

FEDERAL HIGHWAY ADMINISTRATION

FINDING OF NO SIGNIFICANT IMPACT

FOR

ROUTE: Interstate 64/High Rise Bridge Corridor Study
LOCATION: City of Chesapeake, Virginia
STATE PROJECT: 0064-131-783. P101; UPC 104366
FEDERAL PROJECT: NH-IM-064-3(481)

The Federal Highway Administration has determined that this project will have no significant impact on the environment. This Finding of No Significant Impact is based on the Environmental Assessment and the Revised Environmental Assessment that have been independently evaluated by the Federal Highway Administration and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project. They provide sufficient evidence and analysis for determining that an Environmental Impact Statement is not required.

8/22/16

Date

John Dumbkins

for: FHWA Division Administrator

The Federal Highway Administration has reviewed the Virginia Department of Transportation's July 21, 2016 letter requesting a Finding of No Significant Impact, which includes the Revised Environmental Assessment (REA), and the transcript from the Location Public Hearing. The REA is attached to the Finding of No Significant Impact (FONSI) and is hereby incorporated by reference into this FONSI.

The study area for the Interstate 64/High Rise Bridge Corridor Study is located in the southwestern quadrant of the Hampton Roads Beltway, which is formed by a loop of Interstate 64 (I-64) and I-664. The study area encompasses approximately eight miles of I-64, between the I-464 Interchange and I-664/I-264 interchanges at Bowers Hill. It includes interchanges along I-64 at Military Highway (Route 13), George Washington Highway (Route 17), and Great Bridge Boulevard (Route 190). The G. A. Treacle Memorial Bridge (High Rise Bridge), a mile-long double-leaf bascule bridge that spans the Southern Branch of the Elizabeth River, also is included in the study area.

The current Level of Service (LOS) within the study area is D or worse for the I-64 freeway facility based on existing peak hour volumes. Specifically, the freeway segment that includes the High Rise Bridge is LOS F in the worst peak hour with heavy congestion. The eastern segment of I-64, between I-464 and the High Rise Bridge has a rear end crash rate of 2.024 per 100 million vehicle miles travelled (MVMT), which exceeds the regional average crash rate of 0.486 per 100 MVMT. Rear end crashes represent the majority of crashes in the study area. In the event of a major storm occurrence, I-64 has been identified in the *VDOT Hurricane Evacuation Guide* as an evacuation route for Virginia Beach, Chesapeake, Suffolk, Norfolk, and Portsmouth. The present width of the High Rise Bridge is approximately 67 feet, which with the future traffic forecast would not meet current design criteria and would contribute to more traffic congestion and worsening safety conditions. The purpose of the project is to enhance capacity, improve vehicular safety, improve the ability of the corridor to function as an emergency evacuation route, and address High Rise Bridge deficiencies.

Environmental Impacts

The environmental impacts for the Candidate Build Alternative (CBA) that involves improvements along the existing corridor were described in the approved Environmental Assessment (EA). The EA was transmitted to numerous federal and state environmental resource agencies and was made available for public review prior to and at the Public Hearing. Substantive comments from Federal and State agencies were addressed in the REA and FONSI request. No substantive comments on the EA were received from the public. No comments were received from the environmental resource agencies or any member of the public that suggested that the project would have a significant environmental impact.

This FONSI documents the environmental impacts associated with the CBA. This approval is based on the impacts associated with the 8 lane build alternative with a 135 foot bridge height. It is recognized that the United States Coast Guard (USCG) made a preliminary determination that a bridge height of 100 feet will meet the reasonable needs

of navigation for this project. This FONSI does not represent approval of a bridge height for the High Rise Bridge. Rather, final approval of the bridge height will be made by the USCG in accordance with federal law. In addition, after the managed lane concept is identified, additional studies may be necessary for the CBA.

The following is a summary of the project's environmental impacts.

Land Use

The study area contains a variety of land use designations, including Industrial/Logistics in the northwest portion of the study area and Low Density Residential land uses to the south. Other land uses within the study area include Business/Commercial, Light Industry/Logistics, Conservation, Medium Density Residential, Office/Research, Institution/Government, High Density Residential and Suburban Mixed Use.

The CBA would be consistent with the Hampton Roads Transportation Planning Organization (HRTPO) 2040 Long Range Transportation Plan (LRTP).

FHWA finds that the impacts to land use are not significant.

Farmland and Forest Resources

Farmland, as defined by the Farmland Protection Policy Act (FPPA) has not been identified within the study. Additionally, Agricultural and Forrestral Districts, protected under state law, have not been identified within the study area. Permanent impacts to forest resources from the CBA would consist of conversion of forested land to either pavement or maintained herbaceous or shrub land. Impacts to forested areas characterized with evergreen trees would occur primarily in the I-464 Interchange, impacts to forested areas characterized with deciduous trees would occur primarily in the Route 13 and Route 17 interchanges, and impacts to mixed forested areas would occur mainly in the Bowers Hill and Route 13 interchanges. Most of these forested areas are isolated by the interstate and other roadways in these urban and residential areas, therefore, impacts to the movement of terrestrial wildlife through these forested areas is expected to be minimal.

FHWA finds that the impacts to Farmland and Forest Resources are not significant.

Social

Community Facilities/Services. The majority of community facilities identified are located within or immediately adjacent to the circular study areas surrounding the U.S. 17 (George Washington Highway North)/I-64 interchange and the I- 64/I-464 interchange. No hospitals, public libraries, police stations or fire departments were identified within the study area. The Indian River Masonic Lodge Number 252 is anticipated to be displaced.

The Preferred Build Alternative would not have a divisive or disruptive effect on the community and would not hinder the accessibility of the public to any of the essential community or public services (schools, churches, shopping centers or medical facilities/hospitals) as well as police/fire and rescue emergency response services.

Neighborhood and Community Cohesion. The majority of the study area is designated for Industrial and Residential uses. The proposed CBA would support planned land use as recommended in Chesapeake's 2035 Comprehensive Plan Update by achieving Chesapeake's master transportation plan which identifies improvements to the I-64 corridor. The proposed Build Alternatives are consistent with and unlikely to affect zoning classifications within the study area. The proposed CBA is not expected to generate substantial additional traffic through residential areas; rather, widening and improvements to the I-64 corridor would provide for more connectivity and mobility between Chesapeake and the other cities of the Hampton Roads region, supporting both current and anticipated land use within Chesapeake.

FHWA finds that the social impacts are not significant.

Environmental Justice

This project has been developed in accordance with Title VI of the Civil Rights Act of 1964 as amended, and Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations.

Public Participation

The Virginia Department of Transportation (VDOT) held a Citizen Information Meeting (CIM) for this study on September 18, 2013 at Deep Creek High School to inform and solicit input from the public and other stakeholder about the study. In accordance with VDOT's Policy Manual for Public Participation in Transportation Projects, the meeting was advertised in local newspapers, on the study website, and via a press release. The open house format for the CIM included display boards depicting general information on the study, including the study schedule and purpose of the study. Comment sheets and informational handouts were provided at the meeting and also were made available on the study website. VDOT representatives were available to discuss the study and answer questions. A total of 82 citizens attended the CIM and 22 public comments were received as a result of the 30-day comment period following the CIM. The primary concerns expressed at the meeting included noise abatement, property displacements, tolling, and the effects of traffic and roadway construction on local businesses. All comments received during the CIM and public comment period have become part of the study record.

Following circulation of the Draft EA, VDOT held a Location Public Hearing for the study on November 6, 2014 at the Tidewater Community College Portsmouth Campus. In accordance with VDOT's Policy Manual for Public Participation in Transportation Projects, the meeting was advertised in local newspapers, on the study website, and via a

press release. Additionally, Location Public Hearing notification letters were sent out to all property owners within or adjacent to the study area 30 days prior to the scheduled hearing date per the Code of Virginia §33.1-223.2:30. The purpose of the Location Public Hearing was to present the findings of the EA and associated technical documents, provide a discussion forum between the public and study team, and solicit input and comments from the community. In addition, public and agency comments received during the 45-day comment period that followed the release of the EA were taken into consideration and incorporated, as appropriate, in the revisions that were made and presented in this Revised EA. All comments received during the public hearing and public comment period have become part of the public hearing record. Information for the study, including the EA and all technical documentation, was made available to the public through a VDOT website. No public comments specific to environmental related issues were received. No changes have been made to the proposed action or associated mitigation measures as a result of comment received on the EA.

Environmental Justice Impacts

In light of Executive Order 12898, a review of the potential disproportionate effects of the Preferred Build Alternative was conducted.

The study area considered in this EA is located along an existing interstate facility. The highest concentrations of minority populations are generally located around the eastern and western study area termini. The estimated impacts would occur along an existing interstate, adjacent to a major water crossing, and would not result in disproportionately high impacts on minority populations. The community effects of the project, including improved roadway capacity; enhanced corridor safety by addressing conditions that contribute to vehicular crash incidences; improved ability of the corridor to function as a key emergency evacuation route; and improvements to the High Rise Bridge, would be borne by all residents within the study area, including minority and low-income persons. Displacements within environmental justice communities would occur in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended, 1987). Relocation resources would be made available to all displaced without discrimination.

FHWA finds that the CBA would not have disproportionately high and adverse effects on minority and low income populations, and finds that the impacts would not be significant.

Historic Properties

Context. The Area of Potential Effects (APE) for the study was defined as 100 feet from the edge of pavement along the existing Interstate 64 corridor from Interstate 464 to Interstate 264, a 600 foot buffer around the High Rise Bridge, and radial buffers of 1,500 feet around four interchanges.

An archaeological and architectural reconnaissance survey was completed for the study to determine the presence of historic architectural resources in the APE. No

archaeological resources were found eligible for listing on the National Register of Historic Places (NRHP), and one architectural resource within the study area, Sunray Historic District is currently listed on the NRHP. The Historic District is located within the vicinity of the proposed project. However, there is considerable amount of modern development between the Sunray Historic District and the project. The project would not acquire any property from the Historic District, nor will it impact the resource in any capacity. Following circulation of the Draft EA the Virginia Department of Historic Resources (DHR) concurred on October 14, 2015 that the undertaking would have no adverse effect on historic properties.

FHWA finds that the impacts to historic properties are not significant.

Section 4(f)

Four City of Chesapeake Public School properties were identified within the study area: Deep Creek Elementary School, Deep Creek Middle School, Deep Creek High School, and Crestwood Intermediate School. In November 2013, VDOT communicated potential impacts with school officials to determine if Section 4(f) was applicable and to document any concerns the school officials may have. Specific to the four school properties within the study area:

- The specific area of the Deep Creek High School and Deep Creek Elementary School property that falls within the study area is not used for public school recreation/athletics or for non-school public recreation/athletics (such as community sports leagues). Therefore, the school property within the study area is not subject to Section 4(f).
- The specific area of the Deep Creek Middle School property that falls within the study area is currently used for public school recreation/athletics and for non-school public recreation/athletics (such as community sports leagues). Therefore, this property is subject to Section 4(f).
- The specific area of the Crestwood Intermediate School property that falls within the study area is on the periphery of the area used for public school recreation/athletics and for non-school public recreation/athletics (such as community sports leagues). Therefore, this property is subject to Section 4(f).

As the study progressed, VDOT worked to reduce potential impacts to these Section 4(f) properties. In May 2014, VDOT met with school officials to further discuss the Interstate 64/High Rise Bridge Corridor Study, its implications on Chesapeake Public School properties, and the consideration of a Section 4(f) use of these properties.

In July 2014, VDOT presented revised plans to Chesapeake Public Schools. Chesapeake Public Schools indicated that the options would result in only temporary impacts to the Deep Creek Middle School property and would not be adverse. VDOT agreed to ensure that any CBA under consideration would not result in permanent impacts to the Deep Creek Middle School property.

On June 9, 2016, Chesapeake Public Schools re-confirmed its position that the proposed impacts at Deep Creek Elementary School and Deep Creek High School would not impact recreational features.

Chesapeake Public Schools re-confirmed that the proposed impacts at Crestwood Intermediate School should not have an adverse effect on the recreational features of the property.

Chesapeake Public Schools also re-confirmed that as long as there are no permanent impacts at Deep Creek Middle School, the temporary impact should not have a long-term adverse effect on the operational/recreational use of the property, and further indicated support for a de minimis finding.

FHWA hereby makes a Section 4(f) finding of de minimis impact for Crestwood Intermediate School and Deep Creek Middle School. FHWA also finds that the Section 4(f) impacts are not significant.

Right of Way / Relocation

The study area contains a total of 724 parcels of land. Of these, approximately 462 parcels are designated as Residential Improved, 93 parcels are designated as Commercial Improved, 57 parcels are designated as Residential Land, 54 parcels are designated as Commercial Land, 51 parcels are designated as Detached Condos, six (6) parcels are designated as Commercial Condos, and one parcel is designated as an Attached Condo property.

A total of 233 parcels lie within or adjoin the Eight Lane 95-foot Build Alternative right-of-way. The CBA is anticipated to acquire 157 partial acquisitions, 70 full acquisitions, and 69 displacements. These impact estimates are conservative and anticipated to change upon the development of detailed project design. Once 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

FHWA finds that the right-of-way and relocation impacts are not significant.

Air Quality

The Air Quality Analysis completed in October 2014 evaluated the two worst-case interchanges (I-64/I-464 and I-64/Rte. 17) and one worst-case intersection (George Washington Highway and South Military highway) in the project corridor for Carbon Monoxide (CO) impacts based on the Eight Lane Build Alternative which was determined to represent the worst-case alternative for air quality purposes. The Air Quality Analysis found peak CO concentrations (estimated using worst case assumptions) to occur in the design year (2040) build scenario at the I-64/I-464 interchange, and they were predicted to be 4.9 ppm and 3.4 ppm for the 1-hour and 8-hour CO NAAQS, respectively, which are both well below the 1-hour and 8-hour CO NAAQS of 35 ppm and 9 ppm, respectively.

A quantitative MSAT analysis was completed as part of the Air Quality Analysis, and it showed that MSAT emissions are expected to decline significantly from Existing Year conditions to the project Opening Year (2025) build conditions, and will continue to decline even further out to the Design Year (2040) build conditions. The changes in regional traffic volumes anticipated as a result of moving to the Eight Lane Build – Managed Alternative is considered insignificant compared to those used in the 2014 Air Quality Analysis, as the updated daily volumes forecast in 2025 and 2040 throughout the project corridor were found to decrease slightly.

VDOT has developed updated 2025 and 2040 traffic volumes for the study. Specifically, detailed traffic forecasts were developed for the Eight Lane Build – Managed Alternative consisting of two high occupancy toll (HOT) lanes and two general purpose (GP) lanes (2 HOT / HOV-2 “free” + 2 GP) as described in the Traffic and Transportation Technical Report supporting the Draft Environmental Assessment (EA) for the project. The development of this data is consistent with commitments made in the Draft EA to evaluate a “worst case” scenario if a managed lane option was identified as the preferred alternative. An air study was completed in October 2014 for this project that identified the Eight Lane Build Alternative as the worst-case alternative and was supported with 2025 and 2040 traffic forecasts. Based on a review of the updated traffic projections for the Eight Lane Build – Managed Alternative and a comparison to traffic compiled for the previous study, the conclusions from the 2014 Air Quality Analysis are still valid and reasonable.

FHWA finds that the air quality impacts are not significant.

Noise

Overall, predicted exterior noise levels range from 49 to 76 dBA Leq (exterior) for the Existing case and 50 to 78 dBA Leq (exterior) for the No-Build Alternative. Build alternative exterior Leqs range from 55 to 79 dBA for all four Build alternatives. On average for all receptors, sound levels are predicted to increase from Existing to No-Build conditions by approximately one decibel. This increase is due to predicted increases in traffic volumes in the area in general. For the Build alternatives, an average increase of

approximately four decibels over the Existing conditions is predicted over all receptors. More substantial increases in existing sound levels are predicted in areas where new roadways would be constructed closer to existing noise-sensitive land uses. Also more substantial increases are predicted in areas where the roadway widening would necessitate the acquisition of buildings that currently provide noise shielding from the existing roadway.

The table below presents a list of the Common Noise Environments (CNEs) in the study area with FHWA Activity categories, descriptions of the associated land use, and the general location for each CNE.

CNE	FHWA Activity Categories*	Description of Land Use and Location
1	B	Single-family residences west of I-264 and I-664 on Spring Meadow Crescent, Sun Valley Crescent, and Keaton Way.
2	B,D,E	America's Best Value Inn, BP Gas Station, Indiana United Methodist Church, and single-family residences north of Indiana Ave and south of Military Highway.
3	B	Single-family residences east of I-64 on Rotunda Ave and Grand Isle Dr.
4	B	Single-family residences and mobile homes south of Military Highway.
5	E	Commercial bench located north of Military Highway and south of I-64.
6	B	Mobile homes and single-family residences south of Military Highway and west of I-64 along Galberry Rd.
7	B	Single-family residences west of I-64 and on both sides of Galberry Rd.
8	B	Single-family residences west of I-64 and along Galberry Rd, Hancock Dr, Dietz Dr, and Andrews Dr.
9	B,C,D	Dominion Village at Chesapeake assisted living facility and single-family residences along Forehand Dr., Deep Creek High School and athletic fields off Forehand Dr.
10	B,C	Single-family residences north of I-64, on Happy Acres Rd and Annaka Loop; Bible World basketball hoop
11	B,C	Fields near Deep Creek Middle School. Single-family residences south of I-64 and along Gerrey Dr, Bywood Ave, Deal Dr, Trent Ave, Hillard St, Plantation Dr, Winwood Dr, Owen's Terrace, and Shell Rd.
12	B	Single-family residences north of I-64 and along Fenway Ave, Bond Ave, Garnes Ave, Oake Mears Cove, Wooddale Ct, Lake Ridge Crossing, and Shell Rd.
13	B,C	Wingfield Pointe Park south of I-64, and single-family residences along Shell Rd, Firman St, Wood Duck Ln, Greenwing Dr, Bluewing Ln, Dutch Ln, and Mandarin Ln.
14	B,C	Summer park North of I-64 and single-family residences along Shell Rd, Ferryman Quay, Levee Ln, Jarvis Rd, Gruen St, Woods Way, Wye Oak Way, London Plane Crest, Paperbark Trail, Pinecroft Ln, Richwood Ave, Rivers Edge Trace, and Anabranche Trace.
15	B,C	The Rivers Apartments on Libertyville Rd south of I-64, Harbor North Park, and single-family residences along Libertyville Rd, Mullen Rd, Mains Creek Rd, Belmont St, Malbon Dr, Sherman Dr, Westcove Ln, and Jones Ln.
16	B,C,D	Crestwood Intermediate School north of I-64, fields west of Crestwood School, and single-family residences along Booker St, Charles St, Laura St, Durham Ave, Ray St, Tuskegee Ave, and Tennyson St.
17	B,C,D	Guru Nanak Foundation of Tidewater Church south of I-64, New Life Apostolic Church south of I-64, and single-family residences along Robert Welch Ln, and Finck Ln.
18	B,C	Roosevelt Memorial Park Cemetery north of I-64, and single-family residences along Campostella Rd, Keats St, Shelley St, and Marcus St.
19	B,C,D,E	Health South Rehabilitation Center, gazebo and trail outside of Independence Parkway Office Building, and single-family residences along Queens Gate Dr, Lordy Byron Ct, Kings Gate Dr, and Lord Nelson Ct.
20	B,C,D	St. Benedict's Church, Grace Baptist Temple and playground, Tidewater Baptist Church and soccer field, and single-family residences along Burns St, Dorcas Rd, Haledon Rd, Rutledge Rd, McCosh Dr, Contrell Ct, Balford Ln, Kincaid Terrace, and Dermott St.
21	B	The Morgan Apartments on Gateway Court, south of I-64

* Note: Activity Category B is exterior residential, C – exterior recreational or institutional, D - interior institutional, E - exterior commercial. Table 1 provides detailed descriptions of the land uses included in the categories.

Source: HMMH, 2014

Overall, residential and recreational impacts are predicted to occur under all alternatives. For the 8-Lane, 135-ft Bridge alternative, a total of 899 receptors are predicted to be impacted, including 817 residential (Cat. B), 78 recreational (Cat. C), 2 institutional (interior, Cat. D), and 2 commercial recreational (Cat. E).

While impact is not predicted under the No Build alternative at the Deep Creek High School baseball fields and track in CNE 9, the CBA is predicted to exhibit impacts at the

nearest recreational receptors. Nine impacts, four at the baseball field and five at the track, are predicted for the CBA.

The Deep Creek Middle School baseball fields in CNE 11 have one receptor that is impacted under existing conditions, two receptors that are predicted to be impacted under the 2040 No Build Alternative, and six receptors that are predicted to be impacted under the 2040 design year build condition.

In the Harbor North Park in CNE 15, the CBA is predicted to cause impacts due to substantial increases in existing noise.

At the athletic fields of the Crestwood Intermediate School (CNE 16), the CBA is predicted to impact 14 receptors in the 2040 design year.

At the play area of the Guru Nanak Foundation of Tidewater Church, one recreational receptor is predicted to be impacted under the CBA.

The large Roosevelt Memorial Park cemetery is located in CNE 18 in the northwest quadrant of the I- 64/I-464 interchange. Over 30 recreational receptors within this park are impacted under existing conditions and are predicted to be impacted in the 2040 design year for the CBA.

Noise impact has been assessed at the recreational areas associated with the three places of worship in CNE 20. One recreational receptor at the Grace Baptist Temple playground is predicted to be impacted under existing conditions as well as the 2040 design year. The CBA is predicted to cause noise impact at two receptors at the outdoor worship and play area at St. Benedict's Church. In the soccer field adjacent to the Tidewater Baptist Church, seven impacted receptors are predicted for this soccer field under the CBA.

All impacts due to substantial increases are predicted to occur in CNEs 15 and 20, in the areas with existing barriers that were assumed to be removed for construction of the project. The existing barriers would be replaced as described in the section below (Barrier 9).

Mitigation

The feasibility of noise barriers was evaluated in locations where noise impact is predicted to occur in the 2040 design year build condition.

VDOT's Single Impacted Receptor Methodology was utilized to assist in evaluating the impacted isolated single receptors within the project area. Utilizing this methodology for receptor site P1248, a gazebo on commercial property in CNE 19, Barrier 13B would provide feasible reductions and achieve the 7 dB(A) design goal at a height of 15 feet and a length of 516 feet. However, with a surface area per benefited receptor value of 7,753, this barrier far exceeds VDOT's criterion of 1,600 SF/BR. The results can be expected to be similar using this methodology at the other identified isolated single impacted site,

P096 in CNE 5, also a recreational receptor on commercial property. Accordingly, this site was not evaluated further for noise abatement.

Barrier 1 was designed for all Build alternatives to benefit 54 single-family residences predicted to be impacted west of I-264 along Spring Meadow Crescent and Keaton Way in CNE 1. The barrier would also benefit 19 additional residences. The barrier would be 5552 feet long, 15 feet high and cost \$2,581,711 at a unit cost of \$31 per square foot. With a surface area per benefited receptor (SF/BR) of 1141, the barrier would be below VDOT's criterion of 1600 SF/BR, and be cost reasonable.

Eight residential dwelling units in CNE 3 would be impacted by noise from I-64 under the CBA. Barrier 2 at a length of 1438 feet and height of 15 feet was evaluated for this area, and would benefit all 8 impacted receptors and one additional receptor. However, at a SF/BR value of 2395, this barrier would not be cost reasonable.

Nine single-family and mobile homes in CNE 6 would be impacted under the CBA in the southwest quadrant of the I-64 interchange with Military Highway. Under the CBA, a total of 22 receptors would be benefited, and the barrier would have a SF/BR value of 1146. Barrier 3 would be feasible and reasonable under the CBA.

Barrier 4-5 was designed to benefit 1) 9 impacted residential receptors along Galberry Rd. in CNE 7 in the 8-Lane alternatives and 2) 30 impacted single family homes, impacted portions of the Deep Creek High School track and baseball fields, and the Dominion Village of Chesapeake assisted living facility's front and back porches in CNEs 8 and 9. A barrier 8080 feet long and 10 to 15 feet high would benefit 55 of 59 impacted receptors and benefit an additional 99 receptors. The surface area per benefited receptor would be 599, therefore the barrier would be reasonable per VDOT's criteria. Noise from the lightly-used rail line adjacent to Yadkin Rd. in the study area was not evaluated in this preliminary study. It will be addressed in the final design noise analysis.

Barrier 6 would benefit impacted single-family homes and a church recreation area in CNE 10, located in the northwest quadrant of the I-64 interchange with George Washington Highway. A barrier 10 feet high and 3363 feet long would be effective for the CBA. Barrier 6 would benefit all 15 impacted receptors and an additional 8 non-impacted receptors. Barrier 6 would have a surface area per benefited receptor of 1461, and would be reasonable per VDOT's reasonableness criteria.

Barrier 7 was designed to benefit many single-family homes and the athletic fields of the Deep Creek Middle School south of I-64 and east of George Washington Highway in CNE 11, and also homes along Firman Street in CNE 13. A barrier 15 feet high and 8725 feet long would benefit 70 of 74 impacted receptors. An additional 95 receptors would be benefited by Barrier 7. The barrier's SF/BR factor would be 794; therefore the barrier would be cost reasonable per VDOT's criteria.

Barrier 8 would benefit many single-family homes predicted to be impacted north of I-64 and east of George Washington Highway in CNEs 12 and 14. Barrier 8 would be 9927

feet long, 15 feet high and provide 5 to 14 decibels of noise reduction. Barrier 8 would benefit all 104 impacted homes, and an additional 70 receptors, including a portion of Summer Park off Rivers Edge Terrace. The barrier's SF/BR factor would be 174; therefore the barrier would be cost reasonable per VDOT's criteria.

Barrier 9 would replace an existing 30-ft high barrier in CNE 15 designed to benefit impacted multifamily and single-family homes along Libertyville Road and off Westcove Lane, south of I-64 and east of the High Rise Bridge. With the 135-ft Bridge, Barrier 9 would be 3822 feet long, and also 30 feet high. Throughout its length, the proposed ground elevation for Barrier 9 is higher than that for the existing barrier, and the barrier would be located on retaining wall or structure in some areas. The constructability of this barrier will be reevaluated during the final design noise analysis. With the 135-foot high Bridge, Barrier 9 would benefit 248 of 251 impacted receptors and benefit another 43 under the CBA. The total SF/BR value would be 394 for the CBA. The net SF/BR factor is 99 for the CBA, and the barrier would be reasonable according to VDOT's reasonableness criteria.

Barrier 10 in CNE 16 would benefit the athletic fields of the Crestwood Intermediate School and single family homes between Booker St. and the north side of I-64. The barrier would be 4640 feet long and 15 feet high. With the 135-foot high Bridge, Barrier 10 would benefit 28 of 33 impacted receptors and benefit another 61 under the CBA. The SF/BR value would be 782 for the CBA. Barrier 10 also would be reasonable for the 135-foot bridge option.

Barrier 11 was designed to benefit impacted single-family homes in CNE 17 along Robert Welch Lane in the southwest quadrant of the I-64/I-464 interchange. The barrier would be 2611 feet long and 15 feet high. For the CBA it would benefit 18 of 19 impacted homes and benefit an additional 10 homes with 5 decibels of noise reduction or more. The square feet per benefited receptor would be 1399, and the barrier would be reasonable, according to VDOT's criteria.

Barrier 12 in CNE 18 is designed to benefit single-family homes and Roosevelt Memorial Park cemetery in the northwest quadrant of the I-64/I464 interchange. The barrier would be 6038 feet long and 25 feet high. With the 135-foot high Bridge, Barrier 12 would benefit 48 of 62 impacted receptors and benefit another 79 under the CBA. The SF/BR values would be 1189 and the barrier would be reasonable according to VDOT's reasonableness criteria. An overlapping barrier to address the transition of the barrier along a ramp from fill to structure was not evaluated in this preliminary assessment. This complex area will be reassessed during the final design phase of the project.

Barrier 13A would benefit single-family homes in the Queens Gate and Kings Gate community in CNE 19, located in the southeast quadrant of the I-64/I-464 interchange. The barrier would be 1616 feet long and 20 feet high. Under the CBA, it would benefit two impacted receptors and an additional 23 receptors. The SF/BR value is 1293. Therefore, Barrier 13 would be reasonable, since it is below VDOT's 1600 SF/BR criteria.

Barrier 13B was evaluated to benefit an isolated single receptor, a gazebo adjacent to a commercial building in CNE 19. The barrier would benefit the receptor with 8 dBA of noise reduction, therefore the barrier is feasible. However, at 516 feet long and 15 feet high, the SF/BR factor would be 7753, well above VDOT's criteria of 1600, so the barrier is not reasonable.

Barrier 14 would replace an existing barrier in CNE 20 in the northeast quadrant of the I-64/I-464 interchange with a barrier nearly twice as long, extending north along I-464 beyond where the existing barrier ends. The area includes many impacted single-family homes as well as recreation areas associated with three churches. Barrier 14 would be 6596 feet long and range in height from 15 to 30 feet. The barrier would benefit 71 of 73 impacted receptors under the CBA, and benefit an additional 58 receptors. The total surface area per benefited receptor is 1221, but the surface area of the existing barrier (108,180 sq. ft.) is to be subtracted from the total (157,550 sq. ft.) when evaluating reasonableness of replacement barriers. The resulting net SF/BR factor is 383. The barrier is reasonable per VDOT's criteria.

Barrier 15 is designed to benefit the Morgan Apartments on Gateway Court in CNE 21, south of I-64 and east of Battlefield Boulevard. The barrier would be 1892 feet long, 25 feet high and benefit 48 of 74 impacted receptors. At a surface area per benefited receptor of 986 or lower, Barrier 15 would be reasonable according to VDOT's criteria.

Identified noise barriers must satisfy final feasibility and cost reasonableness criteria. Therefore, the noise barrier parameters identified in this document are preliminary and should not be considered final. Final design parameters, feasibility, and cost reasonableness must be based upon an approved road design alignment and include all required materials and installation costs. If a noise barrier is determined to be feasible and reasonable, the affected public will be given an opportunity to decide whether they are in favor of construction of the noise barrier.

FHWA finds that the noise impacts are not significant.

Water Quality & Aquatic Resources

Surface waters in the study area flow into either the Western Branch of the Elizabeth River or the Southern Branch of the Elizabeth River, which are tributaries to the James River and, ultimately, the Chesapeake Bay. There are no designated National Wild or Scenic Rivers in Virginia. The Southern Branch of the Elizabeth River, the Gilmerton Deep Creek Canal, and several streams and unnamed tributaries intersect the study area. The Western Branch of the Elizabeth River is located outside of the study area; however, it is fed by some of these tributaries. The streams that were field-verified to intersect the study area include Hodges Creek, Newton Creek, and unnamed tributaries of Goose Creek and Deep Creek.

Several streams and river segments within the vicinity of the study area are listed as impaired. Goose Creek, Deep Creek, Hodges Creek, Mains Creek, and the Southern Branch of the Elizabeth River were listed as impaired for Aquatic Life Use because of failure to meet the dissolved oxygen criteria and for Fish Consumption Use. In addition, the Virginia Department of Health (VDH) has issued a fish consumption advisory for polychlorinated biphenyls (PCBs) for these surface waters and for dioxins in the Southern Branch of the Elizabeth River and its tidal tributaries.

Most of the tidal stream impacts would occur as a result of the construction of the CBA. The CBA would span approximately 2,800 feet of the Southern Branch of the Elizabeth River and Deep Creek, similar to the length of the existing High Rise Bridge. Permanent stream impacts would result from construction of new bridge piers and abutments for the bridge structure. Tidal streams also would be affected by estimated permanent roadway impacts west of the bridge, including the Gilmerton Deep Creek Canal and the western portion of Deep Creek. The western portion of Deep Creek west of the bridge would be impacted by fill required for the roadway. It is anticipated that the CBA would impact Hodges Creek.

The CBA is estimated to have 1.88 acres of tidal stream/river impacts. Approximately 5,098 linear feet of the non-tidal streams within the study area are located in interchange areas and are therefore assumed to be impacted. For the purposes of this study, a worst case scenario is presented and all streams are assumed to be channelized and/or placed in culverts. Once the project advances into design, additional avoidance and minimization measures may be possible.

The CBA would generate pollutants during construction and operation. Sediment runoff produced during construction would be minimized by the production of and adherence to an approved erosion and sediment control plan. Temporary and permanent SWM measures, including SWM ponds, sediment basins, vegetative controls, and other measures, would be implemented to minimize potential degradation of water quality. The CBA would not inhibit the attainment of Total Maximum Daily Limit (TMDL) goals for the Elizabeth River and streams in the study area. Once the project advances into design, the CBA would be designed to comply with both federal and state stormwater requirements in place at that time. The inclusion of SWM facilities into the CBA would substantially improve stormwater runoff quality compared to the existing condition.

Based on the Federal Emergency Management Agency (FEMA) flood insurance rate map (FIRM), approximately 290 acres of 100-year floodplains and another 20 acres of 500-year floodplains are located within the study area. These floodplains are primarily located in the eastern portion of the study area, along the Elizabeth River, Deep Creek, and the Gilmerton Deep Creek Canal. The width of the floodplain extends continuously from the Gilmerton Deep Creek Canal east to Great Bridge Boulevard (Route 190), a distance of approximately three miles. The 100-year and 500-year floodplains also are associated with Newton Creek to the northeast of the I-64/I-464 Interchange. The floodplain along a tributary to Newton Creek extends into the study area approximately 850 feet and is approximately 250 feet in width. There also are floodplains associated

with Goose Creek in the western portion of the study area. The 100-year floodplain associated with a tributary of Goose Creek is located to the southwest of the I-64/I-664 (Bowers Hill) Interchange and is approximately 2,100 feet long and approximately 900 feet in width within the study area.

Estimated impacts as a result of the CBA for the 100 year floodplain are 20.98 acres and 3.75 acres for the 500 year floodplain. The estimated permanent impacts to floodplains beneath the bridges would result from the construction area of the piers. Encroachments resulting from the CBA are not “significant encroachments” as defined in 23 CFR §650.105(q). Once the project advances to design, additional avoidance and minimization of potential impacts to floodplains may be possible.

FHWA finds that the impacts to water quality and aquatic resources are not significant.

Wetlands and Waters of the U.S.

Waters of the U.S. are defined by US Army Corps of Engineers (COE) and EPA regulations, and are described generically in EPA's 404 (b) (1) Guidelines as rivers, streams, ponds, and special aquatic sites, (*e.g.*, sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes).

Approximately 91 acres of wetlands were identified within the study area including 43 acres of estuarine intertidal emergent (E2EM) wetlands, five (5) acres of palustrine emergent (PEM) wetlands, and 44 acres of palustrine forested (PFO) wetlands. Approximately 1.23 acres of the E2EM wetlands are part of the 7.5-acre Chesapeake Land Development Tidal Bank, which is located east of the High Rise Bridge. The CBA would have impacts to both tidal and non-tidal wetlands. Wetlands would be impacted by roadway widening, bridge piers and abutments, interchange modifications, and stormwater management facilities (SWM). Impacts to wetlands have been avoided as practicable through the alternatives screening process. Once the project advances into design, additional avoidance and minimization measures may be possible.

Most of the estimated non-tidal wetland impacts would be to two large PFO wetlands located at the Route 13 Interchange. Estimated impacts to PEM wetlands within the Bowers Hill Interchange result in approximately one acre for the CBA. The impacts to tidal wetlands beneath the bridges would result from the area of the piers. The permanent impacts east and west of the bridges result from impacts of placing fill beneath the roadway. Additional tidal wetland impacts would result to the Chesapeake Land Development Tidal Bank property from the CBA due to a relocation of the existing Libertyville Road to the south. Most of the estimated tidal wetland impacts would result from impacts due to fill.

Permits are anticipated as a result of unavoidable impacts to streams and wetlands from the CBA. For this study, the permit process would proceed once the National Environmental Policy Act (NEPA) process is concluded. Once the project advances into design, additional avoidance and minimization measures may be possible. Once the final

engineering design is complete, the wetland impacts would be calculated and would provide the basis upon which wetland compensation would be determined. Non-tidal stream impacts would be compensated for by purchase of stream credits or onsite restoration of degraded streams. Mitigation of tidal stream or river impacts would be determined during the permitting stages with the appropriate agencies.

FHWA finds that the impacts to wetlands and waters of the U.S. are not significant.

Groundwater

The VDH noted that no ground water wells are within a one mile radius of the study, not within Zone 1 or 2 of any public water sources, no apparent impacts to public drinking water sources, and that the local utility would need to verify potential impacts to public water distribution systems or sanitary sewage collection systems. The potential for non-point source pollutants to enter groundwater or surface water from storm water runoff would be managed by implementing an erosion and sediment control plan and a storm water management plan (including a pollution prevention plan) in accordance with VDOT's most current *Road and Bridge Specifications*. These specifications prohibit contractors from discharging any contaminants that could affect water quality. In the event of accidental releases, the contractor will be required to immediately notify all appropriate local, state, and federal agencies and take immediate action to contain and remove contaminants in accordance with the approved pollution prevention plan.

FHWA finds that the impacts to groundwater are not significant.

Threatened and Endangered Species

Section 7 of the Endangered Species Act outlines consultation procedures for federal interagency cooperation to conserve federally listed species and designated critical habitats. VDOT initiated coordination with the U.S. Fish and Wildlife Service (USFWS) to determine whether formal Section 7 Consultation is required. Early in the planning process, VDOT began coordinating with agencies involved with federal and state listed threatened and endangered species. Scoping responses from the agencies served as a guideline for further work. Throughout September and October 2013, a number of internet databases were explored in an effort to identify supplementary federal and state listed species; these include the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) system, the DGIF *Virginia Fish and Wildlife Information Service* (VaFWIS) database, and the DCR Natural Heritage Program database for the three subwatersheds that comprise the study area. The northern long-eared bat (*Myotis septentrionalis*) was officially listed by the USFWS as threatened on April 2, 2015 (effective on May 4, 2015). A review of the USFWS IPaC system indicates that the northern long-eared bat could be present within the study area. No surveys were completed as part of this study to document the potential presence of the bat.

VDOT has consulted the USFWS IPaC and has determined that the northern long-eared bat could be present within or adjacent to the study area. Once study advances to design,

VDOT would obtain an updated IPaC report to confirm if the bat or other federally-listed species were present within or adjacent to the study area. If species are present, VDOT, in coordination with FHWA, would enter into the appropriate level of Section 7 consultation with USFWS under the Endangered Species Act. This is consistent with previous recommendations from USFWS. In previous coordination, USFWS recommended that, because of the possibility that survey protocols for the northern long-eared bat may be altered over time, further coordination should be undertaken with USFWS closer to construction. This consultation process would be completed prior to any ground disturbing activity. As the study area considers an existing interstate facility, it is unlikely that this coordination would result in a change in the location decision. Based on FHWA's and VDOT's previous experience consulting with USFWS for the northern long-eared bat, a "likely to adversely affect" determination is unlikely. Even if the project is determined to likely to adversely affect the species and formal consultation is required, a "jeopardy" biological opinion for any of the three species is highly unlikely. In addition, the formal consultation process requires the USFWS to issue a Biological Opinion that contains mandatory reasonable and prudent measures that the USFWS considers necessary or appropriate to minimize the impact. All reasonable and prudent measures in a Biological Opinion will be incorporated into the project in order to minimize any potential impacts to threatened and endangered species.

FHWA finds that the impacts to threatened and endangered species populations are not significant. Notwithstanding, FHWA will not authorize the use of federal funds for construction until VDOT documents the results of the Section 7 consultation in a NEPA reevaluation for FHWA's consideration.

Hazardous Materials

The environmental evaluation showed that no potential hazardous materials are located within the project area. All hazmat issues have been addressed and no additional hazardous materials investigations are needed. If contaminated soils are discovered during construction, VDOT will develop and implement procedures for their proper management through coordination with the regulatory agencies, and/or through the development of special provisions. No adverse impact is anticipated due to hazardous materials within the project area.

FHWA finds that the hazardous materials impacts are not significant.

Construction Impacts

During construction, temporary environmental impacts can occur but can be controlled, minimized or mitigated through careful attention to prudent construction practices and methods. Potential temporary construction impacts and preventive practices are summarized below.

Water Quality. Through implementation and monitoring of best management practices during and after construction, water quality impacts would be effectively avoided or

minimized and mitigated. Specifically, the potential for non-point source pollutants to enter groundwater or surface water from storm water runoff would be managed by implementing an erosion and sediment control plan and a storm water management plan (including a pollution prevention plan) in accordance with VDOT's most current *Road and Bridge Specifications*. These specifications prohibit contractors from discharging any contaminants that could affect water quality. In the event of accidental releases, the contractor will be required to immediately notify all appropriate local, state, and federal agencies and take immediate action to contain and remove contaminants in accordance with the approved pollution prevention plan.

Air quality. Construction-related air quality impacts such as emissions from diesel-powered equipment, burning of debris, fugitive dust, and the use of cutback asphalt would be temporary. The proposed improvements would comply with all applicable local, state, and federal regulations (including the Virginia Environmental Regulation 9 VAC 5-40-5600 *et seq.* on fugitive dust emissions, and 9 VAC 5-40-5490 *et seq.* regarding cutback asphalt). Measures to control dust would include minimizing exposed earth by stabilization practices (including grass, mulch, pavement, and/or other types of cover) as early as possible following ground disturbance. Other stabilization practices would be implemented in accordance with VDOT's most current *Road and Bridge Specifications* manual.

Noise. Construction activity may cause intermittent fluctuations in noise levels. Temporary noise impacts would be attenuated through implementation of the VDOT-developed and FHWA approved noise limit specification for construction activities (as specified in VDOT's most recent *Road and Bridge Specifications*). Section 107.16(b) 3 of VDOT's Road and Bridge Specifications prescribes contractor requirements for noise control during construction. The contractor will be required to conform to this specification to reduce the impact of construction noise on the surrounding community.

Solid Waste Disposal. Any solid waste impacts created during construction would be temporary. All solid waste material resulting from clearing and grubbing, demolition, or other construction operations would be removed from the project and disposed of in an appropriate manner.

Hazardous Materials. It is expected that no additional hazardous materials evaluations would be required. If contaminated materials are encountered during construction, VDOT will develop and implement appropriate procedures for their proper management and coordinate the removal, disposal, and/or treatment of the materials, as necessary. If contaminated groundwater is encountered during construction, VDOT will implement appropriate specifications for proper management and treatment of the water, as necessary.

FHWA finds that the construction impacts would not be significant.

Indirect Impacts

As part of this scoping effort, a number of planning documents prepared by the City of Chesapeake were reviewed, including the City's Comprehensive Plan, Moving Forward-Chesapeake 2035, the 2035 Land Use Plan, and the 2050 Master Transportation Plan. These documents illustrate that the proposed improvements have been considered in the local and regional planning processes for some time.

Specific indirect effect study areas were developed for each of the following resource topics:

- Socioeconomic and Land Use
- Natural Resources
- Recreational Resources
- Historic Properties.

As depicted on the 2035 Land Use Plan within the 2035 Comprehensive Plan Update, the study area traverses land planned for a variety of land uses including Industrial/Logistics in the northwest portion of the study area and Low Density Residential land uses to the south. The study area lies predominantly within the Urban Overlay district, with portions south of I-64 crossing into the Suburban Overlay district. The intent of the Urban Overlay district is to provide opportunities for infill development in areas of established infrastructure in order to reduce less efficient, sprawling development patterns. The Suburban Overlay district aims to provide a transition area between the urban areas of Chesapeake and the outer lying rural area. Thus, the Urban Overlay district has been identified as the principal location for increased future residential, commercial, and industrial development. The 2050 Development Pattern Map also identifies much of the study area corridor as within an Auto-Oriented Major Activity Center, an area of development designed with an emphasis on automobile use access, rather than pedestrian access.

It should be noted that induced growth is not anticipated for the CBA because the improvements associated with each alternative occur on an existing interstate facility and do not result in any new interchanges. Because the study area is in an advanced land use progression, it is more likely that the proposed transportation improvements could result in infill development than urban/suburban sprawl. As a result, the improvements are not expected to be a catalyst for induced growth, but rather accelerate existing or planned growth. Any growth that does occur is expected to occur along the existing corridor in existing or previously developed areas where the environment already has been impacted.

Given the high level of development that already has occurred around the existing interstate facility, the project should have minimal consequence on the surrounding populations and land uses. While it is not anticipated that induced growth would occur, the existing land uses for the region may become more desirable properties resulting in changes to higher density uses and infill development. Construction of a 135-foot bridge would result in the potential for similar indirect effects as the no-build condition, as both

would allow for the movement of all conceivable vessels along the river. Under these conditions, marine development south of the High Rise Bridge could expand to match that of areas north of the study area.

Aquatic environments also would experience further fragmentation by extending culverts along streams and the Gilmerton Cut. The construction of a new bridge alignment also would create some new fragmentation. Given the level of impact and impairment that has occurred in the waterways within the study area, it is unlikely that the widening of the existing interstate facility would represent a measurable level of fragmentation. In addition, the construction of modern stormwater management facilities would result in beneficial indirect effects in the waterways surrounding the direct impact area.

FHWA finds that the indirect impacts from the project would not be significant.

Cumulative Impacts

Cumulative impacts are the impact on the environment resulting from the incremental impact of the project when added to other past, present, and reasonably foreseeable future actions. Other past, present, and reasonably foreseeable future actions in the study area underway by the city, state and federal governments that could cumulatively impact the environment include:

Present and Reasonably Foreseeable Projects in Chesapeake That Are Funded and Part of the Regional Traffic Model

Project Name	Project Description	Status
Dominion Boulevard	Widen from 2-lane undivided arterial to a 4-lane limited access highway, add urban interchanges and replace the steel drawbridge with 95foot fixed span bridge.	Under Construction
Portsmouth Boulevard	Widen from 2 lane undivided arterial to 4 lane arterial	Committed project in HRTPO 2034 Long-Range Transportation Plan

Note: the Portsmouth Boulevard project is a committed project in the HRTPO 2040 Long-Range Transportation Plan as well.

Reasonably Foreseeable Future Projects Sponsored by the City of Chesapeake

Project Name	Project Type	Project Description
22nd Street Bridge	Transportation	Replace the existing bridge with new 2-lane bridge and sidewalks
Bruce and Taylor Road Right Turn Lane	Transportation	Right turn lane extension
Centreville Turnpike Bridge Repairs	Transportation	Repair existing structure
Deep Creek Bridge	Transportation	Replacement of existing Deep Creek bridge with 2-lane split leaf bascule bridge and roadway approaches
Elbow Road Curve Realignment	Transportation	Improve curve radii and shoulders
Elbow Road Flashing Beacons	Transportation	Install curve warning flashing beacons
Gum Road Multi Use Path	Transportation	Construct 10' wide asphalt multi-use path along east side of Gum Road
Greenbrier Streetscape Project	Transportation	Landscaping, decorative streetlights, sidewalks, left turn lanes and crosswalks
Hudgin Bridge	Transportation	Replace existing steel and timber bridge on Fentress Airfield Road
Military Highway Improvements	Transportation	Left turn lanes and traffic signal improvements
Portsmouth Boulevard Widening Phase IV	Transportation	Widen from 2 lanes to 4 lanes
Sunray Bridge Rehab	Transportation	Superstructure replacement and roadway approaches
Triple Decker Bridge Rehab	Transportation	Rehabilitation of existing bridge structure
Volvo/Independence Roundabout	Transportation	Construct roundabout at Volvo Parkway/Independence Parkway
Woodlake Drive Extension	Transportation	Extend Woodlake Drive to Battlefield Boulevard
Compressed Natural Gas Fueling Station #2	Facilities	Design and construct second natural gas fueling station
Conference Center Renovation	Facilities	Renovation of existing conference facility
Dismal Swamp Trail	Facilities	Extend paved trail from Deep Creek to Ballahack Road
Great Bridge Visitors Center	Facilities	Provide 8,500 square foot building at Great Bridge Battlefield and Waterways Park

Many of the past actions that have contributed to the baseline for this analysis occurred as part of the residential, commercial, and industrial development. This development transformed a rural landscape into an urban/suburban environment. This change resulted in a loss of wildlife habitat and species, impacts to wetlands and streams, and increased levels of air and water pollution. The development also formed the basis for the tremendous level of population growth Chesapeake experienced.

Cumulative impacts consist of the impacts of the alternatives under consideration in the EA and the impacts of the past, present, and reasonably foreseeable future actions. The table below illustrates the resources that could potentially be impacted by the present and reasonably foreseeable future projects.

Project Name	Project Type	Anticipated Environmental Issues that could be Cumulative
Dominion Boulevard	Transportation	Socioeconomics and land use, natural resources, recreational resources
Gilmerton Bridge	Transportation	Socioeconomics and land use, natural resources, recreational resources
South Norfolk Jordan Bridge	Transportation	Socioeconomics and land use, natural resources, recreational resources
Portsmouth Boulevard	Transportation	Socioeconomics and land use, natural resources, recreational resources
I-64 High Rise Bridge	Transportation	Socioeconomics and land use, natural resources, recreational resources
22nd Street Bridge	Transportation	Socioeconomics and land use, natural resources
Bruce and Taylor Road Right Turn Lane	Transportation	Socioeconomics and land use, natural resources
Centreville Turnpike Bridge Repairs	Transportation	Socioeconomics and land use, natural resources
Deep Creek Bridge	Transportation	Socioeconomics and land use, natural resources
Elbow Road Curve Realignment	Transportation	Socioeconomics and land use, natural resources
Elbow Road Flashing Beacons	Transportation	Socioeconomics and land use, natural resources
Gum Road Multi Use Path	Transportation	Socioeconomics and land use, natural resources, recreational resources
Greenbrier Streetscape Project	Transportation	Socioeconomics and land use, natural resources, recreational resources
Hudgin Bridge	Transportation	Socioeconomics and land use, natural resources
Military Highway Improvements	Transportation	Socioeconomics and land use, natural resources
Portsmouth Boulevard Widening Phase IV	Transportation	Socioeconomics and land use, natural resources
Sunray Bridge Rehab	Transportation	Socioeconomics and land use, natural resources
Triple Decker Bridge Rehab	Transportation	Socioeconomics and land use, natural resources
Volvo/Independence Roundabout	Transportation	Socioeconomics and land use, natural resources
Woodlake Drive Extension	Transportation	Socioeconomics and land use, natural resources
Compressed Natural Gas Fueling Station #2	Facilities	Socioeconomics and land use, natural resources
Conference Center Renovation	Facilities	Socioeconomics and land use, natural resources
Dismal Swamp Trail	Facilities	Socioeconomics and land use, natural resources, recreational resources
Great Bridge Visitors Center	Facilities	Socioeconomics and land use, natural resources, recreational resources
Juvenile Services PLC Systems Replacement	Facilities	Socioeconomics and land use, natural resources
EECBG Energy Retrofits	Facilities	Socioeconomics and land use, natural resources
Elizabeth River Park Improvements	Facilities	Socioeconomics and land use, natural resources, recreational resources
Mosquito Control Facility Relocation	Facilities	Socioeconomics and land use, natural resources
Municipal Parking Lots and Sidewalks	Facilities	Socioeconomics and land use, natural resources

Project Name	Project Type	Anticipated Environmental Issues that could be Cumulative
Fire Station #10	Facilities	Socioeconomics and land use, natural resources
Public Safety Emergency Dispatch Center	Facilities	Socioeconomics and land use, natural resources
Fire Station #13 Expansion	Facilities	Socioeconomics and land use, natural resources
Public Works Solid Waste Operation Relocation	Facilities	Socioeconomics and land use, natural resources
Renewal and Replacement Work	Facilities	Socioeconomics and land use, natural resources
South Norfolk Community Center Upgrades	Facilities	Socioeconomics and land use, natural resources
Residential and commercial development	Facilities	Socioeconomics and land use, natural resources, recreational resources
Industrial development	Facilities	Socioeconomics and land use, natural resources, recreational resources
The Elizabeth River Project	Environmental Restoration	Socioeconomics and land use, natural resources, recreational resources

All of these actions have had or will have an impact on the environment. For purposes of cumulative impact analysis for this EA, the primary issue is whether or not the proposed project would significantly impact the same resources as the actions listed above, resulting in an accumulation of impacts to the resource in question. Given that the impacts from the project on individual environmental resources are relatively minor, the effects of the CBA would not significantly contribute to adverse cumulative impacts.

FHWA finds that the cumulative impacts would not be significant.

Council on Environmental Quality's Regulations

The Council on Environmental Quality's regulations requires consideration of a project's context and intensity in determining whether the project will have a significant impact (40 C.F.R. 1508.27). Regarding context, the regulations state, "Context means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant." Since this project is a site-specific action, significance depends upon the effects of the project on the project area.

Regarding intensity, the regulations identify issues that should be considered in determining if the intensity of a project's impacts is substantial enough to warrant the preparation of an environmental impact statement (40 C.F.R. 1508.27(b)(1-10)). These issues are considered in the determination of whether there is a significant impact. The issues are addressed below:

1. Impacts that may be both beneficial and adverse – The project would result in beneficial impacts on the human environment. The project would reduce congestion, enhance corridor safety, address the need for High Rise Bridge improvements, and improve the ability of the corridor to function as a key emergency evacuation route. We find that these beneficial impacts, when taken in conjunction with the adverse impacts, do not reach the level of significant requiring the preparation of an environmental impact statement.

2. The degree to which the project affects public health or safety – It is not anticipated that the project will adversely affect public health and safety. Since the project would enhance the capacity of the I-64/High Rise Bridge Corridor, congestion would be reduced, while addressing safety issues and improving the region's key emergency evacuation route. Also, the project will not cause or contribute to an exceedance of the National Ambient Air Quality Standards.

3. Unique characteristics of the geographical area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers or ecologically critical area – The project would not adversely affect historic properties. Chesapeake Public Schools confirmed that there would not be any long term adverse effects on the operational/recreational use of the property and they support the de-minimis finding under Section 4(f). As discussed above, the impacts on wetlands would not be significant. No prime farmlands, wild and scenic rivers, or ecologically critical areas would be impacted by the project. There would be no effects to historic properties.

4. The degree to which the effects on the environment are expected to be highly controversial – The term “controversial” refers to cases where substantial dispute exists as to the size, nature, or effect of the action rather than to the existence of opposition to a use, the effect of which is relatively undisputed. On this project, there has been no documented dispute regarding the size, nature, or effect of the project from the state or federal environmental resource agencies or any other entity. Further, no environmental resource agency has opposed the project. Based on the above, we find that the degree to which the effects on the environment are expected to be highly controversial does not require an environmental impact statement for this project.

5. The degree to which the effects on the quality of human environment are highly uncertain or involve unique or unknown risks – There are no known impacts on the quality of the human environment that can be considered highly uncertain or involve unique or unknown risks. The CBA is anticipated to acquire 157 partial acquisitions, 70 full acquisitions, and 69 displacements. No community facilities, services or access would be adversely affected by the project. The project will not cause or contribute to an exceedance of the National Ambient Air Quality Standards.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future

consideration – This action will not set a precedent for future actions with significant effects or represent a decision in principle about a future consideration. FHWA’s regulations at 23 CFR 771.115(a) list the types of actions that normally have a significant effect on the environment thereby requiring the preparation of an environmental impact statement. The widening of an existing facility is not on the list. The project has logical termini and independent utility and represents a reasonable expenditure; it does not force additional improvements to be made to the transportation system. This decision will not establish a precedent regarding the requirements of NEPA as they will be applied to future projects.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts - This action has logical termini and independent utility and does not force additional transportation improvements to be made to the transportation system. Cumulative impacts were addressed in the EA and in this document, and we find that they are not significant.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss of significant scientific, cultural, or historic resources – No districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places would be adversely affected by the project.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act – VDOT has consulted the USFWS IPaC and has determined that the northern long-eared bat could be present within or adjacent to the study area. Once study advances to design, VDOT would obtain an updated IPaC report to confirm if the bat or other federally-listed species were present within or adjacent to the study area. If species are present, VDOT, in coordination with FHWA, would enter into the appropriate level of Section 7 consultation with USFWS under the Endangered Species Act. This is consistent with previous recommendations from USFWS. In previous coordination, USFWS recommended that, because of the possibility that survey protocols for the northern long-eared bat may be altered over time, further coordination should be undertaken with USFWS closer to construction. This consultation process would be completed prior to any ground disturbing activity. As the study area considers an existing interstate facility, it is unlikely that this coordination would result in a change in the location decision.

Based on FHWA's and VDOT's previous experience consulting with USFWS for the northern long-eared bat, a "likely to adversely affect" determination is unlikely. Even if the project is determined to likely to adversely affect the species and formal consultation is required, a "jeopardy" biological opinion for any of the three species is highly unlikely. In addition, the formal consultation process requires the USFWS to issue a Biological Opinion that contains mandatory reasonable and prudent measures that the USFWS considers necessary or appropriate to minimize the impact. All reasonable and prudent

measures in a Biological Opinion will be incorporated into the project in order to minimize any potential impacts to threatened and endangered species.

FHWA finds that the impacts to threatened and endangered species populations are not significant. Notwithstanding, FHWA will not authorize the use of federal funds for construction until VDOT documents the results of the Section 7 consultation in a NEPA reevaluation for FHWA's consideration.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment – The proposed action does not knowingly threaten a violation of any Federal, State, or local law for the protection of the environment. All applicable permits will be acquired prior to construction.

Conclusion

Based on the foregoing information and other supporting information, we find that the proposed project will not have a significant impact on the environment. Therefore, an environmental impact statement is not warranted, and the Finding of No Significant Impact is being issued accordingly. The Finding of No Significant Impact will be reevaluated as appropriate pursuant to 23 C.F.R. 771.129(c) as major approvals are requested from FHWA.