congestion is already deterring motorists from utilizing the interstate as they travel between Richmond and Williamsburg, and the impact on local / regional roads is only exacerbated when there is an accident on the interstate. Henrico County also agreed with the findings from the FEIS. The County noted this is particularly true along U.S. Route 60. This segment of Route 60 currently is used by motorists diverting off of I-64 (both eastbound and westbound) when the interstate is experiencing heavy traffic and congestion. The County anticipates an additional travel lane in each direction on I-64 will likely reduce this diversion.

Neighborhoods and neighborhood leaders have been and would continue to be provided with opportunities to review and comment on study and design material. FHWA and VDOT held numerous meetings and comment periods throughout the development of the FEIS. Several of these events were held in close proximity to the proposed section. Table 5 lists these opportunities.

None of the comments received during these events expressed concern over neighborhood and community facilities within or adjacent to the proposed section. VDOT will continue to coordinate with New Kent County and Henrico County.

Table 5: Public Involvement Opportunities in Proximity to the Proposed section		
Citizen Information Meeting	March 23, 2011	City Center Conference Room 700 Town Center Drive Newport News
Citizen Information Meeting	April 25, 2012	City Center Conference Room 700 Town Center Drive Newport News
Location Public Hearing	December 11, 2012	Bruton High School 185 East Rochambeau Drive Williamsburg, VA 23188
Location Public Hearing	December 12, 2012	City Center Conference Room 700 Town Center Drive Newport News
Public review and comment on Request for Record of Decision	August – September 2017 (tentative)	VDOT web site and public announcements
Design Public Hearing (tentative)	January 2017 (tentative)	To be determined

Environmental Justice
There are no minority or low-income populations in the Census Tracts surrounding the proposed section.

b. Natural Resources

Waters of the United States, Including Wetlands
Because the Request proposes the widening of an existing interstate, it is anticipated that the proposed section would impact Waters of the United States, including wetlands. Total direct impacts are estimated in Attachment 2 of this Request. Most of the systems being impacted have already been altered and affected by the original construction of the interstate and surrounding development.

As noted in Appendix H of the FEIS, VDOT is committed to meeting stormwater management requirements along the proposed section. By meeting these requirements, indirect impacts to wetlands outside of the area of direct impact should be beneficial, through the reduction in stormwater volume and pollutant loads. Because the proposed section would include widening of existing bridges over wetlands and streams, indirect effects due to shading are possible. While it is possible that the original construction of I-64 years ago may have disrupted hydrology of wetlands and stream systems, it is unlikely that further disruptions in the hydrology of these systems would occur.

Water Quality
Implementation of the proposed section would result in increased impervious surface and subsequent stormwater runoff. However, a number of Stormwater Management (SWM) facilities would be included in the design and VDOT would perform downstream channel improvements to meet the technical criteria Part IIB of the current Virginia Stormwater Management Program Regulations (Section 4VAC50-60-62 et. seq.). The water quality requirements would be addressed by the proposed SWM facilities and offsite nutrient credit purchases. A large portion of the water quantity (channel and flood protection) requirements would be addressed by the SWM facilities (i.e. “controlled” SWM areas). The remaining “uncontrolled” areas flowing directly into the existing receiving channels will be analyzed for downstream erosion and improvements

would be made accordingly. All new and existing pervious and/or impervious areas draining into or through the study area would need to meet the Part IIB requirements. For these reasons, it is anticipated that indirect effects to surface and groundwater resources would be minimal.

Floodplains

Impacts to floodplains could come through the widening of the interstate over these resources. The use of appropriate bridging over these resources would avoid indirect effects to downstream resources during flood events and would not result in the loss of any floodplain resources upstream or downstream of the required crossings.

Threatened and Endangered Species

As noted previously, the swamp pink and the northern long-eared bat may occur along the proposed section. Future coordination with USFWS would be required to determine if these species are present and if they could be impacted by the proposed section.

c. Section 4(f) Resources

The FEIS identified the potential use of the Cold Harbor Battlefield within proposed section. As documented in the FEIS, DHR concurred that the improvements would have no adverse effect to this resource. DHR also concurred with the potential de minimis finding under Section 4(f). As such, implementation of the proposed section would not adversely impact the setting or qualities of the battlefield.

d. Summary

As presented in the analysis completed for Step 5, the proposed section is not expected to make more than minor changes or alterations in the behavior and function of the affected environment caused by the proposed section encroachment or induced growth. The proposed section should experience some growth and development in the study time frame with or without the proposed section, as evidenced by population and employment projections; however, this growth would be consistent with local comprehensive plans. Additionally, only minor changes to traffic patterns and accessibility are anticipated, as I-64 is an existing corridor, no new interchanges are proposed as part of the proposed section and any improvements to I-64 would be largely within the existing right of way.

The indirect effects of the proposed section to natural resources, specifically Waters of the United States, including wetlands and water quality would not be significant. These resources are regulated under permits and/or approval processes by state and federal agencies, therefore limiting the potential for any indirect effects to be allowed to occur without requiring coordination of any impacts or required mitigation to resources. In addition, direct and indirect impacts on resources protected by other environmental laws (e.g., Waters of the United States) would be further assessed and mitigated in the future final design and permitting stages. Overall, based on this analysis, the indirect effects are not considered potentially significant.

6) Analyze Indirect Effects

The objective of this step is to analyze potentially significant effects identified in Step 5 by determining magnitude, probability of occurrence, timing and duration, and degree to which the effect can be controlled or mitigated. As noted in Step 5, no potentially significant effects were identified for the proposed section. Notwithstanding, qualitative techniques were employed to estimate the magnitude of the effects identified in Step 5 and describe future conditions with and without the proposed transportation improvement. Descriptions of future conditions are included in Step 5.

As previously described in Step 5, the potential for growth and land use changes as a result of the proposed section was analyzed. The proposed section is rural or suburban in nature, and the proposed section is not

likely to cause a substantial change in type or intensity of land use. The proposed section should experience growth and development in the study time frame with or without the proposed section, as evidenced by population and employment projections; however, this growth would be consistent with the local comprehensive plan. The implementation of the proposed section is not likely to influence if growth would occur in the I-64 corridor.

As described in Step 5, the indirect effects to natural resources, specifically Waters of the United States, including wetlands; water quality; floodplains; and threatened and endangered species would not be significant. These resources are regulated under permits and/or approval processes by state and federal agencies, therefore limiting the potential for any indirect effects to be allowed to occur without requiring coordination of any impacts or required mitigation to resources.

7) Evaluate Analysis Results

Assessing the magnitude of indirect effects, which was the goal of the previous two steps, involved making several types of assumptions regarding the nature of the impact-causing activities, the nature of the cause-effect relationships, and how the environment would be affected by the impacts. The objective of Step 7 is to evaluate the potential for uncertainty in these assumptions in order to better understand the indirect effects.

However, since no potentially significant indirect effects were anticipated in Step 6, according to NCHRP Report 466, it is not necessary to apply more detailed sensitivity or risk analysis techniques suggested for Step 7, even if detailed techniques have been used in other steps in the analysis. The key criteria in assessing the need for detailed evaluation are (1) whether the analysts or stakeholders believe that there is any level of uncertainty regarding the underlying assumptions used to estimate the indirect effects, and (2) whether changes in the underlying assumptions can be expected to result in significant changes in the findings.

Based on this analysis, there is minimal uncertainty regarding the assumptions made, and the likelihood of variation in the assumptions is unlikely to significantly alter the findings. However, direct and indirect impacts on resources protected by other environmental laws (e.g., Waters of the United States) would be further assessed and mitigated in the future final design and permitting stages of the proposed section.

8) Assess Consequences and Develop Mitigation

The purpose of estimating indirect effects of proposed transportation projects is to contribute to the body of information that will support a decision about whether to proceed with the plan or project, as proposed; to formulate a revised plan or project; or to otherwise mitigate adverse indirect effects associated with the proposed plan or project. The objective of this step is to assess the consequences of the analyzed indirect effects in the context of the full range of effects and to develop strategies to address unacceptable indirect effects.

As demonstrated in the FEIS and attachments to this Request, there has been no substantial controversy identified over the proposed section or its impacts. No potentially significant indirect effects were identified and no indirect effects have been determined to be unacceptable to the agencies or the public. However, direct and indirect impacts on resources protected by other environmental laws would be further assessed and mitigated in the future final design and permitting stages of the proposed section.

Cumulative Effect Analysis

In accordance with Council on Environmental Quality (CEQ) regulations, cumulative impact is defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal)

or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR § 1508.7). A cumulative impact includes the total effect on a natural resource, ecosystem, or human community due to past, present, and future activities or actions of Federal, non-Federal, public, and private entities. Cumulative impacts may also include the effects of natural processes and events, depending on the specific resource in question. Cumulative impacts include the total of all impacts to a particular resource that have occurred, are occurring, and would likely occur as a result of any action or influence, including the direct and reasonably foreseeable indirect impacts of a Federal activity. Accordingly, there may be different cumulative impacts on different environmental resources. However, not all of the resources directly impacted by a project will require a cumulative impact analysis. The resources subject to a cumulative impact assessment are determined on a case-by-case basis.

Methodology
In determining cumulative effects for this Request, the analysis followed the five-part evaluation process outlined in Fritiofson v. Alexander, 772 F.2d 1225 (5th Cir. 1985), as described in FHWA's Guidance: *Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process* (http://www.environment.fhwa.dot.gov/projdev/qaimpact.asp):

1. What is the geographic area affected by the project?
2. What are the resources affected by the project?
3. What are the other past, present, and reasonably foreseeable actions that have impacted these resources?
4. What were those impacts?
5. What is the overall impact on these various resources from the accumulation of the actions?

Each of these parts of the evaluation process is outlined below.

1) Geographic Area
The geographic limits for the cumulative effects analysis were determined to go beyond those used for the direct impact analysis (See Attachment 5). Therefore, the geographic limits for the analysis for cumulative effects reach beyond the defined study area. Multiple boundaries such as political/geographic boundaries (i.e., planning corridor districts and census tracts or block groups) were reviewed to determine the appropriate areas for the cumulative effects analysis. Study area boundaries for each resource were individually determined based on study requirements and available data. The study areas for the resources and socioeconomic features as well as the temporal boundaries for the timeframe of the cumulative impact analysis are described below.

Resources Study Areas
Multiple resource boundaries were reviewed to assess the effects of each resource for the proposed section. Based on readily available data from federal, state and local sources, the resources were mapped using GIS mapping techniques, and analyzed to determine the potential for cumulative effects created by the proposed section.

Socioeconomic Study Area
Socioeconomic study areas were established to analyze neighborhoods and community facilities; environmental justice; displacements and relocations; economic activity; land use; and parks, recreation areas and open space within proposed section. The socioeconomic study area for this proposed section is made up of the census tracts that border the proposed section.

Timeframe for Analysis
The analysis of cumulative effects must consider past, present, and reasonably foreseeable future actions. The temporal boundary used for the time frame for this cumulative effects assessment spans from the 1960s, when construction of I-64 within the study corridor began, to 2040 which is the modeled design year for the FEIS.

2) Affected Resources
During the indirect effects analysis, an inventory and assessment of notable features and/or resources was performed. These resources were reviewed for potential cumulative effects. Existing conditions information for these resources is contained under Step 3 of the pervious section of this attachment. Other affected resources that were not notable and therefore were not included in the cumulative effects analysis can be found described in the FEIS and associated technical documents.

3) Past, Present, and Reasonably Foreseeable Actions
As discussed under Step 4 of the previous section, there are a number of development activities and actions that have occurred and/or are planned to occur that could contribute to cumulative effects on resources affected by the proposed section. In addition to those previously mentioned a number of others are described below.

Past Actions
Traditional development patterns have generally followed a relatively sprawling land use pattern. Low-density residential uses have developed in isolation from employment centers and shopping centers. Office parks, shopping centers, apartments and single-family subdivisions generally creep further and further from urban areas into the more suburban or rural areas of the corridor.

In addition to general growth patterns, several past transportation improvement projects have occurred within the vicinity of the proposed section. These projects have occurred since the construction of I-64 was initiated in the early 1960s. The projects are listed below in Table 6.

Table 6: Past and Present Projects within the ICE Study Area

Approximate Location	Year	Project Description
Exit 193 – Henrico County	1988	Major bridge reconstruction at Nine Mile Road
Exit 193- Henrico County	2004	Major bridge reconstruction at Stoney Run Parkway
Exit 195 – Henrico County	1986	Major bridge reconstruction at Masonic Lane
Exit 195 – Henrico County	1988	Major bridge reconstruction over the Norfolk Southern Railroad
Exit 197 – Henrico County	1996	Major bridge reconstruction at Airport Drive
Exit 200 – Henrico County	1992	Major bridge reconstruction at Drybridge Road
Exit 200 - Henrico County	2006	Major bridge reconstruction at Meadow Road
Exit 200 – Henrico County	2001	New fly-over ramp from southbound Interstate 295 to eastbound Interstate 64
Exit 200 to Exit 272	2006	Contra flow lane reversal system
Exit 205 – New Kent County	1991	Major bridge reconstruction over the Chickahominy River

Beyond the area surrounding the western terminus of the proposed section, development in the area has been limited. This has led to the limited levels of development described earlier in the document.

Present and Reasonably Foreseeable Future Activities and Actions
In its Comprehensive Plan[7], New Kent County sets several goals for economic development. These goals include focusing economic development in designated areas, promoting the expansion of retail sales, and promoting the location of clean commerce and industry. The Bottoms Bridge interchange, which represents the eastern terminus of the proposed section, is identified as a favorable location for future development. The Henrico County Comprehensive Plan[8] is more focused on controlling development and improving existing developments.

In addition to this general focus on future development, the FEIS identified reasonably foreseeable future projects within the overall FEIS study area. Most of these projects were in Hampton Roads at the eastern end of the study area. Table 7 lists the reasonably foreseeable projects through the FEIS design year 2040 planning horizon. Although most of the projects listed in the table below are outside the study area for the proposed section and are not inclusive of the smaller and/or non-transportation projects occurring in the region, they were identified in the FEIS as contributing to regional traffic and transportation conditions that may affect the proposed section.

Table 7: Reasonably Foreseeable Future Projects within the Study Area

Project Name	Approximate Location	Project Description
Interstate 95/Interstate 64 Interchange Overlap	Exit 190, City of Richmond	Interchange reconstruction
Stoney Run Parkway Interchange	Between Exit 193 and Exit 195, Henrico County	New interchange
Interstate 295 improvements	Exit 200, Henrico County	Widening
Richmond-Hampton Roads Passenger Rail	From Richmond through Petersburg to Norfolk	New rail service
Southeast High Speed Rail	Washington, DC to Charlotte, NC	New rail line with connections in Richmond

4) Impacts

The potential cumulative impacts that would result through the implementation of the proposed section are described in the following paragraphs.

Socioeconomic and Land Use
Transportation projects affect existing and future land use in several ways. These include directly converting land from its existing use to transportation use, limiting or precluding planned future developments from occurring, and indirectly inducing unplanned development as well as supporting and enhancing planned development. However, because the proposed section would involve acquiring right of way along an existing interstate corridor, would focus improvements within the existing median, and would not involve any interchange modifications; these usual impacts would be limited.

[7] http://www.co.new-kent.va.us/DocumentCenter/View/741
[8] http://henrico.us/planning/ordinances-guidelines-publications/2026-comprehensive-plan/

Neighborhoods and Community Facilities
There are limited neighborhoods or community facilities within the relatively undeveloped study area for the proposed section. Since the proposed improvements would be focused within the existing interstate median, substantial impacts to existing neighborhoods and community facilities are not anticipated. Property impacts reported in the FEIS would be reduced, as widening would occur on the inside of the median. The estimates included in the FEIS are conservative estimates and the actual calculation of relocations is expected to decrease as the proposed section final design is developed and more detailed roadway right of way requirements are determined.

In examining the cumulative effects of the proposed section with past, present and reasonably foreseeable future actions, it was determined that as a result of these federal and state regulations, along with local planning efforts, a substantial contribution of effects from the proposed section to neighborhoods and community facilities is not anticipated.

Environmental Justice
Based on 2010 Census data, none of the census tracts in the socioeconomic study area have a minority population of 29%[9] or greater. None of the census tracts within the study area had a median household income below the U.S. Department of Health and Human Services poverty guidelines for 2013 ($23,550). Therefore, in examining the cumulative effects of the proposed section with past, present and reasonably foreseeable future actions, it was determined that there would be no disproportionately high or adverse effects to minority and low-income populations as a result of the proposed section.

Natural Resources
Waters of the United States, Including Wetlands
As identified FEIS, many of the systems have been heavily manipulated through past ditching or filling activities associated with the road development and previous transportation improvements. Despite the high degree of previous disturbance, these systems may still provide ecological functions such as wildlife habitat, flood control and water quality benefits such as nutrient uptake and sediment trapping. Federal and state regulations and permit requirements would reduce impacts to these resources and provide for appropriate mitigation. The proposed section also would include stormwater management and erosion and sediment control features that are consistent with current regulations. These standards exceed those that were in place when the existing interstate highway was constructed. Therefore, by reducing the stormwater volume and pollutant load, these projects would have beneficial cumulative effects on Waters of the United States.

In examining the cumulative effects of the proposed section with past, present and reasonably foreseeable future actions, it was determined that these federal and state regulations and the permitting process would limit temporary and permanent effects to jurisdictional wetland and stream systems within the study area, and thus a substantial contribution to effects on from the proposed section on Waters of the United States is not anticipated.

Water Quality
Cumulative impacts to water quality are as described in the previous section.

[9] 2012 Census data indicates that 29% of Virginia's population identifies as minority

Floodplains
There are 100-year floodplains located around the central portion of the proposed section. By confining the majority of the widening to the existing median, impacts would be limited. Unavoidable impacts to floodplains would occur to previously disturbed resources. The limited nature of the potential impacts would not measurably affect the previously disturbed floodplains. In examining the cumulative effects of the proposed section with past, present and reasonably foreseeable future actions, it was determined that a substantial contribution of effects from the proposed section to floodplains is not anticipated.

Threatened and Endangered Species
As noted previously, the swamp pink and the northern long-eared bat may occur along the proposed section. Future coordination with USFWS would be required to determine if these species are present and if they could be impacted by the proposed section. Historic impacts to wildlife species and wildlife habitat have led to the protection offered by the Endangered Species Act and other federal and state laws.

In examining the cumulative effects of the proposed section with past, present and reasonably foreseeable future actions, it was determined that these federal and state regulations and the permitting process would limit temporary and permanent impacts to threatened and endangered species within the study area, and thus a substantial contribution to effects on from the proposed section on threatened and endangered species is not anticipated.

Section 4(f) Resources
The FEIS identified two instances where a use of a Section 4(f) property may occur. Both uses were found to be de minimis. Given this finding and the limited number of Section 4(f) resources in and around the study area, it was determined that there would be limited impacts to Section 4(f) resources within the study area, and thus a substantial contribution to effects on from the proposed section on these resources is not anticipated.

Overall Impact
The purpose of this cumulative analysis was to assess substantial effects on resources within the study area that result from past, present, and reasonably foreseeable future projects, in addition to the proposed section. Overall, implementation of the proposed section is not expected to substantially alter development patterns within the proposed section and is not anticipated to substantially contribute to the cumulative impacts of resources evaluated as part of this study.

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Ms. Jessie Yung
Federal Highway Administration
August 26, 2016

Attachment 4: Relevant Communication Following the FEIS

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 SHORT LANE
GLOUCESTER, VA 23061
PHONE: (804)693-6694 FAX: (804)693-9032
URL: www.fws.gov/northeast/virginiafield/

Consultation Code: 05E2VA00-2016-SLI-3155 June 23, 2016
Event Code: 05E2VA00-2016-E-03756
Project Name: I-64 Segment A

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and

endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: I-64 Segment A

Official Species List

Provided by:

Virginia Ecological Services Field Office
6669 SHORT LANE
GLOUCESTER, VA 23061
(804) 693-6694
http://www.fws.gov/northeast/virginiafield/

Consultation Code: 05E2VA00-2016-SLI-3155
Event Code: 05E2VA00-2016-E-03756

Project Type: TRANSPORTATION

Project Name: I-64 Segment A
Project Description: I-64 Segment A

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:

Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Henrico, VA | New Kent, VA

Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Flowering Plants	**Status**	**Has Critical Habitat**	**Condition(s)**
Swamp pink *(Helonias bullata)*	Threatened		
Mammals			
Northern long-eared Bat *(Myotis septentrionalis)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

United States Department of Interior
Fish and Wildlife Service

Project name: I-64 Segment A

Appendix A: FWS National Wildlife Refuges and Fish Hatcheries

There are no refuges or fish hatcheries within your project area.

MEMORANDUM

To: Mark Riblett, VDOT

From: Barbara Nelson, RRTPO

Date: July 8, 2016

Subj: FFY15 to FFY18 VDOT TIP Amendments Request: Nine New Projects – RSTP/CMAQ and Smart Scale

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At the July 7, 2016 TPO meeting, the TPO took action to approve the grouping of 10 projects in the FFY 15 – FFY 18 Richmond Regional TPO Transportation Improvement Program (TIP):

- UPC 109193: CRAC Bus Purchase
- UPC 109191: 288/Commonwealth Ctr Pwky & Bailey Bridge IMR
- UPC 109231: I-64/Ashland Rd IMR
- UPC 109190: Laburnum Avenue Sidewalk, PE-Phase.
- UPC 109266: Richmond Marine Terminal – Intermodal Transfer Improvements
- UPC T18033: Transit Development Plan
- UPC 106299: Azalea Avenue Intersection Improvements, PE & RW Phase
- UPC 107458: I-64 Widening between I-295 and Exit 205-Bottoms Bridge, PE-Phase
- UPC T11802: Vehicle Fuel Conversion Program, Additional Phase

Attached for VDOT records and files are a copy of the TPO resolution and corresponding TIP pages. An updated TIP document reflecting the addition of this project will be posted on the RRPDC website July 11, 2016.

Should you have any questions, please contact Sarah Rhodes at 323-2033 or srhodes@richmondregional.org.

SER
Attachments

pc: Ivan Rucker, FHWA
John Rutledge, CRAC
Barbara Smith, Chesterfield County
Tom Coleman, Goochland County
Clinton Edwards, GRTC
Todd Eure, Henrico County
Sarah McCoy, Port of Virginia
Ron Svejkovsky, VDOT
Sarah Rhodes, RRPDC
Jin Lee, RRPDC

Interstates/Toll Roads

UPC # 107458

Jurisdiction:
Route: 64 **Street Name:**
Description: I-64 Widening
Location: I-295 to Bottoms Bridge
Project Length:
Project Category: Capacity Increase
System: Interstate
Administered By: VDOT
Regionally Significant: ☑

Schedule

Phase	Start	End	Status
Preliminary Engineering (PE):	8/26/2016	2/4/2020	FFY16
Right of Way (RW):	2/4/2020	1/12/2021	FFY20
Construction (CN):	1/12/2021	3/1/2022	FFY21

Cost Estimates / Previous Obligations

Cost Estimates

PE:	$5,502,320
RW:	$2,900,000
CN:	$51,508,068
Total:	$59,910,388

Federal Obligations

			Federal Obligations			
Phase	**Fund Source**	**Match**	**FY15**	**FY16**	**FY17**	**FY18**
PE	AC			$5,502,320		

Amendments

Amendment Number 2015-15 **Requested on 6/8/2016** **by VDOT** **Date Approved 7/7/2016**

1). This is a new HB2 project added to the TIP. 2). Add PE phase to FFY16 and obligate $5,502,320 PE AC funds (no match).

Richmond District

Interstate Projects

MPO	Richmond					
UPC NO	109231	SCOPE	Preliminary Engineering			
SYSTEM	Interstate	JURISDICTION	Goochland County		OVERSIGHT	NFO
PROJECT	I-64/ASHLAND RD INTERCHANGE IMR				ADMIN BY	VDOT
DESCRIPTION	FROM: I-64 TO: I-64 (1.9000 MI)					
PROGRAM NOTE	FFY16-16 STIP AMD - add $320,000 (RSTP) FFY16.					
ROUTE/STREET	I-64 (0064)				TOTAL COST	$400,000

	FUND SOURCE	MATCH	FY15	FY16	FY17	FY18
PE	Federal - RSTP	$80,000	$0	$320,000	$0	$0

MPO	Richmond					
UPC NO	97565	SCOPE	Bridge Replacement w/o Added Capacity			
SYSTEM	Interstate	JURISDICTION	Henrico County		OVERSIGHT	FO
PROJECT	RTE 64 - REPLACE BRIDGES OVER RTE 156				ADMIN BY	VDOT
DESCRIPTION	FROM: APPROACHES & BRIDGE OVER RTE 156 TO: (2.60 MI W RTE 295)					
ROUTE/STREET	0064				TOTAL COST	$17,386,388

	FUND SOURCE	MATCH	FY15	FY16	FY17	FY18
PE AC	Federal - AC	$217,170	$868,680	$0	$0	$0
CN AC	Federal - AC	$3,077,278	$0	$12,309,110	$0	$0

MPO	Richmond					
UPC NO	105141	SCOPE	Bridge Replacement w/o Added Capacity			
SYSTEM	Interstate	JURISDICTION	Henrico County		OVERSIGHT	NFO
PROJECT	RTE 64 - REPLACE BRIDGES OVER RTE 33 (NINE MILE RD)				ADMIN BY	VDOT
DESCRIPTION	FROM: APPROACHES & BRIDGES OVER RTE 33 TO: (0.80 MI E RTE 156) (0.8300 MI)					
PROGRAM NOTE	Roll-over project added to the FFY15 STIP based on FHWA approval of STIP Amd #FFY14-14 8/7/14. Project is consistent with the metropolital TIP.					
ROUTE/STREET	I-64 (0064)				TOTAL COST	$9,535,100

	FUND SOURCE	MATCH	FY15	FY16	FY17	FY18
CN	Federal - BR	$0	$1,442,466	$0	$0	$0

MPO	Richmond					
UPC NO	107458	SCOPE	Preliminary Engineering			
SYSTEM	Interstate	JURISDICTION	Henrico County		OVERSIGHT	FO
PROJECT	#HB2.FY17 RTE 64 - MAJOR WIDENING				ADMIN BY	VDOT
DESCRIPTION	FROM: RTE 295 TO: EXIT 205 (BOTTOM'S BR)					
PROGRAM NOTE	FFY16-16 STIP AMD add $5,502,320 (AC-Other) FFY16					
ROUTE/STREET	0064				TOTAL COST	$59,910,388

	FUND SOURCE	MATCH	FY15	FY16	FY17	FY18
PE AC	Federal - AC	$0	$0	$5,502,320	$0	$0

Ms. Jessie Yung
Federal Highway Administration
August 26, 2016

Attachment 5: Figures

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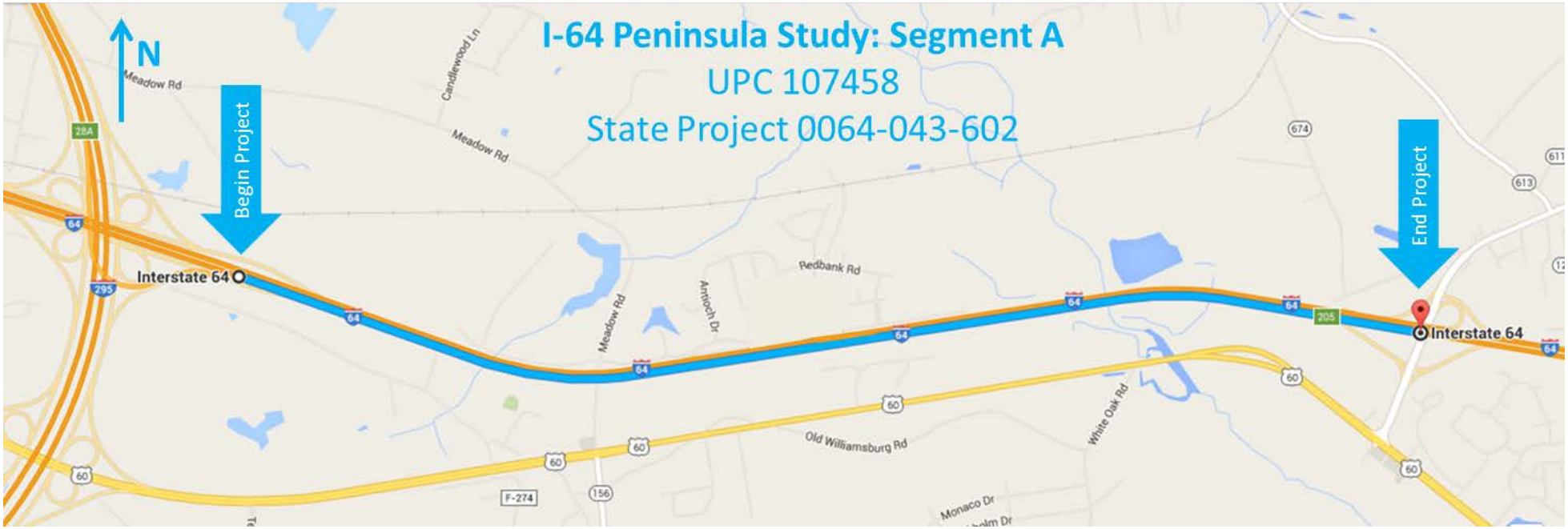
Ms. Jessie Yung
Federal Highway Administration
August 26, 2016



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Federal Highway Administration
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Federal Highway Administration
August 26, 2016

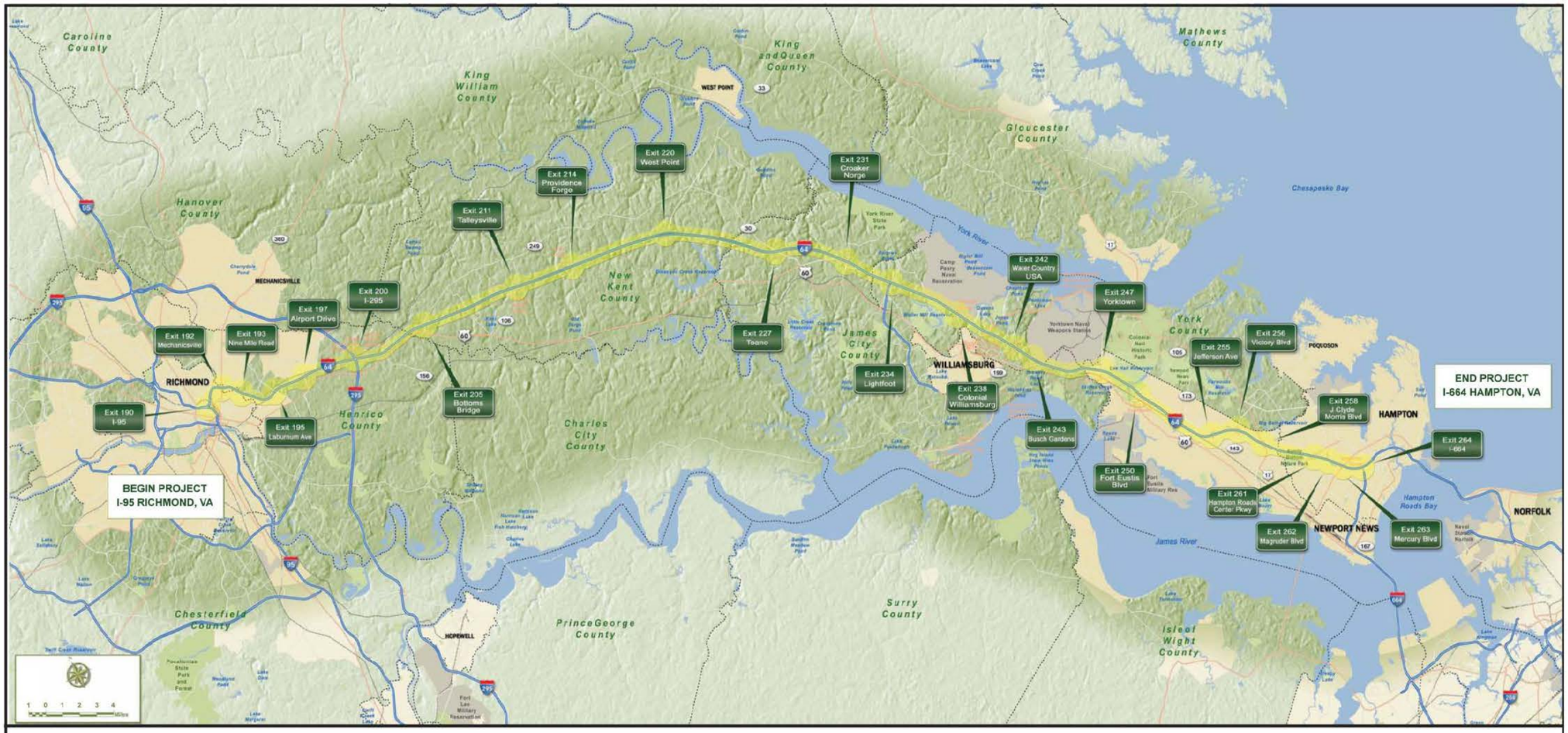

Figure I.1
Project Location

I-64 PENINSULA STUDY ENVIRONMENTAL IMPACT STATEMENT

Ms. Jessie Yung
Federal Highway Administration
August 26, 2016

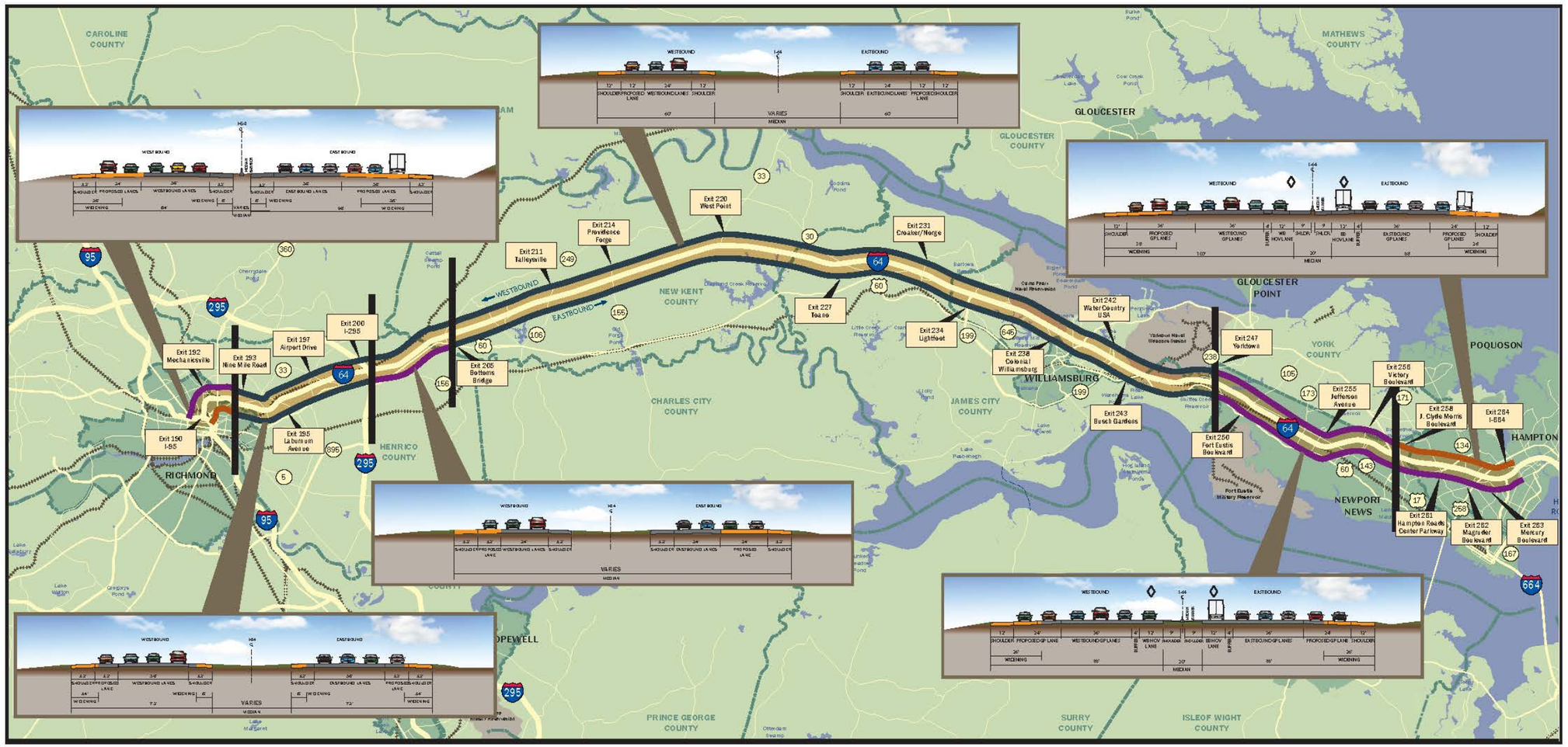

Figure II.3
Proposed Number of Additional Lanes for Build Alternatives 1A and 2A

I-64 PENINSULA STUDY ENVIRONMENTAL IMPACT STATEMENT