3. PROVIDE A DESCRIPTION OF THE PROJECT, PROJECT PRIMARY AND SECONDARY PURPOSES, PROJECT NEED INTENDED USE, AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

- The purpose must include any new development or expansion of an existing land use and/or proposed future use of residual land
- Describe the physical alteration of surface waters
- Include a description of alternatives considered to avoid or minimize impacts to surface waters, including wetlands, to the maximum extent practicable. Include factors such as, but not limited to, alternative construction technologies, alternative project layout and design, alternative locations, local land use regulations, and existing infrastructure
- For utility crossings, include both alternative routes and alternative construction methodologies considered
- For major surface water withdrawals, public surface water supply withdrawals, or projects that will alter instream flows, include the water supply issues that form the basis of the proposed project.

Project Description

The proposed Atkinson Boulevard and Bridge Project is located in Newport News, Virginia and will provide a new east-west transportation link between Jefferson Avenue (Route 143) and Warwick Boulevard (Route 60). Atkinson Boulevard will be designed as a minor urban arterial road and will extend for approximately 1.2 miles from the intersection of Atkinson Way and Warwick Boulevard (Route 60) east to Jefferson Avenue. Currently, Atkinson Way is a east-west road that terminates at the Denbigh Compost & Drop-off Facility. The project will continue east from the Denbigh Compost & Drop-off Facility, over the CSX railroad, Interstate 64 (I-64) and ultimately intersects Jefferson Avenue. It is bounded to the north by Fort Eustis Boulevard (Route 105) and to the south by Denbigh Boulevard (Route 173). The center of the proposed project can be found at the following coordinates 37° 9' 12.664 N and 76° 32' 27.904" W.

Purpose and Need

As identified in the approved Environmental Assessment (EA) (June 21, 2006), Finding of No Significant Impact (FONSI) (February 16, 2010) and Reevaluation (January 23, 2015), the purpose and need of the project is based on existing and future network deficiencies and the lack of major east-west routes that facilitate cross-peninsula traffic movement. This project would improve transportation mobility and capacity, which in turn would improve access and reduce congestion (see Level of Service [LOS] table, chapter II of EA, and traffic assessment in "CORPS of Engineers Request for Information", March 2014). Atkinson Boulevard provides an additional east-west connector and reduces cross city travel time, reduces delays on Denbigh Boulevard, and reduces intersection delays. The City of Newport News Comprehensive Plan further indicates that traffic forecasting for the City's major roads during the peak hour expects congestion (LOS E and F) despite planned improvements. Furthermore, the City's Comprehensive Plan calls for building east-west connectors between Warwick Boulevard and Jefferson Avenue every two to three miles and includes the proposed Atkinson Boulevard and Bridge Project.

Alternatives

This project considered multiple alternatives during the planning process as discussed in the approved environmental documentation. The formulation of these alternatives was based primarily on the transportation needs identified during the development of the purpose and need. Five alternatives were assessed: Specifically, Alternatives A, B, C, D and the No-Build. These alternatives were assessed based on their ability to address the identified purpose and need as well as their potential environmental effects. Including: right-of-way, business and residential displacement and relocations, streams and wetlands, environmental justice, air, noise, hazmat, and cultural resources. Alternatives A, C, and D were eliminated from detailed study due to right-of-way, displacement and relocation impacts, and not adequately addressing the identified purpose and need. The No-Build was included for evaluation in the EA to serve as a benchmark for the comparison of future conditions and impacts and was not selected as the preferred alternative because it did not address the identified purpose and need. Alternative B was selected as the alternative that meets the purpose and need and is described below.

Preferred Alternative

As discussed in the approved environmental documentation, Alternative B was selected as the preferred alternative because it will improve transportation mobility and capacity at three major intersections: Fort Eustis Boulevard and Jefferson Avenue, Denbigh Boulevard and Jefferson Avenue, and Denbigh Boulevard and Warwick Boulevard. This alternative would improve access and reduce congestion by providing adequate east-west transportation connectors between Jefferson Avenue and Warwick Boulevard that would serve communities on both side of I-64. The proposed alignment will provide four 12-foot travel lanes with curb and gutter and a raised grass median all within the right of way limits. Additionally, Alternative B is included in the City's Comprehensive Plan.

Water Resources

Palustrine Forested (PFO), Palustrine Scrub-Shrub (PSS), and Palustrine Emergent wetlands (PEM) have been identified throughout the extent of the project. All wetlands identified within the project limits have a hydrologic connection to waters of the U.S. and are classified by the Department of Environmental Quality (DEQ) as Class III, non-tidal. Therefore, the stream, wetlands, and ditches within the project location do not have a tidal influence. No isolated wetlands were identified in the project limits. In addition, unnamed tributaries and jurisdictional ditches flow toward Stony Run (an anadromous fish stream [from approximately Warwick Boulevard to it's confluence with the Warwick River]) which flows to the Warwick River and the James River. Stony Run is located to the south of the project and is entirely outside of the project limits. No federal or state threatened and endangered water or anadromous fish use streams have been identified in the project limits. The hydrologic unit code for the project limits is 02080206–Lower James and JL38-Warwick River sub-watershed. An approved preliminary jurisdictional determination for waters of the U.S. was issued on July 22, 2014 by the U.S. Army Corps of Engineers (USACE) and has a project number of NAO-2006-05076 (06-V6800) (VDOT U000-121-V11), Stony Run.

The project limits are outside of the bounds of the 100-year floodplain as shown on the approved Flood Insurance rate map dated May 2, 1977 (panel H & I-07) and January 17, 1986 (Panel 6 of 18). The entire project limits are contained within flood zone C which is a low risk area above the 500-year flood level and has a 0.2% chance that an annual flood will occur. Impacts to wetlands and streams are unavoidable. Permanent, temporary and conversion impacts are anticipated through the construction of this project. In addition, a jurisdictional ditch will be relocated. Tree removal and ground clearing activities are necessary for the construction of this project. To minimize adverse effects to wildlife resources it is suggested that tree removal be outside of the primary songbird nesting season.

The original design location was entirely within a palustrine forested wetland (PFO) (known as Wetland 8 PFO as shown on the Preliminary Jurisdictional Determination dated July 22, 2014) along the north side of Atkinson Way. Wetland impacts have been reduced during the design by shifting the alignment to the south and adjacent to Atkinson Way. This shift will now impact the outer edge of Wetland 8 in several locations.

One stream (unnamed tributary to Stony Run) will be impacted as a result of this project. The impact to this stream is unavoidable. The stream will be crossed at a slight skew and will maintain continuous flow by the installation of an appropriate sized box culvert during construction.

The proposed single bridge design will allow for the proposed alignment to provide a continuous span bridge over the CSX railroad, wetlands, and I-64. The bridge footprint has been minimized to all extents practicable, minimizing impacts to wetlands requiring less fill material into the wetlands. In addition, the single bridge design as compared to a two bridge design reduces impacts to wetlands by 2.16 acres. The original tree canopy will be maintained where possible. However, the area under the bridge will be cleared and grubbed to allow for the construction and future maintenance of the bridge. Due to tree removal and future maintenance, wetlands located under the bridge will be converted from Palustrine Forested (PFO) to Palustrine Emergent (PEM). Once construction is complete all wetlands located under the bridge will function as PEM wetlands. As such this project will have conversion impacts.

The bridge will be placed on piers to support the structure, permanently impacting both palustrine forested and emergent wetlands. Despite placing piers in wetlands for support, this reduces the overall wetland impact area. The area under the bridge will be kept natural, allowing for wetlands to function as emergent wetlands by not completely filling them. Permanent wetland impacts between the bridge piers are not expected. After construction is complete, pre-construction elevations/contours will be returned to the disturb wetland areas.

In order to construct the bridge with stable approaches, a Mechanically Stabilized Earth (MSE) wall will be constructed west of I-64 and CSX railroad. Embankments east of I-64 will have a 2:1 slope thus further reducing wetland impacts. MSE wall construction will minimize impacts to wetlands by achieving a vertical face and will use less concrete than regular mass concrete retaining structures. This construction requires a net reduction in the amount of fill that will be placed in wetlands. In addition, the median width was reduced from the original design from 28 feet to 16 feet.

Within temporary construction easements strict measures have been taken to reduce the negative impacts that construction may have to wetlands. To aid in minimizing ground disturbance and stabilizing the project area, trees will be cleared but not grubbed (root system will be left intact) within the temporary construction easement. No grubbing allows for the tree's root system to remain intact and sprout new shoots minimizing the manipulation to the wetland hydrology and characteristics. The temporary wetland impacts will be restored to preconstruction contours once construction is complete and will not be maintained (volunteer tree species will be allowed to vegetate this area) after construction is complete.

Temporary impacts to palustrine forested wetlands have been reduced from the original design for the construction of the bridge between I-64 and CSX railroad specifically to wetland 5. Construction access was originally designed to enter the project location off of Trustwood Lane. This design was eliminated during final design because of the negative impact it would have to wetland 5. Construction access will be provided from I-64 which drastically reduces impacts to wetland 5.

Stormwater management is proposed for the construction of this project. The site location was selected based on available City of Newport News owned property, topographic, hydraulic engineering, and availability of offsite untreated storm water from adjacent properties to offset Jefferson Avenue's needs. Instead of placing another basin along Jefferson Avenue that would be located in wetlands, we were able to capture offsite drainage from the adjacent subdivision (located north of the proposed roadway) to meet the current requirements. Stormwater management will be beneficial to this project and the environment by reducing the pollutant loads entering the adjacent water resources and the harmful effects that it could have. Stormwater will be treated to protect the surrounding land from erosion, flooding and pollutants. The stormwater facility will be permitted separately from this Joint Permit Application. The proposed stormwater facility will be permitted through the Virginia Stormwater Management Program. Below you will find the impacts associated for the construction of the stomwater management facility.

Additional Alternatives Analysis As Part Of 404 Permitting Process

In January 2014, the City of Newport News and Whitman, Requardt and Associates met with USACE to discuss their request for additional information concerning Alternatives C and D. The additional detailed analysis for Alterative C and D included: alternatives comparisons, engineering comparisons, traffic assessment, wetland impacts, responses to additional questions USACE previously requested from VDOT, and purpose and need discussion. This additional analysis was completed to aid the USACE in making their Least Environmentally Damaging Practicable Alterative (LEDPA) determination. Based on this additional analysis, the consideration of Alternative C and D were eliminated and not carried forward. This additional analysis was provided to the USACE on March 14, 2014.

Alternatives C and D do not improve mobility or reduce congestion in the transportation network and do not provide an additional east-west connection to facilitate cross peninsula traffic. Furthermore, Alternatives C and D do not adequately meet the purpose and need for this project. This additional analysis focused on the engineering solution to providing another east-west connector and selecting an alternative. The results of the additional analysis are summarized below and further support the selection of Alternative B as the preferred alternative.

- Alternative C and D do not meet the purpose and need

- Alternative B provides a better engineering solution to providing another east-west connector because:
  - It is located approximately mid-way between Fort Eustis Boulevard and Denbigh Boulevard
  - No design exceptions required
  - No impact to the traffic lanes of I-64
  - No required railroad improvements
  - Improves safety to traveling public

- Alternative B has more permanent wetland impact as compared to Alternative C and D. However, neither Alternative C or D should be considered the LEDPA because:
  - Alternative B has a lower cost than Alternative C and D
  - Alternative B has no required displacements of homes or businesses
  - Alternative B has no potential social justice issues
  - Alternative B is almost fully contained on existing City property
  - Alternative B has no potential Section 4(f) impacts

- Alternative B increases capacity by providing a new four-lane east-west connection between Jefferson Avenue and Warwick Boulevard and provides the most relief to Denbigh Boulevard

For copies of the minutes of the April 28, 2014 and January 16, 2014 meetings and additional information requested by the USACE see Section 4.0 Alternatives C and D Analysis and Request for Additional Information of the document.

Preferred Alternative B Impacts
Impacts To Streams
The project will result in a total of 246 linear feet, 1,570.56 square feet, and 2, 041.73 cubic yards of permanent non-tidal stream impact to an unnamed tributary of Stony Run.

Permanent Impact 13 -Stream crossing of Tributary 1 to Stony Run (proposed box culvert)
A total of 246 linear feet, 1,570.56 square feet, and 2,041.73 cubic yards of non-tidal stream channel will be filled due to the proposed installation and construction of a triple barrel (single 8-foot rise by 8-foot wide and double 6-foot rise by 8-foot wide) reinforced concrete box culverts. Per the Preliminary Jurisdictional Determination dated July 22, 2014 this stream is known as Tributary 1 to Stony Run. This stream has perennial flow and a watershed less than 5 square miles from the point of impact upstream. The existing stream channel has been straightened in the location of the proposed culvert. Therefore, it does not require the proposed culvert to be constructed on a skew, reducing stream impacts. In addition, a high amount of sediment lines the stream bed within the project location making for an unstable aquatic habitat environment.

The barrel closest to the right bank looking downstream is a 8-foot rise by 8-foot wide box culvert and will be constructed in the base flow channel or low flow channel to maintain stream flow once construction is complete. The construction of this culvert is known as Stage 1 per the impact plates provided. This barrel will be countersunk at a minimum of 6" below the controlling stream invert both upstream and downstream of the culvert. The countersinking is necessary to meet the current culvert countersinking requirements for non-tidal waters. To dissipate the stream's energy the inlet will be depressed and armored with rip rap and the proposed outlet will form a scour hole and will also be armored with rip rap. Impacts are unavoidable for the construction of the proposed crossing. The other two barrels (double 6-foot rise by 8-foot wide) will be constructed adjacent to the 8-foot rise by 8-foot wide barrel. The two barrels will be located in the floodplain of the stream which contains wetlands and are designed and sized to receive large storm events.

The proposed triple barrel reinforced concrete box culverts will convey a 25-year storm event which meets the criteria for urban minor arterial as set forth in the VDOT Drainage Manual. The governing constraint of the culvert design is to provide conveyance of the 100-year storm event with an increase in headwater of less than one foot in comparison to existing conditions per the manual. The proposed roadway and box culvert result in a maximum increase in headwater of 0.1 feet. This increase does not have any adverse effect on any surrounding properties.

Box culvert construction will require cofferdams for the in-stream work to isolate the construction area. The cofferdams will be constructed of rock and the locations are shown on impact plates 5 and 6. All work within the stream will be phased/staged (Stage 1 (single barrel) and phase/stage 2 (double barrel)) from each end of the construction area. Phasing/staging the construction will allow the stream flow to be diverted into a temporary ditch keeping the work area isolated, dry and maintain stream flow. Excavation and installation of the box culvert will be confined to within the cofferdams to isolate the work area. Once construction is complete cofferdams will be removed from Tributary 1 to Stony Run. The plan section and cross section drawing are included for your review. Excavated materials will be stockpiled in a manner that prevents reentry into the stream.

For the construction of phase/stage 1 (single barrel), a diversion ditch will be constructed in uplands to maintain flow. The construction of the ditch will allow the stream flow to be diverted around the proposed culvert location keeping the work area dry, maintaining stream flow and reducing sediment from entering the stream during construction. The ditch will be approximately 10 foot in width. To prevent sediment from entering the stream and work area a silt fence will be installed between the ditch and stream

channel. Once construction is complete, cofferdams and silt fence will be removed and the ditch will be filled with VDOT approved clean fill material free of contaminants in toxic concentrations.

To minimize harmful effects that concrete may have on the aquatic environment and its residents, concrete will harden and cured prior to contact with open water.

Impacts to Wetlands
Permanent (Impact 2,5,8,12,14,15,17,19,21,25,32,37,41,42, and 45)
A total of 8.81 acres, 383,979.57 square feet of wetlands will be permanently impacted as a result of this project. Permanent impacts to wetlands will require tree removal. The trees within the wetlands will be cleared (removed) and grubbed for the construction of the proposed roadway using heavy construction equipment. Trees will only be removed and grubbed as depicted on the impact plates provided. VDOT approved clean fill material free of toxics will be necessary to be placed in the PFO, PSS and PEM wetlands filling them to create a solid road base.

Permanent Impact (PFO) – 7.74 acres, 337,157.01 square feet (Impact 2,5,8,12,15,21,32,and 42)

Permanent Impact (PSS) – 0.03 acres, 1,182.35 square feet (Impact 17)

Permanent Impact (PEM) – 1.05 acres, 45,640.22 square feet (Impact 14,19,25,37,41, and 45)

Temporary (Impact 1,3,4,6,16,18,20,23,24,26,27,29,30,33,34,36,38,40,43,44,46,47, and 48)
A total of 1.26 acres, 55,017.20 square feet of wetlands will be temporarily impacted as a result of this project. Temporary impacts to the PFO, PSS, and PEM wetlands will be necessary for the construction of this project. Strict measures have been taken to reduce the negative impacts that construction may have on wetlands. To aid in minimizing ground disturbance and stabilizing the project area, trees will be cleared but not grubbed (root system will be left intact) within the temporary construction easement in wetland areas. No grubbing allows for the tree's root system to remain intact, sprout new shoots and minimizing the manipulation to the wetland hydrology. The temporary wetland impacts will be restored to preconstruction contours once construction is complete and will be not be maintained (volunteer tree species will be allowed to vegetate this area).

Temporary Impact (PFO) – 0.86 acres, 37,340.61 square feet (Impact 1,3,4,6,16,18,23,29,30,33,34,38, and 44)

Temporary Impact (PSS) – 0.01 acres, 418.72 square feet (Impact 47)

Temporary Impact (PEM) – 0.40 acres, 17,257.86 square feet (Impact 20,24,26,27,36,40,43,46,and 48)

Temporary Impact 27 (Temporary work trestle)
A total of 0.01 acres, 523.20 square feet of PEM wetland will be temporarily impacted for the construction of a temporary work trestle. The trestle will be used for stationing construction equipment on while constructing the new bridge. The temporary work trestle for the new bridge over I-64 and CSX railroad will be constructed on pilings to reduce impacts to wetlands. The temporary work trestle will extend out into a palustrine emergent wetland (Wetland 6). To support the trestle a maximum of 135 piles will be temporarily placed in the PEM wetland. Workers will install these piles with an impact hammer or use vibratory pile installation. From the temporary work trestle, the piers of the bridge will then be constructed. Constructing the piers from the trestle reduces the amount of temporary fill within the PEM wetland. Once the bridge piers are constructed, the temporary work trestle will be removed.

Temporary Impact 23 and 30 (temporary access road between CSX railroad and I-64)
A total of 0.06 acres, 2,656.87 square feet of PFO wetland is being temporarily impacted for the construction of a temporary access road. The access road is necessary to access the interior portions of the project area to transport bridge construction materials. The temporary access road will be approximately 30 feet wide and be constructed primarily in uplands. However, it will impact PFO wetland 5 in two locations. Several temporary access road alternatives were considered. The access road as shown on Plate 3 has the least environmental impacts of the alternatives which reduces the impacts to PFO wetlands.

Conversion (Impact 9,10,11,22,28,35,and 39)
A total of 0.89 acres, 38,774.26 square feet of wetland will be converted from PFO to PEM wetlands as a result of this project. Conversion impacts are necessary for wetlands classified as PFO located under the bridge footprint. Once cleared it will be kept free of woody vegetation. This area will be restored to emergent wetlands upon completion of the project. Tree growth under the bridge would present a future maintenance issue. Only the bridge piers will permanently fill the wetlands once construction is complete.

In addition conversion impacts will be necessary for the installation of an underground water utility along Jefferson Avenue. The utility easement will be maintained, converting forested wetlands to emergent wetlands. The above total includes the conversion of the utility easement.

It is anticipated that conversion impacts will be mitigated on a 1:1 replacement basis in accordance with 9VAC25-670-70-J.

Impacts to Ditches
Permanent Impact 7 (culvert extension)
A total of 0.003 acres of jurisdictional ditch is being impacted by the extension of twin 36-inch diameter culvert pipes along the western portion of the Denbigh Compost & Drop-off Facility. The culvert pipes are necessary to maintain hydrologic flow. The design will provide for additional area necessary for the placement of safety guardrails along the shoulder of the proposed driveway access.

Relocation Impact 49 (Ditch relocation-self mitigating)
A total of 0.5 acres, 21,794.93 square feet and a length of 986 linear feet of jurisdictional ditch are being relocated along the north side of Atkinson Way and adjacent to the existing roadway within the Denbigh Compost & Drop-off Facility property. The proposed ditch dimensions are approximately 10 foot wide, 6 feet in depth and will have a length of 890 feet. The banks will be sloped 2:1 grade. The existing ditch conveys stormwater along the western portion of the property to it's confluence with an unnamed tributary of Stony Run. This ditch is currently maintained. The proposed ditch will have a dimensionally similar cross-section and have the same natural substrate as the original ditch. Large storm events will have an unrestricted flow allowing for maximum flood storage. A portion of the proposed ditch will be constructed in uplands. The proposed ditch will serve the same functions providing a storage area for stormwater runoff, and maintain a conveyance to the unnamed tributary to Stony Run as the existing ditch. It is anticipated that the proposed ditch relocation will be considered self-mitigating. Once construction is complete the original ditch location will be filled. Wetlands associated with this ditch will maintain their hydrological connectivity to the unnamed tributary to Stony Run. As a result wetlands will not be drained.

Temporary Impact 31 (ditch crossing near (I-64))
A total of 0.06 acres and 2,577.15 square feet of jurisdictional ditch is being temporarily impacted by the installation of culvert pipes adjacent to I-64. The culvert will provide construction access to the interior portions of the project between CSX railroad and I-64. The temporary access road will be approximately 30 feet wide. The temporary access road will provide construction traffic to cross the jurisdictional ditch without damaging the banks. In addition, it will keep erosion and sediment generated by construction traffic to a minimum. The proposed twin culvert pipes will convey a 10-year storm event and maintain flow. Culverts will be strong enough to support construction equipment and will be placed within the same foot print of the existing ditch. The existing ditch conditions flows parallel to I-64 and is straight or channelized in nature. Disturbance to the ditch bed will be kept to a minimum. The culvert will be countersunk at a minimum of 6" below the controlling ditch invert both upstream and downstream of the culvert. The countersinking is necessary to meet the current culvert countersinking requirements for non-tidal waters. Once construction is complete the culverts will be removed, the ditch will be restored to its pre-construction contours, and properly stabilized.

Stormwater Management Impacts
A single stormwater management facility/basin is included in the construction of the proposed project. The site location was selected based on available City of Newport News owned property, topographic, hydraulic engineering, and availability of offsite untreated stormwater from adjacent properties to offset Jefferson Avenue's needs. The proposed facility/basin is located approximately 250 feet north of the Denbigh Compost Drop off facility and 650 feet south of Woodhaven Road. The required stormwater management will be beneficial to this project and the environment by reducing the pollutant loads entering the adjacent water resources and the harmful effects that it could have.

The proposed stormwater facility/basin will be permitted through the Virginia Stormwater Management Program and not part of the Joint Permit Application. The construction proposes to impact Palustrine Forested Wetlands (PFO) (AB-200 and AB-400) and convert PFO to Palustrine Emergent Wetlands (Wetland 8 and 11) per the Preliminary Jurisdictional Determination issued by the US Army Corps of Engineers on July 22, 2014.

- A total of 0.084 acres of permanent PFO wetland impacts and 0.04 acres of wetland conversion (Palustrine Forested to Palustrine Emergent) are anticipated for the construction of the stormwater facility/basin. These impacts are a result of the construction of the stormwater facility/basin and not the proposed roadway. Permanent wetland impacts will result from construction of the stormwater basin and conversion impacts will result from the construction of the inlet and outlet pipes.

- The current location of the proposed roadway alignment will permanently impact both wetlands AB-200 and AB-400. The proposed roadway is located south of the stormwater facility. The location of the roadway alignment and anticipated impacts will create a hydrologic disconnection of subsurface flow to the receiving waters, isolating both wetlands along the north side of the roadway. A total of 0.13 wetland acres would be isolated between the proposed roadway and the stormwater facility.

- A total of 0.21 acres of PFO wetlands would remain isolated (wetlands AB-200 and AB-400) for the construction of the proposed roadway and if the stormwater basin was not constructed. Permanent wetlands impacts are not anticipated to change regardless if the stormwater facility was constructed. However, conversion impacts of 0.04 acres are not anticipated if the facility/basin was not constructed.

- The jurisdictional ditch located to the north of the existing Atkinson Way and proposed roadway is being relocated along the north side of the existing Atkinson Way, south of the proposed roadway, and adjacent to the Denbigh Compost & Drop-off Facility. The relocation is necessary to maintain a hydrologic conveyance to an Unnamed Tributary to Stony Run. In addition, it will serve the same functions as the existing ditch by conveying stormwater runoff. It is anticipated that the ditch relocation will be self-mitigating. The ditch relocation is necessary due to property ownership acquisition. A total of 986 linear feet and 0.5 acres will be impacted and relocated.

Mitigation
As a result of the construction impacts, unavoidable permanent impacts to both streams and wetlands will be compensated for through compensatory mitigation. Mitigation credits will be purchased through an USACE and DEQ approved mitigation bank within the Hydrologic Unit Code 02080206 –Lower James before construction will commence. Documentation of an approved mitigation bank was accessed using the regulatory in-lieu fee and bank information tracking system (RIBITS) database. It is anticipated that the compensation ratios provided below will be applied to permanent and conversion impacts associated with this project.

Compensation ratios for permanent wetland impacts are as follows:
- 2 acres for each 1 acres of permanent impact to forested wetlands
- 1.5 acres for each 1 acre of permanent impact to scrub-shrub wetlands

- 1 acre for each 1 acre of permanent impact to emergent wetlands
- 1 acre for each 1 acre of conversion of forested wetlands to emergent wetlands

Compensation for permanent stream impacts used the unified stream methodology to assess the compensation requirements.

Historic Resource Information
On April 9, 2014 a memorandum issued from the Department of Historic Resources which is the State Historic Preservation Office (SHPO) for historic resources determining that no further identification efforts are warranted. No historic properties will be affected by the project. This determination was made as part of the National Environmental Policy Act process completed for this project.

Threatened and Endangered Species Information
Please refer to section 7 of this document for information regarding threatened and endangered species.

3. PROVIDE A DESCRIPTION OF THE PROJECT (Continued)

Date of proposed commencement of work (MM/DD/YYYY) ____ October 2016	Date of proposed completion of work (MM/DD/YYYY) July 2019
Are you submitting this application at the direction of any State, local, or Federal agency? _____Yes __X___No	Has any work commenced or has any portion of the project for which you are seeking a permit been completed? _____ Yes __X___ No
If you answered "yes" to either question above, give details stating when the work was completed and/or when it commenced, who performed the work, and which agency (if any) directed you to submit this application. In addition, you will need to clearly differentiate between completed work and proposed work on your project drawings. N/A	
Are you aware of any unresolved violations of environmental law or litigation involving the property? _____Yes _X__No (If yes, please explain)	

4. PREVIOUS SITE VISITS AND/OR PERMITS RELATED TO THE PROPOSED WORK (Include all Federal, State, and Local pre-application coordination or previous permits)

Agency	Activity	Permit/Project number, and explanation of non-reporting Nationwide permits previously used	Action taken ** and Date of Action	If denied, give reason for denial
FHWA	Environmental Assessment (Reevaluation)	Federal M-5122(144) State U000-121-V11,PE-101	Signed 1/23/2015	N/A
USACE	Preliminary Jurisdictional Determination	NAO-200605076 (06-V6800)(VDOT U000-121-V11)	Issued Preliminary Jurisdictional Determination 7/22/2014	N/A
DHR	Section 106 of NHPA coordination	1994-0789	No historic properties will be affected 4/9/2014	N/A
Dovetail Cultural Resource Group	Summary of the Proposed Atkinson Boulevard Extension	State U000-121-V11,PE-101 DHR file number 1994-0789	November 2013	N/A
FHWA	FONSI\Revised EA	Federal M-5122(144) State U000-121-V11,PE-101	Signed 2/16/2010	N/A
VDOT	Resolution of the Commonwealth Transportation Board		4/17/2008	N/A

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
VIRGINIA DIVISION

ENVIRONMENTAL ASSESSMENT

ROUTE:	**Atkinson Boulevard**
STATE PROJECT:	**U000-121-V11, PE-101**
FEDERAL PROJECT:	**M-5122 ( )**
FROM:	**Warwick Boulevard**
TO:	**Jefferson Avenue**
CITY:	**Newport News**

THIS DOCUMENT PREPARED BY
BRIAN S. REID SR.
ENVIRONMENTAL ENGINEER
VIRGINIA DEPARTMENT OF TRANSPORTATION

SUBMITTED PURSUANT TO 42 USC 4332 (2) (c)

We concur that this document is acceptable for public availability.

6/21/06
Date

John Drinkins
for the Division Administrator

ENVIRONMENTAL ASSESSMENT

Atkinson Boulevard
State Project: U000-121-V11, PE-101
Federal Project: M-5122 ( )

1. STUDY AREA

The Virginia Department of Transportation (VDOT), in cooperation with the Federal Highway Administration (FHWA), is considering improvements in the City of Newport News, Virginia that would provide for a new east-west transportation link between Route 143 and Route 60. The corridor extends for approximately 1.2 miles between Route 143 in the east and Route 60 in the west and is bounded to the north by Route 150 and to the south by Route 173 (see Figure 1).

HISTORY

The need for an east-west connection was first identified in 1987 as the Lucas Creek Road Connection and was subsequently modified in the ***Peninsula Area Transportation Study – Year 2000 Major Thoroughfare Plan*** (PATS 2000) to include the Snidow Boulevard Connection. The Peninsula Planning District Commission, now known as the Hampton Roads Planning District Commission (HRPDC), published the PATS 2000. The need has also been identified in the City of Newport News ***Framework for the Future Comprehensive Plan*** adopted in 2001. The project is in the FY 2005-2008 Transportation Improvement Program and in the HRPDC 2026 Long Range Plan.

NEED

The need for the project is based on existing and future network deficiencies and the lack of major east-west routes that facilitate cross-Peninsula traffic movement. The City of Newport News Comprehensive Plan further indicates that existing major traffic congestion points are on I-64, Warwick Boulevard, Oyster Point Road, J. Clyde Morris Boulevard, and Jefferson Avenue and that sections of these streets are currently experiencing congestion (Level of Service [LOS] E and F). (See appendix A for a description of the different levels of service). The City's Comprehensive Plan calls for building east-west connectors between Warwick Boulevard and Jefferson Avenue every two to three miles.

Congestion is anticipated to further increase over the next 20 years even with planned road improvements such as the eight lanes widening of I-64; widening Jefferson Avenue, J. Clyde Morris Boulevard, Oyster Point Road and Warwick Boulevard to six lanes as indicated in the City Comprehensive Plan. The HRPDC 2020 Traffic Forecasts indicate that high traffic volumes and congestion are forecast for Jefferson Avenue north of Bland Boulevard, reaching 63,000 VPD while forecasts for Warwick Boulevard north of Bland Boulevard reach 62,000 VPD.

The existing ADT for the three major intersections in the study area: Fort Eustis Boulevard and Jefferson Avenue; Denbigh Boulevard and Jefferson Avenue; and Denbigh Boulevard and Warwick Boulevard indicate the intersections are operating at LOS B and C according to 2005 traffic studies using HCM modeling (see table 1).

However, by the Design Year, 2030, the lack of adequate east-west transportation links in the study area results in all three intersection operations deteriorating to LOS E. According to AASHTO in heavily developed sections of metropolitan areas, Urban Minor Arterials can be designed for use to achieve a LOS D. When a LOS D is selected for design, it is desirable to consider the use of one-way streets or alternative bypass routes to improve the LOS. Transportation improvements, particularly those that add east-west capacity, would enhance the overall transportation system; provide access to Stony Run Park from communities east of I-64; promote access between businesses, residential communities, and schools on either side of I-64 in the study area.

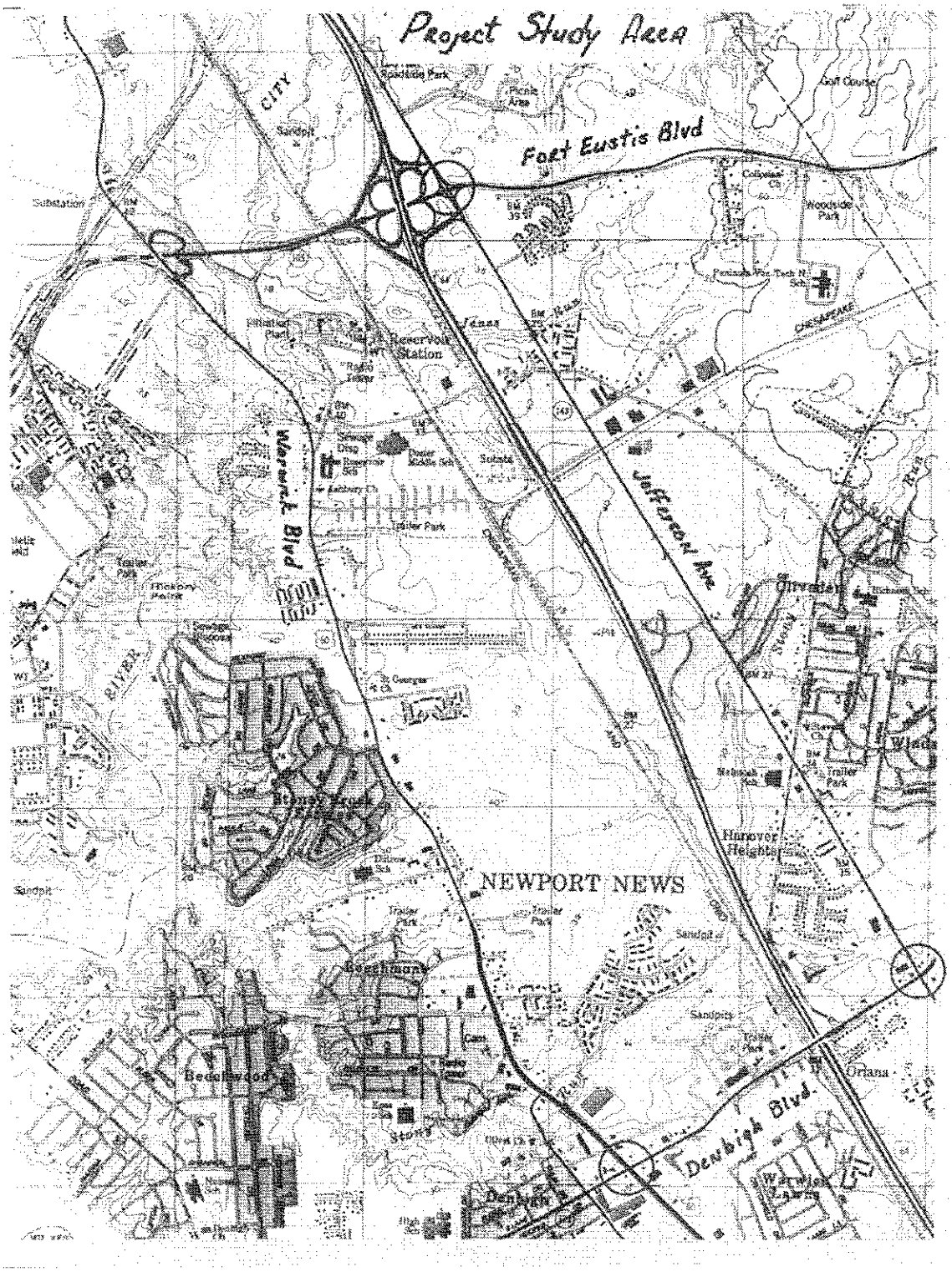
TABLE 1

Roadway Intersections Within Area Network	*2004 Existing*	*2030 No-Build*
Fort Eustis Boulevard and Jefferson Avenue	LOS B	LOS E
Fort Eustice Boulevard and Interstate 64 Off Ramp	LOS B	LOS E
Denbigh Boulevard and Jefferson Avenue	LOS C	LOS F
Denbigh Boulevard and Warwick Boulevard	LOS C	LOS F

SUMMARY

In conclusion, the purpose of the project is to improve transportation mobility and capacity, which in turn would improve access and reduce congestion. The study area lacks adequate east-west transportation connectors between Jefferson Avenue and Warwick Boulevard.

Figure 1


Project Study Area
Fort Eustis Blvd
Jefferson Ave
Warwick Blvd
Denbigh Blvd
NEWPORT NEWS
Reservoir Station
Hilton
Oriana
Denbigh

II. ALTERNATIVES

This section discusses the No-Build and Build Alternatives for this project and describes the reasons for their elimination or maintenance for further evaluation in this document.

2.1 ALTERNATIVES ELIMINATED FROM DETAILED STUDY:

Alternative "A" begins at the existing at grade intersection of Warwick Boulevard with Lucas Creek Road. The alignment trends northerly approximately one mile where it becomes common with Alternative "B". Alternative "A" continues northerly for approximately one mile until it approaches the CSX Railroad Yorktown spur, crosses railroad then continues over Interstate 64 to its terminus with Jefferson Avenue. Both CSX Railroad and Interstate 64 would be grade separated by bridge spanning the entire length then tying into Jefferson Avenue at grade.

The Typical Section depicting Alternative "B" *(Figure 2)* would have been used for Alternative "A". It shows a 4-lane divided roadway with a pavement width of 50 feet (supporting two 25-foot roads, each with two 12-foot lanes), a 16-foot raised median and curb & gutter. All proposed roadway construction under the Typical Section would be contained within a 107-foot minimum width right-of-way. Easements for construction and storm water management may also have been necessary in some areas outside the right-of-way limits. Under this typical section, roadside drainage would be addressed through storm sewers located beneath the curb & gutter elements.

Alternative "A" has a total length of 1.6 miles and would require 22.5 acres of Right of Way and displace 25 families 1 business and 2 personal properties. Wetland impacts are 6.1 acres of Palustrine Forested Wetlands, 1.7 acres of temporary Palustrine Forested / Palustrine Emergent Wetlands and approximately 200 linear feet of stream impacts. Construction cost for Alternative "A" is estimated at $41.2 million.

Alternative "A" was considered but was eliminated from detailed study due to the above substantial right-of-way and relocation impacts. Alternative "A" is estimated having 22.5 acres of right-of-way impacts and the alignment would displace 25 families. Alternative "B", on the other hand, would have fewer right-of-way impacts (16.1 acres), no relocations and a construction cost of $34.2 million compared to the Alternative "A" cost of $41.2 million.

Alternative "C" begins at Route 60 and Merry Oaks Drive opposite Warwick Landing Parkway. The alignment trends westerly between Reservoir Middle School and Dozier Middle on the right of Alternative "C" and the trailer park located to the left of the corridor. The corridor continues westerly to be bridged over the CSX Railroad line then provide for an at grade intersection at Industrial Park Drive prior to traversing under Interstate 64 where it would have to be narrowed or split in order to locate the two lanes of traffic on each side of the existing piers.. It ends at the intersection of Jefferson Avenue and Industrial Park Drive.

A modification of Alternative "C" – Alternative "D" - was also developed. Alternative "D" differs than Alternative "C" only in the area of the at-grade crossing with Industrial Park Drive. At this location Alternatives "C" and "D" separate and both alignments would go under I-64 and end at Jefferson Avenue. Alternative "D" would require the lengthening of both I-64 structures because it crosses I-64 further north. The total length of Alternative "D" is 1.01 miles with a construction cost of $26.9 million compared to $24.5 million for Alternative "C". Alternative "D" was established to avoid splitting the alignment between two pier structures under I-64 as Alternative "C" would do.

The Typical Section depicting Alternative "B" *(Figure 2)* would have been used for Alternative "C" and Alternative "D". It shows a 4-lane divided roadway with a pavement width of 50 feet (supporting two 25-foot roads, each with two 12-foot lanes), a 16-foot raised median and curb & gutter. All roadway construction under the Typical Section would be contained within a 107-foot minimum width right-of-way. Easements for construction and storm water management may also have been necessary in some areas outside the right-of-way limits. Under this typical section, roadside drainage would be addressed through storm sewers located beneath the curb & gutter elements.

Alternative "C" has a total length of 1.0 miles and would require 13.3 acres of Right of Way, displace 37 families and 1 business. Wetland impacts totals 0.6 acres of Palustrine Forested Wetlands, 2.1acres of temporary Palustrine Forested. Construction cost for Alternative "C" is estimated at $24.5 million.

Alternative "C" along with its modification - Alternative "D" - was considered but was eliminated from detailed study due to 1) right-of-way and displacement impacts and 2) the fact that it would not adequately address the purpose and need. The right-of-way and utility relocation was estimated to cost $12.9 million for Alternative "C" and $10.8 million for alternative "D". Alternatives "C" and "D" would have displaced 37 families and 1 business. Alternative "B" on the other hand, would require no residential or business displacements. Because Alternative "C" and "D" share the same alignment for most of its length, the 2030 ADT for both would be approximately 23,000 vehicles compared to 31,000 vehicles for Alternative "B". Although Alternative "C" would allow for a 2030 LOS C at the intersection of Fort Eustice Boulevard and Jefferson Avenue, the level of service (LOS) at the intersection of Denbigh Boulevard and Jefferson Avenue as well as Denbigh Boulevard and Warwick Boulevard would be LOS F. Alternative "B" on the other hand would allow for a LOS D to be achieved at those two intersections.

2.2 ALTERNATIVES CARRIED FORWARD:

NO-BUILD: The No-Build Alternative does not allow for construction of a new roadway between Warwick Boulevard and Fort Eustis Boulevard. As a result, the existing traffic conditions will further degrade as project traffic increases. Under the No-Build Alternative the existing roadway network would experience increases in the traffic volumes resulting in a decrease in the level of service.

Alternative "B" begins at-grade with the intersection of Warwick Boulevard and Snidow Boulevard. The alignment trends easterly past the Arbors Apartment complex for approximately three quarters of a mile where it becomes common with Alternative "A". Alternative "B" continues northerly for approximately one mile until it approaches the CSX Railroad Yorktown spur, crosses railroad then continues over Interstate 64 to its terminus with Jefferson Avenue. Both CSX Railroad and Interstate 64 will be grade separated by bridge spanning the entire length then tying into Jefferson Avenue at grade.

The Typical Section depicting Alternative "B" *(Figure 2)* shows a 4-lane divided roadway with a pavement width of 50 feet (supporting two 25-foot roads, each with two 12-foot lanes), a 16-foot raised median and curb & gutter. All proposed roadway construction under the Typical Section depicting Alternative "B" would be contained within a 107-foot minimum width right-of-way. Easements for construction and storm water management may also be necessary in some areas outside the proposed right-of-way limits. Under this typical section, roadside drainage would be addressed through storm sewers located beneath the curb & gutter elements.

Bridging: Bridge design would be initiated after alignment selection. The VDOT would most likely pursue the design of concrete bridges piles, beams, and deck. Alternative "B" includes the spanning of

CSX railroad. The clearance for the railroad would most likely be about 23 feet, dependant upon input from CSX railroad.

Alternative "B" alignment will improve transportation mobility and capacity at the three major intersections of Fort Eustis Boulevard and Jefferson Avenue, Denbigh Boulevard and Jefferson Avenue and Denbigh Boulevard and Warwick Boulevard, as indicated by the traffic analysis. Alternative "B" would improve access and reduce congestion by providing the study area adequate east-west transportation connectors between Jefferson Avenue and Warwick Boulevard in an area that would serve communities on both sides of Interstate 64.

Estimated Cost: Estimated costs for the construction of roadways and bridges and for the acquisition of right-of-way are as follows:

ESTIMATED PROJECT COSTS

ALTERNATIVE	"B"
Alignment Length (in miles)	1.2
Construction Cost (in $ millions)	$8.4
Right-of-Way Cost (in $ millions)	$4.8
TOTAL COST (in $ millions)	$34.2

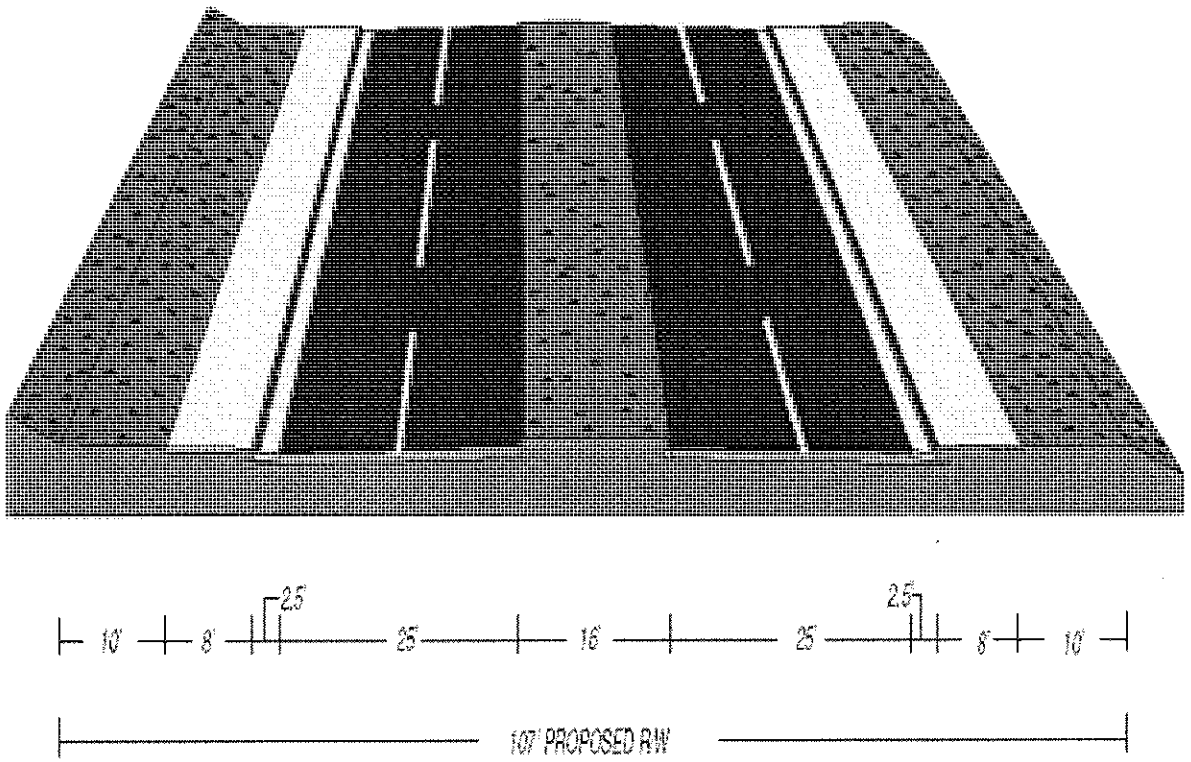
Level of Service Tabulation

The following tabulation shows LOS for the existing and future Build / No-Build:

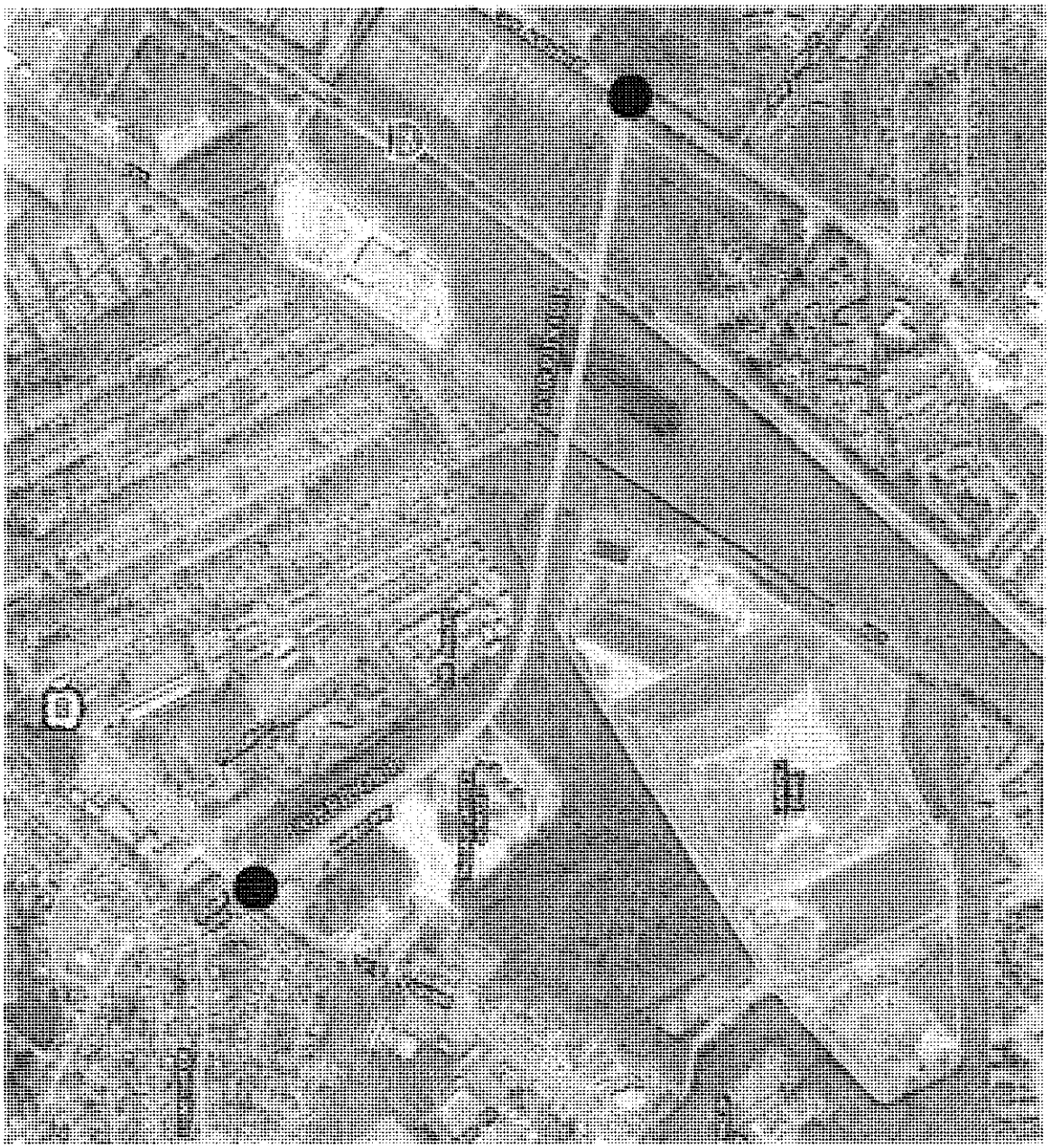
Roadway Segment	*2004 Existing*	*2030 No-Build*	*2030 Build Alternative "B"*
Fort Eustis Boulevard and Jefferson Avenue	LOS B	LOS E	LOS C
Fort Eustice Boulevard and Interstate 64 Off Ramp	LOS B	LOS E	LOS D
Denbigh Boulevard and Jefferson Avenue	LOS C	LOS F	LOS D
Denbigh Boulevard and Warwick Boulevard	LOS C	LOS F	LOS D

(FIGURE 2)

PROPOSED TYPICAL SECTION
ALTERNATIVE "B"
(ON NEW LOCATION)



(FIGURE 3)
ALTERNATIVE "B"



III. IMPACTS TO THE ENVIRONMENT

SOCIAL IMPACTS: At the time of preparation of this document, no organized opposition to the proposed project has occurred. The City of Newport News is supportive of this project and has endorsed this project as an Urban Highway System funding priority. The City of Newport News states that "this project will enhance the effect on emergency services by providing an alternate route for accessing emergencies and relieving traffic congestion on Fort Eustis Blvd. and Denbigh Boulevard allowing emergency vehicles less congested routes on those east-west connectors".

Based on the existing locations of communities within the project area, Alternative 'B' would allow for community cohesion between the subdivisions to the east and those on the west side of Interstate 64. Alternative "B" will also allow for a more direct access to recreational facilities for the communities.

RIGHT-OF-WAY: In order to construct Alternative "B", acquisition of additional right-of-way would be required. Under the proposed typical section, a minimum right-of-way width of 105 feet is required. The following tabulation shows approximate right-of-way requirements (in acres) for Alternative "B".

RIGHT-OF-WAY REQUIREMENTS

ALTERNATIVE	"B"
Alignment Length (in miles)	1.2
ROW Required (in acres)	16.2
Temp Construction Easement (in acres)	2.9

Storm water management facilities and wetland mitigation sites would also require additional right-of-way. Neither detention basins nor mitigation sites have been located or designed; however, appropriate locations and design features will be incorporated in project design once an alignment has been selected.

DISPLACEMENT AND RELOCATION: The VDOT has completed its ***Relocation Cost Summary Report*** to estimate the potential number of families, individuals, businesses, and non-profit organizations that might be displaced by the construction of Atkinson Boulevard. Estimated displacements are as follows:

TOTAL PROJECT DISPLACEMENTS

ALTERNATIVE	"B"
Families	0
Individuals	0
Business	0
Non-Profit	0
Personal Property	0

The acquisition and relocation program of the VDOT will be conducted in accordance with the ***Uniform Relocation and Real Property Acquisition Policies Act of 1970, as amended***. Relocation resources would be made available to all residential and business displacees without discrimination. Assurance is given by the VDOT, as required by Federal and State law, that adequate, decent, safe, and sanitary housing will be made available or provided to each residential displacee. Each displacee would be given sufficient time to negotiate for and obtain possession of replacement housing. Housing would be within the financial means of the displacee and available to all persons regardless of race, color, religion, sex, or national origin. If necessary, the VDOT would provide "last resort" housing; however, the provision of "last resort" housing is not anticipated. Special assistance in relocation will be given to those families with elderly or handicapped persons who might require special attention.

The VDOT feels that a relocation office is not needed for this project due to the fact that there are no relocations for Alternative "B" and the proximity of its Hampton Roads District Office in Suffolk.

ENVIRONMENTAL JUSTICE: This document has been prepared in accordance with ***Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations***. Pursuant to environmental justice principles, adverse environmental justice impacts include, but are not limited to, human health, community cohesion or economic viability, availability of public or private services, employment, displacements, traffic congestion, exclusion or separation from the broader community, or denial, reduction, or delay in the receipt of benefits.

General information regarding the makeup of environmental justice populations and potential displacements within those populations was obtained by the VDOT's Right of Way Section through standard windshield surveys (made without the benefit of personal contact) of any residential neighborhoods that would fall within the project area of potential affect.

Alternative "B" was reviewed and determined not to have a disproportionate human health, economic, social, or other impact on minority or low-income populations.

AIR QUALITY ANALYSIS: Air quality is defined by ambient air concentrations of specific pollutants determined by the U. S. Environmental Protection Agency (EPA) to be of concern with respect to the health and welfare of the general public. The subject pollutants are ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). EPA established National Ambient Air Quality Standards (NAAQS) for these pollutants.

Since the proposed construction of Atkinson Boulevard is in a non-attainment area for ozone, the project must be part of a conforming Transportation Improvement Plan (TIP) and the Long Range Transportation Plan (LRP). This project was included in the Hampton Roads Ozone non-attainment 8-hour conformity analysis of the FY 2005-2008 TIP and 2026 Constrained LRP that the FHWA/FTA approved on October 21, 2005.

A CO analysis for the existing conditions and proposed construction was performed for the intersection of Snidow Boulevard, which will be tied into the constructed Atkinson Boulevard, and Warwick Boulevard (Route 60). Eight sensitive receptor sites were selected in the proximity of this intersection. For this project, the forecasted traffic conditions in the existing year (2004), interim year (2017) and design year (2030) were analyzed. The CO analysis demonstrated that the proposed project of constructing Atkinson Boulevard would not adversely affect air quality. The project would not cause or contribute to a violation of air quality standards outlined in the NAAQS.

In addition to the criteria air pollutants for which there is National Ambient Air quality Standards (NAAQS), the EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-roads mobile sources (e.g., airplanes), area sources (e.g. dry cleaners) and

stationary sources (e.g. factories or refineries). An in-depth analysis for mobile source air toxics has been covered in the attached Air Quality Analysis.

NOISE ABEMENT:

Impact assessment has been performed for all noise sensitive areas within the Atkinson Boulevard location corridor, including condominiums; single family residential properties, a trailer park, a school, and undeveloped land. The study shows that noise impacts will occur for the design year (2030) alternative.

Noise impact was identified along the corridor under the design year (2030) build condition for Alternative "B". A total of twenty-six (26) residential properties are predicted to be impacted under Build Alternative "B" conditions. Impacts will be due to future traffic noise levels that approach or exceed the FHWA Noise Abatement Criteria (NAC) for Activity Category B, and a substantial increase predicted to occur between existing noise levels and design year build case noise levels. The existing year (2004) noise levels range from 53 to 67 dBA, and the design year no-build levels range from 53 to 67 dBA. The design year (2030) build levels range is 57 to 69 dBA for Alternative "B". See Summary of Sound Levels in the attached noise study for a complete listing of the sound level for the selected study sites.

Various noise abatement measures have been considered to reduce or eliminate the impacts. Only the construction of sound barriers has been found to be feasible and reasonable. Noise barriers were evaluated for all impacted properties. (See attached study)

.

CULTURAL RESOURCES: In accordance with **Section 106 of the National Historic Preservation Act,** the VDOT has completed surveys to identify historic properties potentially affected by the project. These surveys to identify significant archaeological sites, buildings, structures, districts, and objects were coordinated with the Virginia State Historic Preservation Officer (VaSHPO) on behalf of the FHWA. The area of potential effects (APE) for this project extends from the intersection of Warwick Boulevard and Atkinson Boulevard to the proposed intersection with Jefferson Avenue.

Archaeological Resources: A Phase I Cultural Resource Survey was completed by William & Mary Archaeological Project Center. The Virginia Department of Historic Resource concurred on April 7, 1997 stating that the project will have no effect on properties that are listed or eligible for listing on the National register of Historic Places. Alternative "B" was reevaluated and on April 13 2004 it was determined that the project still would have no effect on historic properties. The project meets the requirements of Section 106 of the National Historic Preservation Act of 1966 as amended.

Architectural Resources: Architectural surveys conducted of the APE of Alternative "B" found no Architectural resources eligible for the NRHP.

NATURAL RESOURCES AND ENDANGERED SPECIES: Based on current knowledge of the area, there was the potential for rare species to occur in the area. Notable among the species was the state threatened Mabee's salamander (***Ambystoma mabeei***).

Endangered Animal Species: The VDOT Wildlife Biologist reviewed the project in regards to the above animal species. The VDOT Wildlife Biologist has determined that the area is not an appropriate habitat for the Mabee's salamander nor is there habitat located within the appropriate distance from the project.

Endangered Plant Species: The VDOT contacted the Virginia Department of Conservation and Recreation (VDCR) through its State Environmental Review Process. VDCR documented the presence of natural

resources in the area. However, due to the scope of activity and the distance to the resource, they did not anticipate the project adversely impacting any of the natural resources.

WETLANDS: Wetland data was collected by VDOT personnel in April, July and September 2004 and all wetland boundaries were verified via field inspection by the Corps of Engineers in September 2004.

The wetlands within the study corridors can be grouped into three classes;

1. Seasonally flooded palustrine forested wetlands on terraces and in depressions.
2. Permanently flooded palustrine emergent wetlands that have formed within an abandoned borrow scar.
3. Wetlands, supported by overbank flooding, associated with an unnamed tributary to Stony Run.

The seasonally flooded palustrine forested wetlands on this project are found on flat to gently sloping mineral soils. These soils are mapped as the poorly drained Chickahominy silt loam, poorly drained Slage fine sandy loam, and poorly drained Yemassee fine sandy loam.

Dominant vegetation within the seasonally flooded palustrine wetlands are provided in table 1.

Dominant Vegetation: Seasonally Flooded Palustrine Wetlands

Quercus alba	OAK,WHITE
Pinus taeda	PINE, LOBLOLLY
Acer rubrum	MAPLE, RED
Liquidambar styraciflua	GUM,SWEET
Quercus rubra	OAK, NORTHERN RED
Quercus michauxii	OAK, SWAMP CHESTNUT
Quercus nigra	OAK,WATER
Quercus alba	OAK,WHITE
Quercus phellos	OAK,WILLOW
Quercus Velutina	OAK, BLACK
Clethra alnifolia	PEPPER-BUSH,COAST

Lyonia ligustrina	MALEBERRY
Diospyros virginiana	PERSIMMON,COMMON
Ulmus americana	ELM,AMERICAN
Vaccinium corymbosum	BLUEBERRY,HIGHBUSH
Nyssa sylvatica	GUM,BLACK
Chasmanthium laxum	SPIKEGRASS,SLENDER
Clethra alnifolia	PEPPER-BUSH,COAST
Carex species.	SEDGES

There is a 170-foot long portion of the alignment that has been cleared and ditched by others between Jefferson Avenue and Route 64. This cleared area no longer exhibits wetland criteria. Because wetland restoration efforts are underway as part of a consent decree, this area is included in the wetland impact estimates for this project based on its former status as seasonally flooded palustrine forested wetland.

Between Route 64 and the railroad tracks, an artificially created wetland was identified. This wetland area is a permanently flooded palustrine emergent wetland that has formed within an abandoned borrow scar with a bermed outlet. This wetland is characterized by dead loblolly pine trunks, no shrub layer, and soft rush (Juncus effusus), and sedges (Carex sp.) in the herbaceous layer.

A portion of the wetlands found in association with the unnamed tributary to Stony Run is vegetatively maintained, palustrine emergent wetlands. These wetlands are dominated by common reed (Phragmites australis) Broad leaf cattail (Typha latifolia), and soft rush (Juncus effusus). The remainder of the wetlands within this crossing are forested wetlands dominated by American Hornbeam (Carpinus caroliniana), coast pepper-bush (Clethra alnifolia), and willow oak (Quercus phellos).

Water Quality Permits and Mitigation: Based on preliminary engineering estimates of 0.1 acre to 3.0 acres of wetland impact per crossing for a total of six crossings and 200 linear feet of stream impacts (see below), an Individual Section 404 Permit will be required from the Corps of Engineers, and an Individual Virginia Water Protection Permit will be required from the Department of Environmental Quality. The project will include all practicable measures to minimize harm to wetlands, in accordance with Executive Order 11990, ***Protection of Wetlands***.

IMPACTS TO WETLANDS
ALTERNATIVE "B"

PERMANENT IMPACTS	*TEMPORARY IMPACTS*	*WOUS*
6.10 ACRES PFO	1.7 ACRES PFO/PEM	200 linear feet

Floodplain Management: The proposed project will have no significant adverse effect on natural and beneficial floodplain values, nor is it expected to increase any floodplain related risks to human safety, health, or welfare, in accordance with Executive Order 11988, ***Floodplain Management***.

PRIME FARMLAND: In cooperation with the United States Department of Agriculture, Natural Resource Conservation Service (NRCS), Form NRCS-CP-106, the "Farmland Conversion Impact Rating" was completed using the Federal evaluation criteria. A copy of this form is attached. The project will not require the acquisition of prime agricultural areas or unique farmlands. In addition, no existing or proposed agricultural or forestal districts are located in the project area.

HAZARDOUS MATERIALS: In 1999 the City entered into a 30-year contract with Sanifill of Virginia, Inc. for disposal of solid waste. As a result, The City closed the last remaining landfill (Denbigh Landfill) in Newport News. The closed landfill was designed to have six distinct disposal areas called "cells". Cells 1 through 3 were used for waste and later closed. Cell 5 was built but never used. Cell 6 is being used as a

composting area with crush and run being used as a removable base. Cell 4 is being used as a dewatering basin for ditch cleaning operations.

Along the boundaries of the landfill are several facilities for environmental purposes. These facilities consist of leachate pre-treatment lagoon, collection ponds, wells, gas collection facilities and dewatering pumps. These items will become isolated once the landfill has been converted to a city park. Part of the project is expected to run through portions of cell 6, the portion used as the mulching facility; this will have no impacts to the Landfill. The project area was reviewed by the Department to ascertain the presence of any sites that might contain hazardous material or substance. There were no areas of concern within the project limits.

AGRICULTURAL/FORESTAL DISTRICTS: The project was coordinated with the U.S.D.A. Soil Conservation Service in compliance with the Farmland Protection Policy Act (FPPA). The areas within the project corridor are either urbanized or undeveloped forested lands and do not contain agricultural or forestal districts.

PARKS & RECREATIONS AREAS: The City of Newport News Comprehensive Plan "Framework for the Future" states that a City Park facility will be developed as part of the Denbigh Landfill closure process. The closed landfill is comprised of 228 acres that is divided into 6 cells. Five of the 6 cells will be developed as part of the city park conversion and a portion of cell 6 will remain as a compost facility. The proposed project would traverse across the northern part of the landfill (cell 6) to provide an east/west connection between Warwick Boulevard and Jefferson Avenue. Because Alternative "B" will be traversing portions of cell 6 that was not part of the landfill to park conversion, section 4(f) does not apply.

CUMULATIVE IMPACTS: Cumulative impacts are defined as those impacts that results from the incremental consequences of an action when added to other past and reasonably foreseeable future action (40 CFR 1508.7). Reasonably foreseeable actions are generally defined as those for which a commitment has been made by the project sponsor to implement the project. Other major ongoing and planned projects within the project area could contribute to a cumulative impact on the environmental.

The Denbigh Landfill is currently owned by the City of Newport News and is located just east of Alternative "B". The landfill is being converted to a City Park with some areas currently open to the public. The park will provide for indoor recreation centers, a concentration of active recreation facilities, substantial landscaping and preservation. All environmental impacts related to the development of the park facility would be well beyond the area affected by Alternative "B".

Atkinson Boulevard would end as an at-grade intersection with Jefferson Avenue. Adjacent to the project, directly across Jefferson Avenue is a proposed development for a shopping center. The project is being managed by Denbigh Associate and has been identified as the Kings Ridge Shopping Center. Through our review of the roadway project, it was determined that the shopping center will be a permitted development and that Denbigh Associate has applied for Army Corps of Engineers' permits to fill in wetland. This development is independent from the Atkinson Boulevard Project, and the wetlands that would be impacted by the private development are separate from the wetlands that would be impacted be the roadway project.

There is one planned roadway project currently in the State Transportation Improvement Plan (STIP) in the area of the Atkinson Boulevard project. The project consists of the widening of Interstate 64 from 4 to 6 lanes with the possibility for a noise abatement wall. The project would start 1.471 miles west of Jefferson Avenue and end 0.911 miles east of Jefferson Avenue. Preliminary review of the I-64 project has indicated little to no wetland impact depending on final location. In addition, the noise receptors that would be impacted as a result of Atkinson Boulevard are not expected to be noise-impacted as a result of the I-64 widening project. There are no other major ongoing projects planned or identified within the area that could contribute to a cumulative impact on the environment.

SECONDARY IMPACTS: Secondary impacts are defined as those that are "caused by an action and are later in time or farther removed in distance but are still seasonally foreseeable" (40 CFR 1508.8). This kind of impact is typically considered an affect indirectly caused or induced by construction of the proposed project. Secondary impacts include changes in employment, population, and development that may result from a transportation project, as well as the social and environmental impacts of the induced land use.

There are no current proposals to develop any land adjacent to the Alternative "B". The property along the alignment is currently owned by the City of Newport News.

PUBLIC INVOLVEMENT:
The VDOT will hold a public hearing which affords all interested parties an opportunity to express their viewpoints and pose any questions related to the project.

IV. COORDINATION & COMMENTS

Potential impacts of the proposed project to both the human and natural environments are based on field reviews by the VDOT and on coordination with the following agencies:

- Newport News City Administration
  (City Manager, Planning Director)
- Newport News Public Schools
- USDA Natural Resources Conservation Service
- Hampton Roads Planning District Commission
- Virginia Department of Health
- Virginia Department of Conservation and Recreation
- Virginia Outdoors Foundation
- Department of Forestry
- Environmental Protection Agency
- US Department of Housing and Urban Development

The preliminary design and alignments of potential build alternatives for the project were presented on September 8, 2004December 16, 2004 and October 25, 2005 at the VDOT's ***Federal Partnering Meeting***, for review, comments, and recommendations. The following agencies were in attendance:

- Federal Highway Administration
- US Army Corps of Engineers
- US Environmental Protection Agency
- US Fish & Wildlife Service

All, or portions of this project, were coordinated for comments at the January 1991, April 1994, and March 2002 Interagency Coordination meeting. Representatives from the following agencies attended and or provided comments on this project.

U. S. Army Corps of Engineers
U. S. Environmental Protection Agency
U. S. Fish and Wildlife Agency
National Marine Fisheries Service

Virginia Department of Conservation and Recreation
Division of Planning and Recreation Resources
Division of Natural Heritage
Division of Soil and Water Conservation
Virginia Department of Environmental Quality
Virginia Department of Game and Inland Fisheries
Virginia Health Department
Virginia Marine Resources Commission

APPENDIX A

LEVELS OF SERVICE

LEVEL OF SERVICE A describes a condition of free flow, with low volumes and high speeds. Traffic density is low, with speeds controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers maintain their desired speed with little or no delay.

LEVEL OF SERVICE B is in the zone of stable flow, with operating speeds beginning to be restricted by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with low probability of traffic flow being restricted. The lower limit (lowest speed, highest volume) of this level of service has been associated with services volumes used in the design of rural highways.

LEVEL OF SERVICE C is still in the zone of stable flow, but the higher volumes closely control operating speeds and driver maneuverability. Most drivers are restricted in their freedom to select their speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained, with service volumes perhaps suitable for urban design practice.

LEVEL OF SERVICE D approaches unstable flow, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuation in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.

LEVEL OF SERVICE E cannot be described by speed alone, but represents operations at even lower operating speeds than Level of Service D, with volumes at or near the capacity of the highway. At capacity, speeds are typically, but not always, in the neighborhood of 30 miles per hour. Flow is unstable, and there may be stoppages of momentary duration.

LEVEL OF SERVICE F describes forced flow of operation at low speeds, where volumes are below capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. The section under study will be serving as a storage area during parts or all of the peak hour. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion. In the extreme, both speed and volumes can drop to zero.

4.0 Alternatives C and D Analysis and Request for Additional Information

- Pre-Application Meeting and the Request for Additional Information (August 13, 2014)
- Clarification and Request for Additional Information (June 26, 2014)
- Minutes of April 28, 2014 meeting COE
- Request for Additional Information (April 25, 2014)
- Alternative C and D Report (March 12, 2014)
- Minutes of January 16, 2014 meeting with COE

City of Newport News
Department of Engineering
2400 Washington Avenue
Newport News, Virginia 23607

(757) 933-2311

Fax (757) 926-8300

August 13, 2014

Ms. Alice Allen-Grimes
Norfolk District Army Corps of Engineers
803 Front Street
Norfolk, VA 23510

RE: Atkinson Boulevard, City of Newport News, Virginia

Dear Ms. Allen-Grimes:

A pre-application meeting for the Atkinson Boulevard project in the City of Newport News was held on January 16, 2014. As a result of the meeting, the Corps of Engineers (USACE) requested additional information. A follow-up meeting was held on April 28, 2014 to review the additional information provided and further discuss the project permitting.

At the conclusion of that meeting, the following steps were recommended for moving the Atkinson Boulevard project forward through the permitting process:

1) **Expand on the description of the public benefits of the project.** Atkinson Boulevard is a vital component of the City's long-term transportation plans and will provide a tremendous benefit and meet the need of our local citizens and the traveling public. To more fully explain these benefits to the USACE, we have provided additional information in the attached on Pages 3 and 4.

2) **Document opportunities for avoiding and minimizing wetland impacts.** The City has provided an evaluation of avoidance and minimization efforts that are included in the preliminary 30% design and has developed additional potential avoidance and minimization options that could be included in the project as shown in the attached on Pages 4 and 5 and Exhibit 1 (Page 7).

3) **Develop a comprehensive set of proposed mitigation measures.** The City has identified several potential mitigation measures that can be used to compensate for unavoidable impacts to wetlands and streams. These measures are presented for consideration by the USACE for inclusion in the final mitigation package found on Page 6 and Exhibit 2 (Page 8).

We have also provided on Page 9 a letter of support from the Commander of the 733d Mission Support Group at Fort Eustis, whose extensive military staff would rely on the new roadway for access.

The City appreciates the USACE'S willingness to work through these issues and looks forward to discussing the aforementioned mitigation options for this project. We would like to schedule a meeting to review the attached materials and to identify any final concerns that the USACE may have prior to the City submitting a Joint Permit Application.

If you should have any questions concerning this project, please contact Dan Blackburn at (757) 926-3977.

Sincerely,

Everett P. Skipper, PE, BCEE
Director of Engineering

EPS/DQB/plw

Attachments

Atkinson Boulevard

1) THE PROJECT WILL BENEFIT THE PUBLIC AND MAKE A SUBSTANTIAL IMPROVEMENT TO EXISTING TRAFFIC CONDITIONS

The City firmly believes that the construction of Atkinson Boulevard will be of great value to the public. Atkinson Boulevard is a vital component of the City's Long Range Transportation Plan and has been one of the City's top transportation priorities for almost 30 years. Atkinson Boulevard will reduce congestion, provide additional capacity in the area roadway network, reduce travel time, provide savings in roadway user costs and fuel consumption, provide a secondary access to Ft Eustis in case of a national emergency, and enhance the response time for emergency responders. Benefits of the project include:

- **The demand for the project exists today** - The public would immediately benefit from Atkinson Blvd. as an alternative cross-city route. In the opening year 2018 Atkinson Blvd. will carry 20,400 vehicles per day and 25,500 vpd by the design year 2038.

- **Greatly reduces cross city travel time** - Travel time along Denbigh Blvd. is reduced by 61% (14.5/14.5 minutes vs. 5.4/6/1 minutes EB/WB) with Atkinson. Travel time on Atkinson Blvd. will be 2.5/2.2 (EB/WB) minutes, which is a savings of 12.0/12.3 (EB-WB) minutes over the 2038 no build numbers.

- **Greatly reduces delays along Denbigh Blvd.** - Delays along Denbigh Blvd. will be reduced by 41% (from 5.8/6.2 minutes/vehicle to 3.4/3.6 minutes/vehicle EB/WB) with Atkinson.

- **Greatly reduces intersection delays at Denbigh/Jefferson and Denbigh/Warwick as follows:**
  - Denbigh Blvd. at Warwick Blvd.: Delays reduced by 52% (101.8 to 47.8 seconds), with LOS improvements from F to D.
  - Denbigh Blvd. at Jefferson Avenue: Delays reduced by 28% (58.6 to 42.2 seconds) with LOS improvements from E to D.

- **Significantly improves speed along east-west routes** - Average speeds along Denbigh Blvd. are improved by 50% (from 10 to 15 mpg) with Atkinson. Speed on Atkinson Blvd. will be significantly faster (30-34 EB-WB) mph.

- **Congestion on Denbigh Blvd. is reduced significantly by the construction of Atkinson Blvd.** – The 2018 opening year traffic on Denbigh Blvd. in the no-build scenario will be 28,200 vpd. This total will drop to 25,500 vpd with the construction of Atkinson Blvd. By the design year 2038, that volume differential will be much more substantial, with 39,600 vpd without Atkinson versus 26,500 vpd with Atkinson. This amounts to a 33% drop in traffic on Denbigh Blvd. because of the construction of Atkinson Blvd.

- **Incident management** – Atkinson Blvd. will provide additional access and response capability for emergency responders.

- **Cost savings to the public** – The 2038 annual user costs are predicted to be reduced by 64% (from $19,100/vehicle to $6,800/vehicle) with the construction of Atkinson Blvd.

- **Significantly reduces fuel usage** - Construction of Atkinson Blvd. will result in significant decreases in fuel usage and associated emissions. The 2038 no-build annual user costs for Denbigh Blvd. would be $554 million as compared to the combined annual user cost for Atkinson Blvd. and Denbigh Blvd. of $197 million.

- **Additional access to Fort Eustis military base** – Construction of Atkinson Blvd. would benefit Fort Eustis by providing another east-west alternative access in cases of national emergency or during an incident management situation.

- **Atkinson will carry a substantial proportion of the east-west traffic** – When combined with the traffic utilizing Denbigh Blvd. (4 lanes) and existing Industrial Park Drive, the combined east/west traffic in 2038 will be 64,500 vpd. Atkinson Blvd. will carry 40% of this total, operating at a LOS B. which is approximately equal to Denbigh Blvd.

- **City's Long-term Transportation Plan** – The need for an additional east-west connection at this location was first identified in 1987 by the City and has been a vital part of the City's transportation plans for over 30 years.

2) DOCUMENT OPPORTUNTITIES FOR AVOIDING AND MINIMIZING WETLAND IMPACTS BY MODIFYING THE ALIGNMENT, ADJUSTING THE TYPICAL SECTIONS AND MODIFYING OTHER ELEMENTS OF THE DESIGN

Current 30% preliminary design - The current 30% preliminary design layout for Atkinson Boulevard would result in 15.48 acres of permanent wetland impact, 2.91 acres of temporary impacts and 200 linear feet of stream impacts. See the attached Atkinson Wetland and Stream Impact Table for detailed impacts to individual wetland areas. **EXHIBIT 1**, illustrates the wetland avoidance and anticipated impacts based upon the current preliminary 30% design.

During the preliminary engineering for the Atkinson Blvd. design, efforts were made to minimize wetlands and stream impacts including:

- **Continuous bridge to reduce wetland impacts** -. Providing a single continuous bridge over the CSX, I-64 and the area between has resulted in a reduction of 2.16 acres of permanently impacted wetlands.

- **Retaining walls to reduce wetland impacts** - Retaining walls were added that resulted in a reduction of 0.10 acres of permanent wetland impacts.

- **Redesign of the SWM basin to reduce wetland impacts** – The proposed SWM basin was redesigned to reduce the permanent impacted wetlands by 0.18 acres.

Additional avoidance and minimization design options – As the project moves into the permitting phase, additional efforts can be provided by modifying the alignment, adjusting the typical section and modifying other elements of the design. **EXHIBIT 2** illustrates the additional wetland avoidance/minimization and anticipated impacts due to potential future design modifications.

- **Reduction of median width** - Due to the need for double left turns and the desire to provide for landscaping of the median, a 28-foot wide median was originally provided in the design. Reduction of the median width from 28 feet to 16 feet where possible would result in a savings of 0.61 acres of impacted wetlands.

- **Re-alignment with Atkinson Way** - During the JD field verifications, the majority of the area north of existing Atkinson Way was determined to be wetlands. Shifting of the preliminary 30% alignment to the south out of this wetland area and along existing Atkinson Way would still impact 4.07 acres of wetlands but compared to Alternative B's 9.49 acres would result in a reduction of permanent impacts to wetlands by 5.42 acres. This shift would require a new entrance to the landfill and bus parking lot that would likely impact Wetland Area 7 (0.14 acres).

- **Extend eastern end of bridge** - The eastern end of the bridge could be extended approximately 300 additional feet at a cost of $5.1 million and would result in a reduction of 1.70 acres of permanently impacted wetlands (approximately $3 mil. Per acre.) These wetlands would also need to be converted from PFO to PEM. Because of the relatively high cost of this mitigation effort, the City proposes that the federal funds would be better spent on wetland preservation elsewhere.

- **Extend retaining wall at landfill** – The retaining wall between the roadway and the landfill can be extended by 733 feet at a cost of $1.3 million and would result in a reduction of 0.72 acres of permanently impacted wetlands (approximately $1.8 mil. Per acre.) This also is an expensive alternative and may be better mitigated at a lower cost elsewhere.

- **Reconfiguring the SWM basin** – Reconfiguring the SWM basin would result in a reduction of 0.87 acres of permanently impacted wetlands. This area is included in the 5.42 acres of wetland minimization described above under Re-alignment with Atkinson Way.

The above additional avoidance and minimization efforts total has the potential to reduce the permanent wetland impacts from 15.48 acres in the current Alternative B design to 7.78 to 10.2 acres. See the attached **EXHIBIT 2** (table for "Alternative B with Proposed Minimization Efforts") for the permanent and temporary impacts to individual wetland areas and estimated wetland credits required. The total avoidance and minimization efforts that include the current design (2.44 acres) as well as potential additional efforts (7.70 acres) as described above total 10.14 acres.

3) DEVELOP A COMPREHENSIVE SET OF PROPOSED MITIGATION MEASURES TO COMPENSATE FOR UNAVOIDABLE IMPACTS TO WETLANDS

Potential mitigation options for consideration to compensate for wetland and stream losses include:

- **Purchase of mitigation credits** - The City could purchase commercially available wetland and stream mitigation credits from an USACE approved mitigation bank within the appropriate HUC watershed.

- **Expansion of the Grafton Pond Natural Area Preserve** – Increase the size of the existing Grafton Ponds Natural Area Preserve through the placement of additional conservation easements on these ecology unique wetland/upland system.

- **On-site wetland enhancement** – Enhance the 13 acres of previously impacted wetlands on the Newdunn property to improve the hydrology function and vegetation success. This effort could include soil amendments, soil de-compaction, and blockage of drainage ditches and planting of woody species.

- **Wetland Preservation** – The City could consider putting conservation easements on other City owned property containing wetlands as part of the overall package.

The City's preference would be to purchase the necessary wetland and stream mitigation credits from an approved mitigation bank. However, the City would be open to discussing a combination of the other mitigation options. Either purchasing the mitigation credits or a combination of the above mitigation measures could provide well in excess of the mitigation credits to compensate for the loss of wetlands for this project.

EXHIBIT 1

ATKINSON WETLAND AND STREAM IMPACTS

Alternative B

Jun-2014

Wetland ID	Type	Total Acreage	Permanent Impact	Conversion Impact	Temporary Impact	Mitigation Ratio	Credits
1	PEM	0.03	0.00	0	0	1	0.00
2	PEM	0.66	0.01	0	0.29	1	0.01
2A	PFO	0.40	0.17	0	0	2	0.34
2B	PSS	0.25	0.03	0	0	1.5	0.05
3	PEM	0.21	0.08	0	0	1	0.08
5	PFO	14.83	0.01	0.26	0.87	2	0.28
6	PEM	5.07	0.03	0	1	1	0.03
7	PFO	1.63	0.00	0	0	2	0.00
8	PFO	15.78	2.92	0	0	2	5.84
Atkinson Way	PFO		6.57	0	0	2	13.14
11	PFO	0.18	0.00	0	0	2	0.00
12	PFO	0.14	0.00	0	0	2	0.00
13	PFO	0.01	0.00	0	0	2	0.00
14	PSS	0.01	0.00	0	0	1.5	0.00
15	PFO	0.02	0.00	0	0	2	0.00
16A	PFO	23.40	2.48	0.27	0.75	2	5.23
16B	PEM	9.43	0.54	0	0	2	1.08
16C	PFO	1.05	0.59	0	0	2	1.18
16C	PEM	0.15	0.11	0	0	1	0.11
16D	PFO	3.92	0.14	0	0	2	0.28
16D	PEM	0.04	0.04	0	0	1	0.04
17A	PFO	0.06	0.00	0	0	2	0.00
17B	PEM	0.01	0.00	0	0	1	0.00
18A	PFO	0.43	0.00	0	0	2	0.00
18B	PEM	0.26	0.22	0	0	1	0.22
AB100	PEM	0.17	0.00	0	0	1	0.00
AB200	PFO	1.40	1.39	0	0	2	2.78
AB400	PFO	0.15	0.15	0	0	2	0.30
		79.69	15.48	0.53	2.91		30.99

EXHIBIT 2

ATKINSON WETLAND AND STREAM IMPACTS
Alternative B with Proposed Miniminization Efforts
Jul-2014

Wetland ID	Type	Total Acreage	Permanent Impact	Conversion Impact	Temporary Impact	Mitigation Ratio	Credits
1	PEM	0.03	0.00	0	0	1	0.00
2	PEM	0.66	0.01	0	0.29	1	0.01
2A	PFO	0.40	0.09	0	0	2	0.18
2B	PSS	0.25	0.00	0	0	1.5	0.00
3	PEM	0.21	0.04	0	0	1	0.04
5	PFO	14.83	0.01	0.60	0.87	2	0.62
6	PEM	5.07	0.03	0	1	1	0.03
7	PFO	1.63	0.14	0	0	2	0.28
8	PFO	15.78	4.07	0	0	2	8.14
11	PFO	0.18	0.00	0	0	2	0.00
12	PFO	0.14	0.00	0	0	2	0.00
13	PFO	0.01	0.00	0	0	2	0.00
14	PSS	0.01	0.00	0	0	1.5	0.00
15	PFO	0.02	0.00	0	0	2	0.00
16A	PFO	23.40	0.86	1.67	0.75	2	3.39
16B	PEM	9.43	0.54	0	0	2	1.08
16C	PFO	1.05	0.47	0	0	2	0.94
16C	PEM	0.15	0.11	0	0	1	0.11
16D	PFO	3.92	0.18	0	0	2	0.36
16D	PEM	0.04	0.04	0	0	1	0.04
17A	PFO	0.06	0.00	0	0	2	0.00
17B	PEM	0.01	0.00	0	0	1	0.00
18A	PFO	0.43	0.00	0	0	2	0.00
18B	PEM	0.26	0.22	0	0	1	0.22
AB100	PEM	0.17	0.00	0	0	1	0.00
AB200	PFO	1.40	0.82	0	0	2	1.64
AB400	PFO	0.15	0.15	0	0	2	0.30
		79.69	7.78	2.27	2.91		17.38

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

AUG 1 2014

733 Mission Support Group Commander
705 Washington Boulevard, Suite 83
Fort Eustis, VA 23604-5006

Mr. James M. Bourey
City Manager
2400 Washington Avenue
Newport News, VA 23607

Dear Mr. Bourey,

Pursuant to an email inquiry initiated by your staff to our Civil Engineer Division at Joint Base Langley Eustis (Fort Eustis), our installation has reviewed The City of Newport News' proposed plans for the extension of Atkinson Boulevard. We appreciate the opportunity to evaluate the effect your proposed development will have on our soldiers and civilians at Fort Eustis. The construction of a crossroad access between Warwick Boulevard and Jefferson Avenue will most definitely enhance the traffic flow to and from our installation.

Fort Eustis has determined that the construction of your roadway extension will not result in any detrimental conditions at our installation and we support you in your endeavor.

I wish you well in your project development.

WILLIAM S. GALBRAITH, Colonel, USA
Commander, 733d Mission Support Group

cc:
Mr. Everett P. Skipper, City of Newport News, 2400 Washington Ave, Newport News, VA 23607
Mr. Thomas C. Cheney, II, City of Newport News, 2400 Washington Ave, Newport News, VA 23607

Global Power For America

CLARIFICATION AND REQUEST FOR ADDITIONAL INFORMATION

CORPS OF ENGINEERS MEETING OF APRIL 28, 2014

A second Pre-Application Meeting for the Atkinson Boulevard project in the City of Newport News was held on April 28, 2014. During that meeting the Corps of Engineers (COE) had several questions that needed further clarification and had requested additional information be provided.

Following are the clarifications and additional information requested at the meeting.

1) ***Comment: The COE expressed concern that the proposed SWM facility shown on Alternative B would impact the adjacent wetlands.***

   Response: The estimate of wetland impacts includes wetlands avoided by the SWM basin but which may be impacted by a loss of hydrology.

2) ***Comment: The COE had requested that the cost of the City owned property along Alternative B to be included in the cost estimate for Alternative B.***

   Response: The acquisition cost for current city property along Alternative B has been added to the construction cost of Alternative B. The right-of–way cost was increased from $300,000 to $2,690,000. Alternative B remains the most economical alternative. The revised Alternative Comparison Table is attached.

3) ***Comment: The COE provided another alignment that is a combination of Alternative B and Alternative C. WR&A is to look at the potential of this alignment to meet the Purpose and Need and the anticipated wetland impacts from this alignment.***

   Response: An additional alignment was reviewed as requested and is referenced as Alignment E. A full study was not developed but was reviewed from an engineering and environmental standpoint and determined it would not be a feasible due to additional wetland impacts, increased construction cost (steel bridge vs. concrete bridge; additional roadway length; one-span I-64 bridges; and raising the profile grade of I-64), and safety issues with the intersection located on an at-grade railroad crossing. Following is a brief discussion of this study:

   - This alignment was a combination of Alternative B and C. The alignment for this alternative would be similar to Alternative B between Warwick Blvd and the CSX Railroad crossing. The alignment would then turn sharply to the north, paralleling Trusswood Lane and then turning east under the I-64 bridges. The remaining alignment to Jefferson Avenue and the necessary widening of Jefferson Avenue would be similar to Alternative C. Sketch attached.

- This alignment is longer than Alternative B and would be 1.56 miles in length and would include a 1620-foot long bridge to span the CSX Railroad and wetlands.

- This alignment would impact more wetlands than Alternative B. This alignment would permanently impact approximately 15.93 acres of wetlands as compared to 15.48 acres of wetlands with Alternative B. The additional wetland areas outside of the study area along Alternative E are approximate and have not been reviewed by the COE.

- This alignment would require that the bridge over the railroad and wetlands to be constructed with steel beams in lieu of concrete beams due to the horizontal curves and the skew across the railroad; thus increasing the cost of the structure. One pier would be required to be constructed within railroad right-of-way.

- This alignment would result in an increase in construction cost and major impacts to traffic on I-64. The replacement bridges on I-64 over this alignment would have to be one-span bridges due to the bad skew under the bridges. In comparison, the Alternative C/D bridges were recommended to be a two span bridge. To maintain the required clearance over the railroad for a one span bridge would require that the profile of I-64 be raised several feet. This would result in an increase in construction costs and major impacts to traffic on I-64.

- This alignment would create additional safety issues. This alignment would require an at-grade crossing of the spur track and the intersection of Industrial Drive would also occur within the at-grade crossing. The at-grade intersection would not be desirable in that it would introduce a new railroad crossing on a major east-west connector requiring a railroad crossing signal and arms; the intersection with Industrial Drive would be located on the railroad spur; and would be a safety issue.

4) ***Comment: The COE asked if there were modifications that could be made to Denbigh Blvd. which would generate the same level of service improvements as Alternative B. WR&A will investigate if widening Denbigh Blvd. to three lanes in each direction would provide the same level of service with reduced wetland impacts.***

   Response: WR&A and KHA have evaluated adding an additional lane in each direction to Denbigh Blvd. to determine if this would provide the same level of service (LOS) on Denbigh Blvd. as produced with Alternative B.

   - Widening of Denbigh Blvd. to six lanes will not increase the LOS on Denbigh Blvd. Comparing the build alternatives of Atkinson Blvd. and the 6-lane Denbigh Blvd.,

Atkinson Blvd. would operate at a LOS D while the improved Denbigh Blvd. would operate at a LOS F. While the build scenario of 6-lane Denbigh Blvd. would operate at a LOS F, Denbigh Blvd. would operate at a LOS D with the construction of Atkinson Blvd. or a LOS E in the no-build scenario. See Tables 1 and 2.

- When comparing the combined roadways of Atkinson Blvd. and Denbigh Blvd. versus a 6-lane Denbigh Blvd., the construction of Atkinson Blvd. would provide an 18% (8,100 vpd) increase in capacity in the design year 2038 beyond what the improved Denbigh Blvd. would provide. Traffic analysis shows that even with improvements (widening to 6-lanes and intersection improvements) to Denbigh Blvd. it would only attract an additional 17,400 vpd to Denbigh Blvd. as compared to the Atkinson Blvd. build scenario in the design year 2038. See Table 1 for the Average Daily Traffic and PM Peak Hour Arterial LOS.

TABLE 1

STREET NAME	FROM	TO	2013 EXISTING	2038 NO BUILD	2038 ALT. B	2038 6-LANE DENBIGH
FT. EUSTIS BLVD.	WARWICK BLVD.	JEFFERSON AVENUE	34,900 LOS E	38,600 LOS E	41,800 LOS E	40,700 LOS E
INDUSTRIAL DRIVE	WARWICK BLVD.	JEFFERSON AVENUE	7,500 LOS C	10,400 LOS C	12,500 LOS D	7,500 LOS C
ATKINSON BLVD.	WARWICK BLVD.	JEFFERSON AVENUE	-	-	25,500 LOS B	-
DENBIGH BLVD.	WARWICK BLVD.	JEFFERSON AVENUE	26,000 LOS E	39,600 LOS E	26,500 LOS D	43,900 LOS F

TABLE 2

INTERSECTION	2013 EXISTING	2038 NO BUILD	2038 ALT. B	2038 6-LANE DENBIGH
JEFFERSON /FT. EUSTIS	LOS C	LOS F	LOS F	LOS F
JEFFERSON / I-64 RAMP (FT. EUSTIS INTERCHANGE)	LOS B	LOS D	LOS E	LOS E
JEFFERSON/ DENBIGH	LOS D	LOS E	LOS D	LOS D/E
WARWICK/DENBIGH	LOS D	LOS F	LOS D	LOS F

5) ***Comment: WR&A provided the additional wetland mapping that was requested by the COE and is ready to meet with David Knepper to review the new mapping.***

Response: WR&A met with David Knepper on June 23, 2014 to review the final wetland delineation and he was satisfied with the delineation results. He will process a preliminary JD for the project.

6) ***Comment: The COE questioned the LOS shown in Table 1 for Denbigh Blvd. WR&A is to investigate.***

Response: Table 1 and the LOS shown for Denbigh Blvd. under the 2013 Existing column is correct. The LOS for Existing 2013 is based upon current actual operating conditions with no adjustments to traffic signals, splits, offsets, or phase sequencing. For Alternate B, the 2038 build condition shows little differences in ADT but has a LOS D. The LOS D results in efficiency achieved through adjustments to the traffic signals, splits, offsets and phase sequencing. Adjustments to existing signals within the corridor would be expected with the addition of new roadways or improvements on existing roadways.

At the meeting the COE recommended the following steps for moving the Atkinson Blvd. project forward through the permitting process:

1) More fully explain the public benefits of the project and how it makes a substantial improvement to existing traffic conditions.

2) Document opportunities for avoiding and minimizing wetland impacts by modifying the alignment, adjusting the typical section and modifying other elements of the design.

3) Develop a comprehensive set of proposed mitigation measures to compensate for unavoidable impacts to wetlands.

This information will be provided under a separate transmittal.

ALTERNATIVE COMPARISONS

	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
ALIGNMENT LENGTH			
	1.20 miles	0.99 Miles	1.0 Miles
CONSTRUCTION COSTS			
EAST/WEST CONN. ROADWAY	$17,875,000	$27,778,000	$27,756,000
I-64 CONSTRUCTION	$ 0	$9,799,000	$9,799,000
EAST/WEST CONN. BRIDGES	$34,000,000	$7,089,000	$7,089,000
I-64 BRIDGES	$ 0	$7,833,000	$7,833,000
UTILITIES (OUT-OF-PLAN)	$2,509,000	$2,509,000	$2,509,000
R/W AND EASEMENTS	$2,690,000	$4,109,000	$5,528,000
WETLAND / STREAMS	$710,000	$325,000	$325,000
TOTAL	**$57,784,000**	**$59,442,000**	**$60,839,000**
WETLAND/STREAM			
Stream Impacts	126’	0	0
Total Acreage	52.2	13.7	13.7
Permanent	8.7	4.3	4.3
Conversion Impact	0.7	0.7	0.7
Temporary	3.0	0.1	0.1
Credits	17.1	9.2	9.2
ROW IMPACTS			
Right-of-way	0.4 Acres	18.4 Acres	18.4 Acres
Temp. Const. Easements	0.6 Acres	1.0 Acre	1.0 Acre
Perm. Utility Easements	0.9 Acres	1.0 Acres	1.0 Acres
ROW Displacements			
Families	0	10	10
Businesses	0	2	3
No. of Parcels	9	17	18
DESIGN EXCEPTIONS REQUIRED			
	No	No	Yes, Horizontal Alignment

MEMORANDUM of MEETING

Date: May 7, 2014

Date of Meeting: April 28, 2014

Time of Meeting: 1:00 P.M.

Meeting Location: Norfolk District Army Corps of Engineers Office, 803 Front Street, Norfolk, VA

Meeting Description: Additional Informational Meeting for Alternatives C and D

CC: Meeting Attendees

Work Order Number: 045804-000

Purchase Order Number: 20131538-000

Project: Atkinson Boulevard

Participants:

Name	Company	Phone	Email
Alice Allen- Grimes	Corps of Engineers	757-201-7219	Alice.w.allen-grimes@usace.army.mil
Kathy Perdue	Corps of Engineers	757-201-7218	Kathy.S.Perdue@usace.army.mil
Pete Kube	Corps of Engineers	757-201-7504	Peter.N.Kube@usace.army.mil
Kim Dugan	City of NN Engineering	757-592-2107	kdugan@nngov.com
Thomas Cheney	City of NN Engineering	757-926-8337	tcheney@nngov.com
Dan Blackburn	City of NN Engineering	757-926-3977	dblackburn@nngov.com
Vince Urbano	City of NN Engineering	757-926-8694	vurbano@nngov.com
John Maddox	WR&A	804-272-8700	jmaddox@wrallp.com
Andy Landrum	WR&A	757-599-5101	alandrum@wrallp.com
John Epperly	WR&A	804-272-8700	jepperly@wrallp.com
Bob Siegfried	WR&A	804-272-8700	bsiefried@wrallp.com

A Pre-Application Meeting for the Atkinson Boulevard project in the City of Newport News was held on January 16, 2014. As a result of the Pre-Application Meeting, the Corps of Engineers (COE) requested additional information. A follow-up meeting was held on April 28, 2014 to review the additional information provided and further discuss the permitting of the Atkinson Boulevard project.

Alice Allen-Grimes by e-mail dated 1/21/14 provided a list of additional information to be provided by the City. The City's response to the additional information request was returned on March 14, 2014. By e-mail dated 4/7/14, the COE requested clarification on several items and the clarifications were returned on 4/25/14.

1) A discussion was held pertaining to the reason that the I-64 bridges over Industrial Park Drive required replacement. WR&A explained the typical section requirements for Alternatives C and D and the conflicts with the existing pier and the pilings for the west abutment for both I-64 bridges. The information available at the meeting was the VDOT Bridge Sufficiency Report dated 2006 which shows a sufficiency rating of 76.5 for the EB bridge and 77.1 for the WB Bridge. Based upon the I-64 Widening Design-Build RFQ, that project calls for widening of these two I-64 bridges but not the replacement of these bridges.
2) The COE expressed concern that the proposed SWM facility shown on Alternative B would impact the adjacent wetlands.
3) The COE had requested that the cost of the City owned property along Alternative B to be included in the cost estimate for Alternative B.
4) It was agreed that Alternatives C and D do not meet the Purpose and Need for the project.
5) The COE provide another alternative that is a combination of Alternative B and Alternative C. WR&A will look at the potential of this alternative to meet the Purpose and Need and the anticipated wetland impacts from this new alignment.
6) The COE asked if there were modifications that could be made to Denbigh Blvd. which would generate the same level of service improvements as Alternative B. WR&A will investigate if widening Denbigh Blvd. to three lanes in each direction would provide the same level of service improvements with reduced wetland impacts.
7) WR&A provided the additional wetland mapping that was requested by the COE and is ready to meet with David Knepper to review the new mapping.
8) The COE questioned the LOS shown in Table 1 for Denbigh Blvd. WR&A to investigate.

The following steps are recommended to moving the Atkinson Blvd. project forward through the permitting process:

1) More fully explain the public benefits of the project and how it makes a substantial improvement to existing traffic conditions.
2) Document opportunities for avoiding and minimizing wetland impacts by modifying the alignment, adjusting the typical section and modifying other elements of the design.
3) Develop a comprehensive set of proposed mitigation measures to compensate for unavoidable impacts to wetlands.

The above is a memorandum of understanding between the parties regarding the topics discussed and the decisions reached. Any participants desiring to add to, or otherwise amend the minutes, are requested to contact John Epperly (800-787-7200).

April 25, 2014

REQUEST FOR ADDITIONAL INFORMATION

Question 1. It is our understanding that as part of VDOT's planned widening of I-64 they will be widening (not lengthening, but adding lane(s)) the existing bridge over Industrial Park Dr. The information you submitted indicates that due to its age the I-64 Bridge would not be further widened but goes on to say that the future VDOT project "will require widening to the inside." Can you clarify whether the existing bridge will be widened to the inside or whether it will be replaced with a wider bridge?

Response: Since our initial submittal, VDOT has advertised the RFQ for the Design-Build Project for I-64 Capacity Improvements – Segment 1. The RFQ plans proposed improvements include the addition of one 12-travel lane and one 12-foot wide paved shoulder in each direction to be located in the median of I-64. As part of the improvements, the existing bridges will be widened to the inside. Attached is a copy of the bridge plans as shown in the RFQ for the I-64 bridges over Industrial Park Drive.

The RFQ plans do not require lengthening of the existing I-64 bridges to accommodate Alternatives C or D or total replacement of the bridges at this time. The RFQ plans call for removal of a portion of the bridge deck and then the required widening to accommodate the I-64 widening. The RFQ at this time does not address any deck replacement or repairs that may be required to the current bridge deck or structure that was constructed in 1963.

Question 2. In Table 1, you provide ADT for several road segments for year 2038. In the EA, both ADT and LOS were provided for existing conditions and for 2030. Please provide ADT and LOS for these segments for existing and the design year (2038). Also, the EA provides LOS for the intersections for the Design year as well as existing; you do not provide LOS under existing conditions in your Table 2. Please provide that information. Also, the EA provided data for the Ft. Eustis /I-64 ramps and showed results for existing and 2030 for Alt B under the intersection analysis. Why did you not include that in your table of intersections?

Response: In Table 1 below we have provided an additional column depicting the 2013 Existing Conditions and provided the LOS and ADT for each segment as requested.

For Table 2 we have added the I-64 / Fort Eustis Boulevard Ramp intersection with Jefferson Avenue and a column for the 2013 Existing Condition as requested. We have assumed that in the EA they were referencing the I-64 / For Eustis Boulevard interchange ramp intersection along Jefferson Avenue since there are no intersections along Fort Eustis Boulevard at the I-64 interchange ramps. The LOS has been provided for each intersection and alternative as requested.

TABLE 1

AVERAGE DAILY TRAFFIC VOLUME AND LOS						
STREET NAME	**FROM**	**TO**	**2013 EXISTING**	**2038 NO BUILD**	**2038 ALT. B**	**2038 ALT. C/D**
FT. EUSTIS BLVD.	WARWICK BLVD.	JEFFERSON AVENUE	34,900 LOS E	38,600 LOS E	41,800 LOS E	39,700 LOS E
INDUSTRIAL DRIVE	WARWICK BLVD.	JEFFERSON AVENUE	7,500 LOS C	10,400 LOS C	12,500 LOS D	27,900 LOS D
ATKINSON BLVD.	WARWICK BLVD.	JEFFERSON AVENUE	-	-	25,500 LOS B	-
DENBIGH BLVD.	WARWICK BLVD.	JEFFERSON AVENUE	26,000 LOS E	39,600 LOS E	26,500 LOS D	45,200 LOS F

TABLE 2

PM PEAK HOUR INTERSECTION LOS AND DELAY				
INTERSECTION	**2013 EXISTING**	**2038 NO BUILD**	**2038 ALT. B**	**2038 ALT. C/D**
JEFFERSON /FT. EUSTIS	LOS C	LOS F	LOS F	LOS F
JEFFERSON / I-64 RAMP (FT. EUSTIS INTERCHANGE)	LOS B	LOS D	LOS E	LOS E
JEFFERSON/ DENBIGH	LOS D	LOS E	LOS D	LOS E
WARWICK/DENBIGH	LOS D	LOS F	LOS D	LOS F

Question 3. Table 1 includes "Atkinson Blvd," and shows traffic for 2038. But for Alt C/D, traffic is shown as '0.' Do you mean Atkinson Way rather than Atkinson Blvd. in the Table?

Response: For this table, the first column is referencing the existing or proposed east-west connector roadways. For Atkinson Boulevard, the 0 in the 2038 NO BUILD and the 2038 Alt. C/D is correct since Atkinson Blvd. is a new roadway on new alignment and would not be constructed under the scenarios of No-Build and Alternative C/D. We have revised this to show a "-" rather than a "0" to eliminate any potential confusion.

Atkinson Way would of course continue to provide access to the landfill and Mary Passage Middle School with little increase in traffic anticipated.

Question 4. Can you clarify why, in Table 1, the construction of Alt C/D results in more traffic on Ft. Eustis Blvd and Denbigh Blvd than under the No Build? We understand why there would be more traffic on Industrial Drive, since C/D essentially extends it to Warwick Blvd.

Response: Based on the volumes forecasted by the travel demand model, with both Alternatives B and C/D, as traffic grows in the different segments of the study area, additional traffic is diverting from Bland Boulevard to Denbigh Boulevard. For Alternative B, due to the proximity of Atkinson Boulevard to Denbigh Boulevard, Atkinson Boulevard is anticipated to draw traffic from Denbigh Boulevard and potentially some from Bland Boulevard. However, Alternatives C and D are located farther from Denbigh Boulevard and will pull less traffic from Denbigh Boulevard.

Under both Alternatives B and C/D, Fort Eustis Boulevard would become more attractive to westbound I-64 traffic. This is traffic that would be currently using the Jefferson Avenue interchange to access points along the Jefferson Avenue and Warwick Boulevard corridors. With an additional east-west connector and as traffic grows along these two corridors, some motorists could find using this exit to access areas along Jefferson Avenue and Warwick Boulevard more attractive. Additionally, it should be noted that the increase in traffic volumes along Fort Eustis Boulevard with Alternative C/D is less than a 3 percent increase compared to No Build conditions.

Question 5. Are there any plans for any improvements on Denbigh Blvd or its interchanges separate from this project?

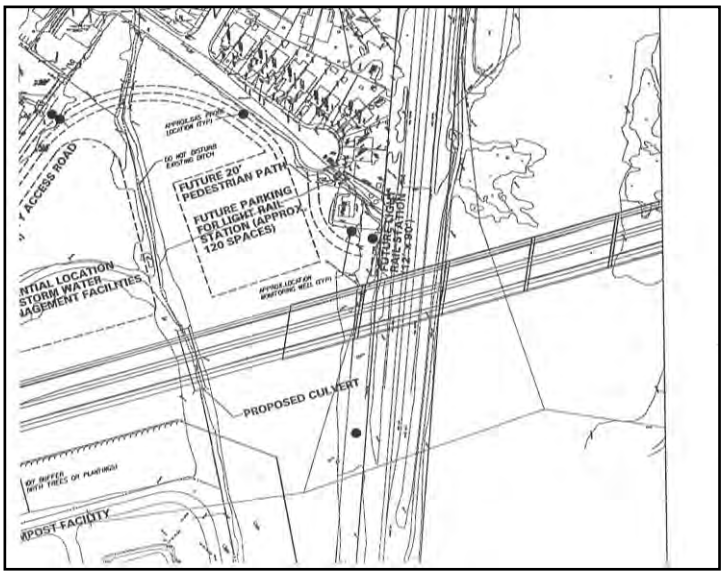
Response: The only known improvement to Denbigh Blvd. is for the VDOT project replacement of the Denbigh Blvd. Bridge over I-64 and the railroad. This project is a bridge replacement project to correct deficiencies associated with the existing bridge structure. Approach work will be limited to that necessary for the bridge replacement. No additional capacity will be provided by the bridge replacement.

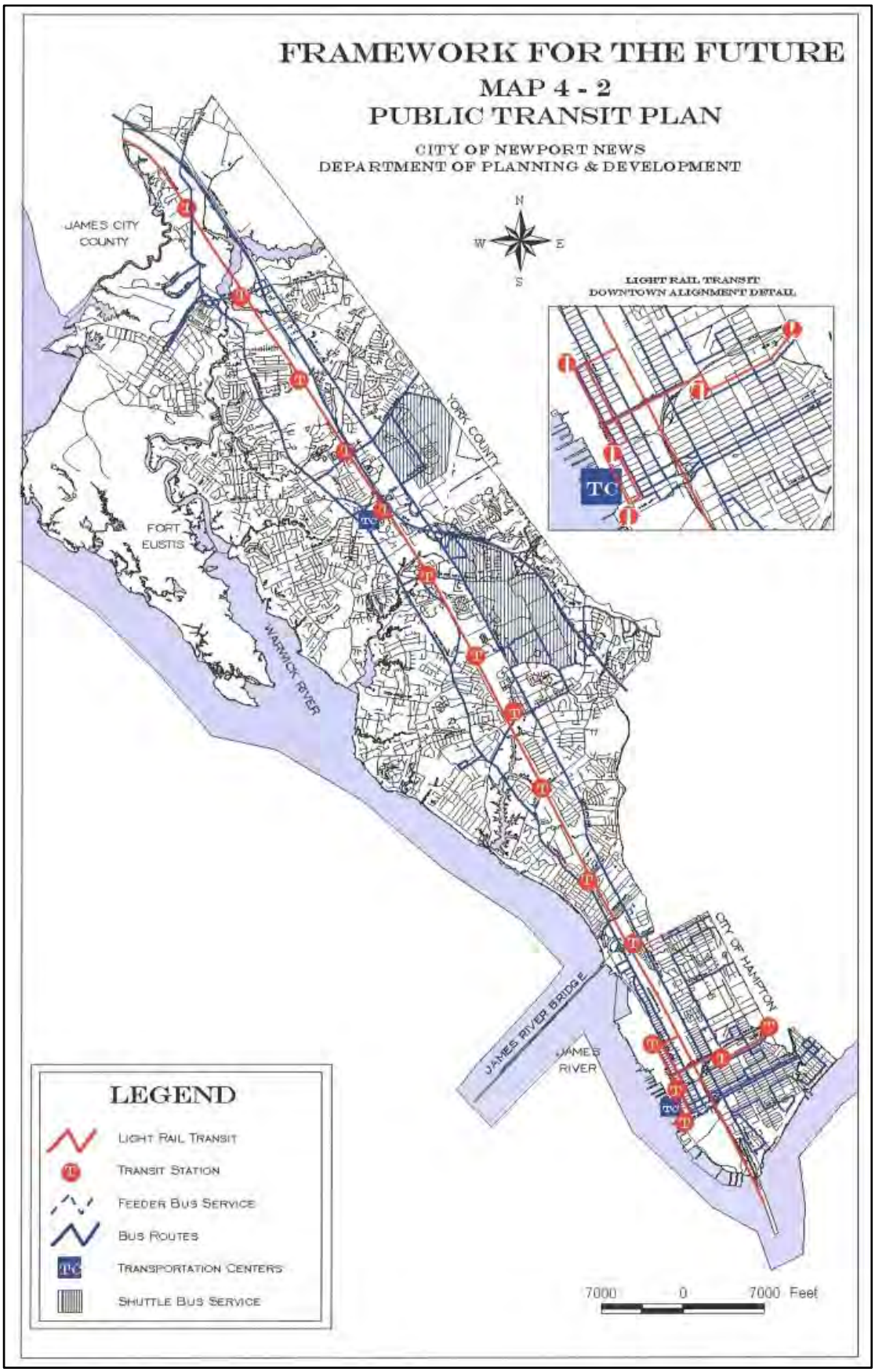
We assume that you are referencing any potential I-64 interchanges in the vicinity of the project. The Interstate Justification Report (IJR) for the I-64 and Bland Blvd. Interchange was approved by FHWA. However, the proposed interchange at Bland. Blvd. is currently not on VDOT's FY14 Six-Year Plan. There is currently no funding for this project as the funding that was available in the past has been returned. The construction of this project is no longer being considered.

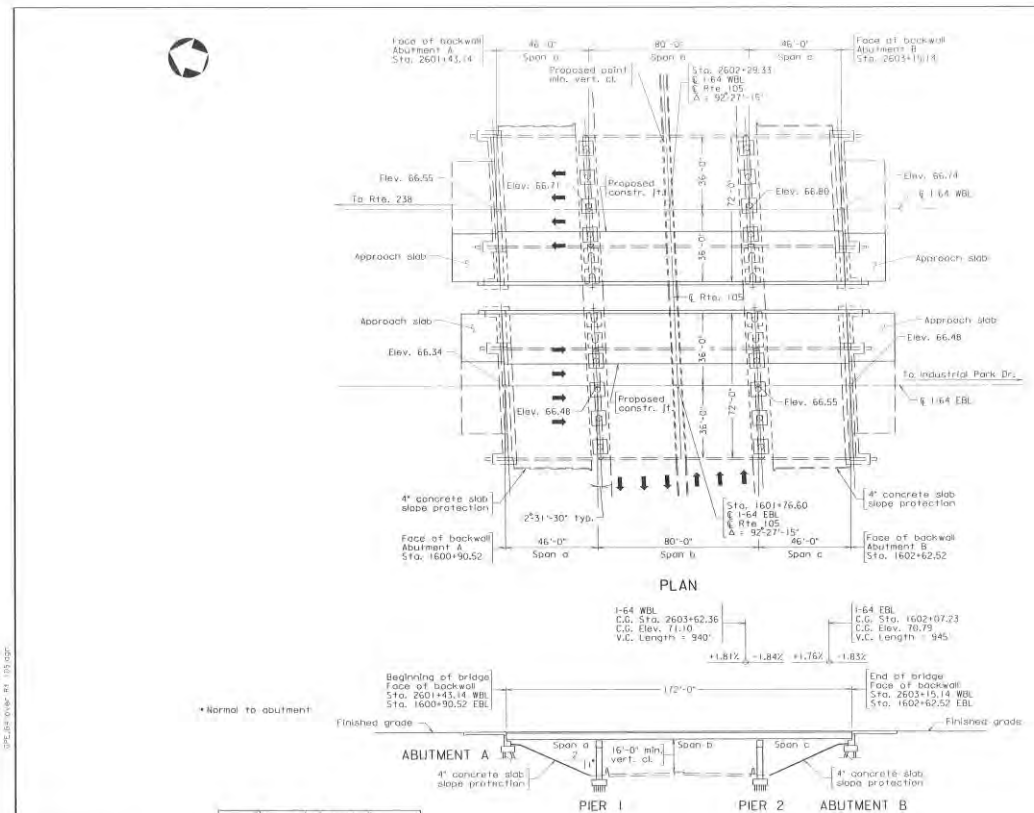
Question 6. You mentioned on Page 10 that Alternative B serves as a connector to the future Light Rail Station from Jefferson Ave. We need some further explanation. What is the exact location of this proposed facility? It is unclear whether any such facility has been approved, would need authorization by the Corps, or whether more than one location is being considered for its placement.

Response: Below is a copy of the City's Public Transit Plan that shows the locations of the proposed future transit stations including one in the vicinity of the proposed Atkinson Blvd. project (Alternative B). A NEPA document has been completed for the proposed Light Rail Corridor. During the study phase of the Atkinson Boulevard project, the alternative study designs took in consideration the potential location and potential access to the future transit station to ensure future construction could be accommodated (see below). Any design currently shown is a schematic drawing and there are currently no designs for the transit station or parking for this location. Currently there is no funding or a timetable for construction of the transit station at this location. The future construction of the transit station would still need to proceed through the normal permitting and design processes prior to any construction.

Alternative Study Schematic For Transit Station At Atkinson Blvd.




FRAMEWORK FOR THE FUTURE
MAP 4 - 2
PUBLIC TRANSIT PLAN
CITY OF NEWPORT NEWS
DEPARTMENT OF PLANNING & DEVELOPMENT
N
W
E
S
JAMES CITY COUNTY
YORK COUNTY
FORT EUSTIS
WARWICK RIVER
JAMES RIVER BRIDGE
JAMES RIVER
CITY OF HAMPTON
LIGHT RAIL TRANSIT
DOWNTOWN ALIGNMENT DETAIL
TC
LEGEND
LIGHT RAIL TRANSIT
TRANSIT STATION
FEEDER BUS SERVICE
BUS ROUTES
TRANSPORTATION CENTERS
SHUTTLE BUS SERVICE
7000 0 7000 Feet



STATE	FEDERAL AID PROJECT	STATE ROUTE	PROJECT	SHEET NO.
VA.	NHS-064-1(345)	64	0064-965-264, B618, B619	3
NBIS Number: 000000000020711 000000000020712		UPC No. 104905		
Federal Oversight Code: FO		FHWA Construction and Scour Code: X231-SN		

DESIGN EXCEPTION(S):

None

GENERAL NOTES:

Width: 72'-0" face-to-face of rails.

Span layouts: 46'-0" - 80'-0" - 46'-0"

Capacity: HL-93 loading.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2007.

Design: AASHTO LRFD Bridge Design Specifications, 6th Edition, 2012; and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2008.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

Bridge Nos. of existing bridges are 2212 (EBL) and 2213 (WBL). Plan Nos. are 166-24.

The existing structure is designed a Type B structure in accordance with Sec. 411.

Note to Offerors:

These plans depict the approximate location and a concept of the proposed structure. The bridge geometrics, span lengths, type and size of superstructure members and substructure elements and maintenance of traffic are to be developed by the Offeror.

RFQ PLANS For Information Only

DATE: 03\14\2014

VDOT

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF TRANSPORTATION

PROPOSED BRIDGE WIDENING ON RTE. 64 OVER RTE. 105 (FORT EUSTIS BLVD) CITY OF NEWPORT NEWS PROJ. 0064-965-264

PLANS BY:	Consultant
COORDINATED:	
SUPERVISED:	
DESIGNED:	Name Title
DRAWN:	Name Title
CHECKED:	

PRELIMINARY PLANS

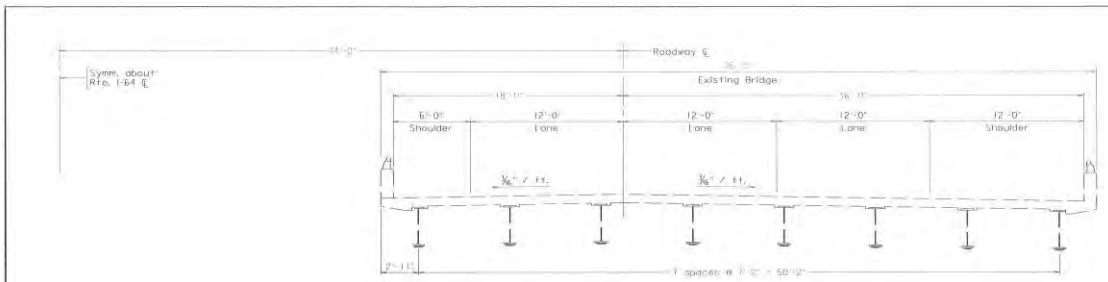
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

No.	Description	Date
REVISIONS		
For Table of Revisions, see Sheet 2.		

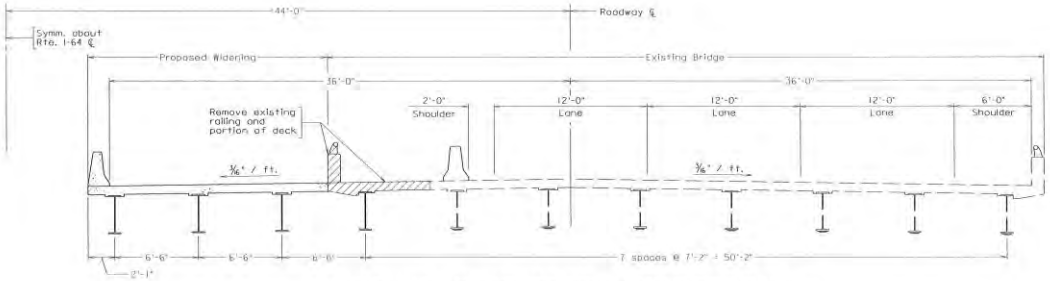
Recommended for Approval: District Project Development Engineer Date

Approved: District Administrator Date

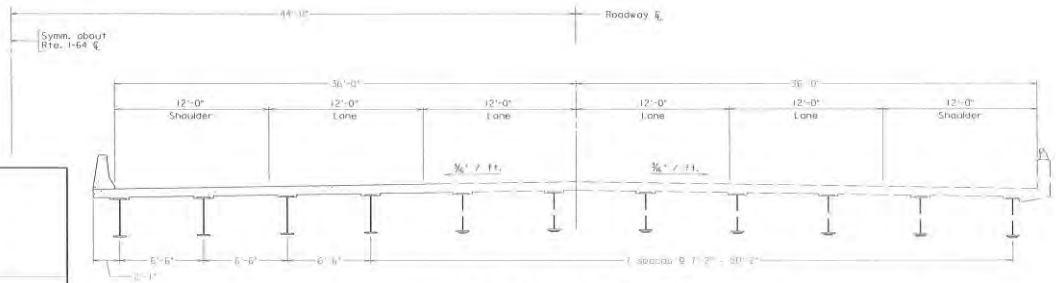
166-24A



EXISTING BRIDGE - TRANSVERSE SECTION
(EBL shown, WBL opposite hand)



DEMOLITION AND CONSTRUCTION - TRANSVERSE SECTION
(EBL shown, WBL opposite hand)



FINAL - TRANSVERSE SECTION
(EBL shown, WBL opposite hand)

Scale: ⅛" = 1'-0" unless otherwise shown

STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—	NHS-064-3(485)	64	0064-965-264, B618, B619	2

Notes:

All sections shown looking station-ahead (to the east).

A suggested Sequence of Construction for each bridge is provided below. Actual sequence of construction and maintenance of traffic is to be developed by the Offeror.

Stage 1: Install temporary traffic controls and shift traffic 6'-0" towards the outside of the existing bridge, maintaining two 12'-0" lanes. Remove railing and portion of deck from median side of existing bridge.

Stage 2: Construct proposed bridge widening. Overlay proposed bridge deck to match elevation of existing bridge.

Stage 3: Remove temporary traffic controls and shift traffic to final alignment.

Stage 4: Remove existing wearing surface. Overlay existing bridge deck and close the existing joints over the piers using temporary lane closures at night.

Legend:

Existing structure to be removed.

RFQ PLANS
For Information Only
DATE: 03\14\2014

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

TRANSVERSE SECTION
(I-64 OVER RTE 105)

No.	Description	Date
	Revisions	

Designed: K.J.
Drawn:
Checked: J.K.S.

Plan No. 166-24A

Sheet No. 2 of 2

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CORPS OF ENGINEERS
REQUEST FOR INFORMATION
ON ALTERNATIVES C AND D
March 12, 2014

This report is in response to our meeting with the Corps of Engineers (COE) at their office on January 16, 2014 and a subsequent e-mail from Ms. Alice Allen-Grimes dated January 21, 2014.

During that meeting the COE noted that they had never received follow up responses from VDOT to questions they had raised on Alternatives C and D. The COE requested that additional studies of Alternatives C and D be performed and additional information be provided related to those alternatives. In the subsequent e-mail the COE specified a course of action for the City that included: **evaluate the C/D Corridor in a narrative description; consider engineering, cost and traffic issues and constraints; provide the traffic study to support any conclusions and describe and explain how the alternatives address the purpose and need; estimate wetland impacts, including temporary impacts, for Alternatives B, C, & D; and address each of the questions raised earlier with VDOT/FHWA (such as measures to reduce displacements in the trailer park).** In the following detailed narrative, along with the attached maps, exhibits, tables and drawings, we have provided the requested information that should help the COE to address their concerns as listed above.

We have completed a detailed study and analysis of Alternatives C and D for comparison to Alternative B as requested. The study has been broken out under the following sections:

- Alternatives – describes the three alternatives in detail. At the end of this section we have provided an Alternative Comparison Summary for a quick reference of costs, environmental impacts and right-of-way impacts.

- Engineering Comparisons – provides a detailed review and comparison of the different alternatives from a perspective of engineering design and impacts.

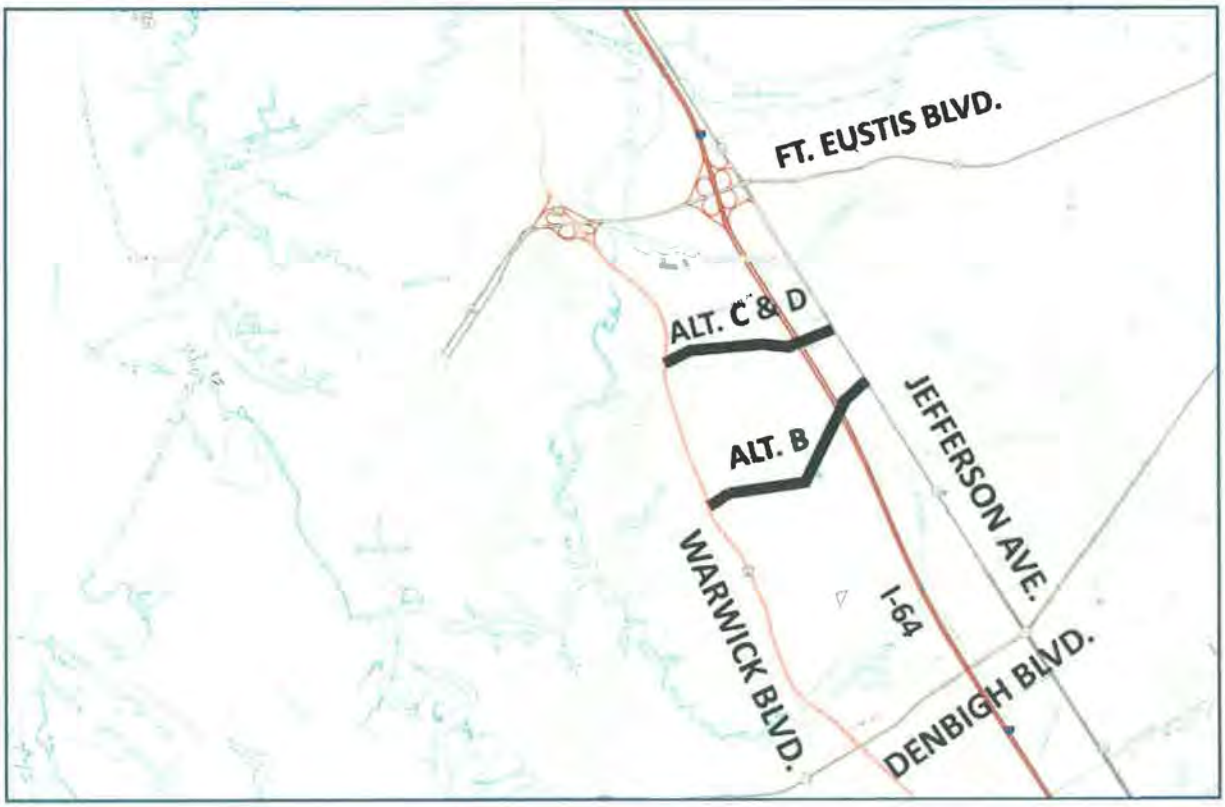
- Traffic Assessment – provides a detail analysis and look at the traffic on the different east-west segments of the roadway network as influenced by the three alternatives.

- Wetland Impacts – provides the estimated temporary and permanent wetland impacts for the three alternatives.

- Response To Additional Questions – addresses individual questions and provides additional information previously requested from VDOT by the COE.

- Purpose and Need – explains how the three alternatives address the Purpose and Need and provides a detailed narrative of the three alternatives and their ability to address the purpose and need for the project as stated in the 2006 EA and 2010 Revised EA and FONSI documents.

LOCATION MAP



ALTERNATIVES

As part of the 2006 Environmental Assessment (EA) Alternatives A, B, C and D were studied. Alternatives A and B were located in the vicinity of existing Atkinson Way and Alternatives C and D were located in the vicinity of Industrial Park Drive. Based on those studies, Alternatives A, C and D were eliminated from further consideration because they did not adequately meet the projects purpose and need. Alternative B was carried forward as the Preferred Alternative because it best meets the project's purpose and need. Prior to approval of the Environmental Assessment by FHWA, the Corps of Engineers had requested that VDOT provide additional analysis and information on Alternatives C and D. The COE has now requested that the City provide the requested information to help in determining the Least Environmentally Damaging Practicable Alternative (LEDPA). All alternatives were studied based upon a 45 mph design speed with a functional classification of Urban Minor Arterial. Following is a narrative of the alternatives:

Alternative B – Alternative B begins at the intersection of Warwick Blvd. and Snidow Blvd. and runs east just north of existing Atkinson Way and north of the existing landfill. At which it then goes on a structure across the CSXT Railroad, the existing wetlands and I-64, tying into Jefferson Avenue approximately 1100 feet north of the intersection of North Ridge Drive. The bridge over I-64 will accommodate the future widening of I-64. Improvements on Jefferson Avenue and Warwick Blvd. will be required to provide the required turning lanes including double left turns on Warwick Blvd. and Jefferson Avenue. An intersection will be provided at Cypress Terrace to provide access to Cypress Terrace, the City landfill and Mary Passage Middle School. Alternative B is approximately 1.2 miles in length which includes a bridge length of 1,723 feet. The cost of this alternative is $55.4 million which includes construction costs, right-of-way and easement costs, and wetland/stream mitigation. This alignment has a permanent impact on approximately 8.7 acres of wetlands and temporary impacts of 3.0 acres based upon current wetland mapping. There will be approximately 126 feet of stream impacts. Most of the land required for construction of this project will be on City owned land with only 0.4 acres of right-of-way required and 1.5 acres of easements required. No residential homes or businesses will be acquired as part of this alternative.

Alternatives C and D – Both Alternative C and D begin at the intersection of Warwick Boulevard and Warwick Landing Parkway and end at its intersection at Jefferson Avenue. The two alternatives are the same alignment between Warwick Boulevard and I-64 but have different termini on Jefferson Avenue. Beginning at Warwick Boulevard the two alternatives run in an easterly direction and swing north of the mobile home park. The alignments then cross the CSXT Railroad and spur track on structure and go underneath I-64 at the same location as the existing Industrial Park Drive underpass. At this point, Alternative C goes straight east and intersects Jefferson Avenue just north of the existing railroad crossing while Alternative D does an "S-turn" to tie into the existing intersection of Jefferson Avenue and Industrial Park Drive. Improvements on Jefferson Avenue and Warwick Blvd. will be necessary to provide the required turning lanes which include double left turns on Warwick Blvd. and Jefferson Avenue. An at-

grade intersection will be provided at the intersection of Industrial Park Drive / Truswood Lane. A new entrance will be provided from the two alternatives to the mobile home park to replace their current entrance onto Warwick Blvd. At the request of the COE to reduce the number of impacted mobile homes, the alignment along the north side of the mobile home park was shifted to the north onto the J.M. Dozier Middle School property.

The two alternatives are proposed to go under I-64 at the location of the I-64 bridges over Industrial Park Drive. The original VDOT studies stated that the typical section under the bridge allowed the eastbound lanes to go under the same bridge span as existing Industrial Park Drive and the westbound lanes would require removing the abutment slope and replacing with a retaining wall to provide the necessary widths. However, based upon a conflict with the existing abutment piles and the required alternative typical section per VDOT Bridge Design Standards (see Exhibit A), there is not adequate room for the westbound lanes under the western span of the I-64 bridges. Therefore the eastbound and westbound I-64 bridges would need to be lengthened (see Exhibit B) and would require a detour be constructed in the median of I-64 in order to maintain two lanes of traffic in both directions. The detour bridges would need to be the length of the existing bridge with the necessary approaches to shift the I-64 traffic over onto the detour. Widening of the existing bridge was eliminated due to the age of the bridge (1963) and that it has already been widened previously. Based upon our understanding, the future VDOT project to widen I-64 will require widening to the inside to provide one additional lane plus a 12' shoulder. The detour bridge would be constructed to meet this requirement. Lengthening the existing I-64 bridges would require that they be brought up to standards and would require additional widening of the shoulders on the existing bridge. At this point it was determined that the best solution to this problem would be to replace the existing I-64 structures. It was determined that a two span bridge (see Exhibit B) would be the most economical structure. The sequence of the construction is shown in Exhibit C and would be compatible with the proposed I-64 widening project. Thus the cost of this work was included with Alternatives C and D.

Following is a summary of the two separate alternatives.

Alternative C - Alternative C is approximately 0.99 miles in length which includes a bridge length of 220 feet over the railroad. The cost of this alternative is $59.4 million which includes construction costs, right-of-way and easement costs, and wetland/streams mitigations. This alignment has a permanent impact on approximately 4.3 acres of wetlands and temporary impacts of 0.1 acres. There are no stream impacts. This alternative will require 18.4 acres of right-of-way and will require 2.0 acres of easements. It is anticipated that 10 mobile homes and two businesses (7-11 store and mobile home office) will be displaced. In addition, the mobile home park swimming pool, mail box facility and playground are being impacted.

Alternative D - Alternative D is approximately 1.0 miles in length which includes a bridge length of 220 feet over the railroad. The cost of this alternative is $60.8 million which includes construction costs, right-of-way and easement costs, and wetland/streams mitigation. This alignment has a permanent impact on approximately 4.3 acres of wetlands and temporary

impacts of 0.1 acres. There are no stream impacts. This alternative will require 18.4 acres of right-of-way and will require 2.0 acres of easements. It is anticipated that 10 mobile homes and three businesses (7-11 store, automobile sales and mobile home office) will be required to be displaced. In addition, the mobile home park swimming pool, mail box facility and playground are being impacted.

We have provided a summary of the Alternative Construction Estimates on the following page for your reference.

ALTERNATIVE COMPARISONS

	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
ALIGNMENT LENGTH			
	1.20 miles	0.99 Miles	1.0 Miles
CONSTRUCTION COSTS			
EAST/WEST CONN. ROADWAY	$17,875,000	$27,778,000	$27,756,000
I-64 CONSTRUCTION	$ 0	$9,799,000	$9,799,000
EAST/WEST CONN. BRIDGES	$34,000,000	$7,089,000	$7,089,000
I-64 BRIDGES	$ 0	$7,833,000	$7,833,000
UTILITIES (OUT-OF-PLAN)	$2,509,000	$2,509,000	$2,509,000
R/W AND EASEMENTS	$300,000	$4,109,000	$5,528,000
WETLAND / STREAMS	$710,000	$325,000	$325,000
TOTAL	**$55,394,000**	**$59,442,000**	**$60,839,000**
WETLAND/STREAM			
Stream Impacts	126'	0	0
Total Acreage	52.2	13.7	13.7
Permanent	8.7	4.3	4.3
Conversion Impact	0.7	0.7	0.7
Temporary	3.0	0.1	0.1
Credits	17.1	9.2	9.2
ROW IMPACTS			
Right-of-way	0.4 Acres	18.4 Acres	18.4 Acres
Temp. Const. Easements	0.6 Acres	1.0 Acre	1.0 Acre
Perm. Utility Easements	0.9 Acres	1.0 Acres	1.0 Acres
ROW Displacements			
Families	0	10	10
Businesses	0	2	3
No. of Parcels	9	17	18
DESIGN EXCEPTIONS REQUIRED			
	No	No	Yes, Horizontal Alignment

ENGINEERING COMPARSION

In addition to the above discussions we offer the following engineering considerations for the three alternatives to help in determining Alternative B is the LEDPA.

1) Construction Costs
    - Alternative B is the least expensive ($55.4 million), Alternative C is the second least expensive ($59.4 million) and Alternative D being the most expensive ($60.8 million).

2) Right-of Way
    - Alternative B right-of-way impacts to other properties are much less than Alternative C and D. 18.4 acres on Alternatives C and D as compared to 0.4 acres on Alternative B.

    - Alternative B right-of way displacements are much less than Alternatives C and D. Alternative B has no relocations while Alternative C require relocation of 10 mobile homes and two businesses (7-11 and mobile home office) and Alternative D would require relocation of 10 mobile homes and three businesses (7-11, automobile sales and mobile home office). In addition, Alternatives C and D would impact the mobile home park swimming pool, mailbox facility and playground. Even with shifting the alignment farther north, the mobile home relocations will still be necessary to provide access from Alternatives C and D and at either end of the mobile home park due to the alignment. There is the opportunity to relocate the mobile homes within the community but that would be dependent on the availability at the time of relocations. However, the impacted mobile homes are located on the outside edge of the community and have the choice lots with shade trees and larger lot sizes.

    - Alternatives C and D also would require additional right-of-way from the CSXT in the vicinity of the railroad spur and I-64 which typically requires additional efforts in obtaining the required right-of-way from the CSX.

    - Impacts to the mobile home park from Alternatives C and D would require investigation into potential environmental justice impacts. In addition, the mobile home park currently has access at a signalized intersection and it is not anticipated that their access to Alternatives C and D would warrant a signal.

Alternative B has already been determined to have no environmental justice impacts.

3) Engineering Constraints

- Improvements to Warwick Boulevard are similar on all three alternatives: providing a dual left turn on southbound Warwick and a right turn lane on northbound Warwick, modifying the existing signal and providing crosswalks.

- Improvements on Jefferson Avenue on all three alternatives will require providing dual left turn lanes on northbound Jefferson and right turn lanes on southbound Jefferson. However the impacts on Alternative C and D are greater. Alternative C requires a new signalized intersection approximately 500 feet south of the existing intersection which does not meet the required VDOT Access Management distance between signalized intersections. Alternative D ties in at the existing signalized intersection and would require modifying the existing signal while Alternative B is a new intersection and meets the access management requirements for a signalized intersection. For Alternatives C and D, the intersections of other intersecting streets (Shields Road, Mason Drive, Industrial Park Drive and Ridgeview Drive) must be addressed for turn lanes and is further complicated with several commercial driveways.

- The intersection of Alternatives C and D with Jefferson Avenue will require a new railroad crossing for the spur track. It is our understanding that this spur track will be increasing the number of trains in the near future due to expansion of existing facilities to the east of Jefferson Avenue. Alternative C would require the stop bar for northbound Jefferson Avenue traffic to be located south of the crossing and require a longer distance to taper back to the existing pavement width. Alternative D would require that the railroad crossing on Jefferson Avenue to traverse the dual turn lanes to the new connector road and the northbound through lanes of Jefferson Avenue which creates a potential safety hazard. Both alternatives would create a safety hazard by provide an opportunity for turning vehicles and northbound traffic to be stopped on the crossing. The existing crossing signal and arms would need to be replaced. Alternative B does not impact the existing railroad crossing.

- The two alternatives are proposed to go under I-64 at the location of the I-64 bridges over Industrial Park Drive. The original VDOT studies stated that the typical section under the bridge allowed the eastbound lanes to go under the

same bridge span as existing Industrial Park Drive and the westbound lanes would require removing the abutment slope and replacing with a retaining wall to provide the necessary widths. However, based upon a conflict with the existing abutment piles and the required alternative typical section per VDOT Bridge Design Standards (see Exhibit A), there is not adequate room for the westbound lanes under the western span of the I-64 bridges. Therefore the eastbound and westbound I-64 bridges would need to be lengthened (see Exhibit B) and would require a detour be constructed in the median of I-64 in order to maintain two lanes of traffic in both directions. The detour bridges would need to be the length of the existing bridge with the necessary approaches to shift the I-64 traffic over onto the detour. Widening of the existing bridge was eliminated due to the age of the bridge (1963) and that it has already been widened previously. Based upon our understanding, the future VDOT project to widen I-64 will require widening to the inside to provide one additional lane plus a 12' shoulder. The detour bridge would be constructed to meet this requirement. Lengthening the existing I-64 bridges would require that they be brought up to standards and would require additional widening of the shoulders on the existing bridge. At this point it was determined that the best solution to this problem would be to replace the existing I-64 structures. It was determined that a two span bridge (see Exhibit B) would be the most economical structure. The sequence of the construction is shown in Exhibit C and would be compatible with the proposed I-64 widening project. Thus the cost of this work was included with Alternatives C and D.

- None of the alternatives would impact the power transmission substation or existing poles. However the overhead transmission line is located over the I-64 bridges and would complicate the construction of the I-64 bridges.

- Alternative D would require a Design Exception for two horizontal curves located between the I-64 overpass and Jefferson Avenue. The proposed design speed is 45 mph and the "S-turn" horizontal curves are restricted to 35 mph.

- Alternatives C and D require reconstruction of the existing I-64 eastbound and westbound bridges at an approximate cost of $17.6 million. Alternative B would span over I-64 and would be compatible with the future widening of I-64.

- MSE walls have been provided on all three alternatives to reduce impacts to adjacent properties and wetlands. Alternatives C and D require longer MSE walls

and additional construction costs in order to reduce these impacts than required by Alternative B.

- Alternative B better serves as a connector to the future Light Rail Station from Jefferson Avenue as it provides a direct connection from Jefferson Avenue.

- Alternative B provides a shared use path that is compatible with the City's Bikeways Plan and is a part of their Framework for the Future 2030 Comprehensive Plan. Industrial Drive is already designated as a bikeway.

4) Environmental Constraints
   - Alternatives C and D have less permanent and temporary wetland impacts and less stream impacts than Alternative B.

   - The shift of the alignment along the mobile home park to reduce the number of impacted mobile homes has pushed the alignment onto the J.M. Dozier Middle School property. Based upon initial discussions with school officials, these athletic fields are accessible to and serve organized and/or substantial walk-on public recreational purposes. The proposed construction could impact the existing athletic fields and therefore, this property could be potentially subject to the purview of Section 4(f) of the Department of Transportation Act.

   - Noise walls are required on all three alternatives. Alternative B has an approximate length of 1,900 feet and Alternative C and D have an approximate length of 2,600 feet each.

   - Alternative B has adequate right-of-way to provide one large Stormwater Management basin for the entire project and will treat additional untreated runoff from the adjacent neighborhood. It appears that for Alternative C and D, we will need two SWM basins with one to be located west of the railroad and one east of I-64. The final locations need to be determined and will require additional right-of-way and potential wetland impacts that are not reflected in the above information. There is little available right-of-way on the west side of the railroad and the basin located on this side would need to be piped approximately 1000 feet to the west and under Warwick Boulevard to the nearest outlet. Alternative B is located along an existing stream and can be outletted directly to the stream.

- Alternative B will impact the landfill property and will require a modification to the landfill boundary and the relocation of a water well and several gas probes. Revisions will need to be approved by the DEQ. Alternatives C and D do not impact the landfill.

- MSE walls have been provided on all three alternatives to reduce impacts to adjacent properties and wetlands.

5) Planning
   - Alternative B (Atkinson Boulevard) is included in the Hampton Roads Transportation Planning Organization's 2030 Long Range Transportation Plan (LRTP).

TRAFFIC ASSESSMENT

Traffic forecasting and capacity analysis was performed to compare No Build conditions to Alternatives B, C, and D. The forecasting methodology was consistent with the methodology documented in the Atkinson Boulevard Traffic Analysis (report dated October 2013). Table 1 summarizes the 2038 average daily traffic volumes along east-west roadways within the study area for No Build conditions, Alternative B, and Alternatives C and D. Table 2 summarizes peak hour LOS and delays at three study intersections for the 2038 design year as requested by the COE.

TABLE 1

STREET NAME	FROM	TO	2038 NO BUILD	2038 ALT. B	2038 ALT. C/D
FT. EUSTIS BLVD.	WARWICK BLVD.	JEFFERSON AVENUE	38,600	41,800	39,700
INDUSTRIAL DRIVE	WARWICK BLVD.	JEFFERSON AVENUE	10,400	12,500	27,900
ATKINSON BLVD.	WARWICK BLVD.	JEFFERSON AVENUE	0	25,500	0
DENBIGH BLVD.	WARWICK BLVD.	JEFFERSON AVENUE	39,600	26,500	45,200

TABLE 2

2038 PM PEAK HOUR INTERSECTION LOS AND DELAY			
INTERSECTION	NO BUILD LOS	ALTERNATIVE B LOS	ALTERNATE C /D LOS
JEFFERSON /FT. EUSTIS	LOS E	F	F
JEFFERSON/ DENBIGH	LOS E	D	E
WARWICK/DENBIGH	LOS F	D	F

With Alternative B, traffic volumes along Denbigh Boulevard are reduced by approximately 13,000 per day compared to no-build conditions, which will result in significant improvement in operations along Denbigh Boulevard. This is reflected in the intersection LOS assessment where the intersection of Jefferson Avenue at Denbigh Boulevard improves from LOS E under No Build conditions to LOS D. Also, the intersection of Warwick Boulevard at Denbigh Boulevard improves from LOS F under No Build conditions to LOS D.

With Alternatives C and D, the traffic volumes along four-lane Industrial Drive will increase by approximately 17,500 compared to no-build conditions; however, traffic volumes along Denbigh Boulevard do not decrease, indicating that the widening of Industrial Drive from two to four lanes does not provide relief to Denbigh Boulevard as does Alternative B. This is reflected in the intersection LOS assessment where the intersections of Jefferson Avenue at Denbigh Boulevard and Warwick Boulevard at Denbigh Boulevard do not improve LOS compared to the No Build conditions.

Forecasted traffic volumes along Ft. Eustis Boulevard are not impacted significantly (less than a 10% change in daily traffic volume) with the three options under consideration as Ft. Eustis Boulevard serves more as an ingress and egress access to I-64 and therefore is only minimally impacted by any of the three alternatives. The intersection of Jefferson Avenue at Ft. Eustis Boulevard does not improve with any of the alternatives.

In summary, Alternative B provides more east-west capacity compared to Alternatives C and D (four lanes versus two lanes) and serves as a more effective east-west connector compared to Alternatives C and D. Alternative B decreases traffic on Denbigh Boulevard by approximately 13,000 vehicles and improves LOS at the intersections of Denbigh Boulevard with Jefferson Avenue and Warwick Boulevard. Alternatives C and D do not provide any improvement to LOS at the study area intersections and does not reduce traffic along adjacent existing east-west connectors in the study area.

WETLAND IMPACTS

The following analysis is based on preliminary wetland delineations which have not been confirmed by the COE. The wetlands along Alternative B were reviewed with the COE in December, 2013, at which time the COE requested additional areas be evaluated. During January, 2014, additional wetlands were mapped in the field along Alternative B, and are shown in the attached mapping. There are additional areas which may be wetlands still under review along Atkinson Blvd., between CSX railroad and I-64, and within the southern portion of the Newdunn property, as indicated on the map. The predicted wetland impact along Alternative B may increase after the final delineation has been completed, and the COE has confirmed the boundaries. The wetlands along Alternative C and D were field identified in February of 2014, but have not been surveyed or confirmed by the COE.

A review of the files from VDOT environmental staff identified the wetlands mapping upon which the EA was developed, and the wetlands mapping upon which Alternative C and D were evaluated. The wetlands identified by VDOT compare very well to the wetlands currently presented in this document. The historical VDOT wetlands mapping can be made available to the COE.

Alternatives C and D have less permanent and temporary wetland impacts and less stream impacts than Alternative B as shown below. Alternatives C and D have only slight differences in wetland and stream impacts and for the purpose of this report are shown together. Following is a table for Alternative B and one for Alternative C/D that show the impacts to individual wetland areas. For the corresponding mapping see the attached Wetland Impacts Exhibits for each alternative.

ATKINSON WETLAND AND STREAM IMPACTS
Alternative B
Feb-2014

Wetland ID	Type	Comments	Total Acreage	Permanent Impact	Conversion Impact	Temporary Impact	Mitigation Ratio	Credits
1	PEM		0.03	0.00	0	0	1	0.00
2	PEM		0.66	0.01	0	0.29	1	0.01
2A	PFO		0.40	0.17	0	0	2	0.34
2B	PSS		0.25	0.03	0	0	1.5	0.05
3	PEM		0.21	0.08	0	0	1	0.08
4	PFO		0.41	0.00	0	0	2	0.00
5	PFO		3.47	0.01	0.28	1	2	0.30
6	PEM		5.07	0.03	0	1	1	0.03
7	PFO		1.63	0.00	0	0	2	0.00
8	PFO		4.32	2.92	0	0	2	5.85
9	PFO		0.26	0.26	0	0	2	0.52
10	PFO		0.26	0.00	0	0	2	0.00
11	PFO		0.18	0.00	0	0	2	0.00
12	PFO		0.14	0.00	0	0	2	0.00
13	PFO		0.01	0.00	0	0	2	0.00
14	PSS		0.01	0.00	0	0	1.5	0.00
15	PFO		0.02	0.00	0	0	2	0.00
16A	PFO		19.10	2.05	0.43	0.75	2	4.53
16B	PEM		8.31	0.54	0	0	1	0.54
16C	PFO		1.05	0.59	0	0	2	1.18
16D	PFO		3.92	0.18	0	0	2	0.36
17A	PFO		0.06	0.00	0	0	2	0.00
17B	PEM		0.01	0.00	0	0	1	0.00
18A	PFO		0.43	0.00	0	0	2	0.00
18B	PEM		0.26	0.22	0	0	1	0.22
100	PEM		0.17	0.00	0	0	1	0.00
200	PFO		1.40	1.40	0	0	2	2.80
400	PFO		0.15	0.15	0	0	2	0.30
			52.19	**8.65**	**0.71**	**3.04**		**17.10**

ATKINSON WETLAND AND STREAM IMPACTS
Alternative C / D
Feb-2014

Wetland ID	Type	Comments	Total Acreage	Permanent Impact	Conversion Impact	Temporary Impact	Mitigation Ratio	Credits
A	PFO	Logged	0.25	0	0	0.00	2	0.00
B	PFO	Vernal Pond	5.9	2.2	0.31	0.00	2	4.71
C	PFO	Mosaic	5.4	2.04	0.37	0.00	2	4.45
D	PEM	Disturbed	2.1	0.08	0	0.06	1	0.08
		TOTALS	**13.65**	**4.32**	**0.68**	**0.06**		**9.24**

RESPONSE TO ADDITIONAL QUESTIONS

As per the Corps of Engineers e-mail of January 21, 2014, they had requested that the City address each of the questions that had been raised earlier with VDOT/FHWA. Following is our response to those questions.

1) *Provide costs, engineering and logistical info on placing the portions of Alternative C on the bridge approaches on structure rather than fill (with MSE walls) and assessing the reduction in wetland impacts associated with such a change.* The bridge over the CSX Railroad can be lengthened from approximately 200 feet to 1270 feet. The noise wall would need to be located onto the bridge. Lengthening of the bridge would increase the cost of the bridge by $22.8 million. Reducing that cost for MSE walls, pavement, curb and gutter, etc. would result in an increase to the project of $19.5 million. The extension of the bridge would reduce the permanent wetland impacts by 2.0 acres and would increase the temporary impacts by 0.6 acres.

2) *Evaluate whether the alignment of Alternatives C and D can be shifted to avoid or minimize the displacements in the mobile home park. We understand that the alignment may be able to go closer to the other power pole. As part of this evaluation, you will look at shifting the alignment back over about where you have it now on the end near Warwick in order to avoid the church and tie in to the street across Warwick. You are going to evaluate whether such a shift can be made and still meet requirements for curvature.* Alternatives C and D have been shifted to the extent possible north away from the mobile home park to reduce the number of impacted mobile homes. Both alignments now tie into the existing signalized intersection of Warwick Blvd. and Warwick Landing Parkway. The horizontal alignment meets the requirements for Urban Minor Arterial Low Speed and 45 mph design speed. The shift to the north reduced the number of mobile home relocations but still require the relocation of 10 mobile homes to provide a new access from Alternatives C and D and at either end of the mobile home park due to the alignment. In addition, Alternatives C and D would impact the mobile home park swimming pool, mailbox facility and playground. There is the opportunity to relocate the mobile homes within the community but that would be dependent on the availability of lots at the time of relocations. However, the impacted mobile homes are located on the outside edge of the community and have the choice lots with shade trees and larger lot sizes. The shift of the alignment along the mobile home park to reduce the number of impacted mobile homes has pushed the alignment onto the J.M. Dozier Middle School property. Based on initial discussions with school officials, these athletic fields are accessible to and serve organized and/or substantial walk-on public

recreational purposes. Therefore, these properties could be potentially subject to provisions of Section 4(f) of the Department of Transportation Act.

3) *Provide mapping showing all wetland impact areas for all alternatives*. See previous section for tables for Alternative B and Alternative C/D that show the impacts to individual wetland areas. For the corresponding mapping see the attached Wetland Impacts Exhibits for each alternative.

4) *Provide the LOS at the 2 Ft. Eustis intersections for Alternative C and D.* The following table provides the intersection LOS and delays at Fort Eustis Blvd. and Denbigh Blvd.

2038 PM PEAK HOUR INTERSECTION LOS AND DELAY

INTERSECTION	NO BUILD LOS	ALTERNATIVE B LOS	ALTERNATE C /D LOS
JEFFERSON /FT. EUSTIS	LOS E	F	F
JEFFERSON/ DENBIGH	LOS E	D	E
WARWICK/DENBIGH	LOS F	D	F

5) *In addition, FHWA indicated they would delete some of the text in the P&N of the EA that refers to problems not being addressed by the proposed project in any demonstrable way (congestion on I-64, Oyster Point, J. Clyde Morris Blvd. and Jefferson, etc.).* The City is in agreement that the text referenced above refers to problems not being addressed by the proposed project. However, it does not appear that the selected text was deleted from the signed Environmental Document.

PURPOSE AND NEED

The purpose and need as presented in the 2006 Environmental Assessment (EA) and 2010 Revised EA and Finding of No Significant Impact (FONSI) is based on existing and future network deficiencies and the lack of major east-west routes that would facilitate cross-Peninsula traffic movements. The three primary elements of the purpose and need include:

- Improved transportation mobility and capacity
- Improve access and reduce congestion
- Provide adequate east-west transportation connections between Warwick Boulevard and Jefferson Avenue

The EA also stated that Alternatives C and D were considered but were eliminated from detailed study because they did not adequately address the purpose and need of the project. Most notably was that Alternatives C and D failed to provide the congestion relief needed in the study area traffic network. Based upon additional traffic analysis presented in the traffic section and as discussed below, Alternatives C and D do not address the purpose and need for the project.

- Improve Transportation Mobility and Capacity
  - Alternatives B, C and D increase east-west capacity.
  - Alternative B provides a substantially greater increase in capacity (four new lanes on Alternative B as compared to 2 additional lanes on Alternative C and D) than Alternatives C and D because it is a completely new major east-west link.
  - Alternative B provides a new east-west connector with four new lanes, located approximately half way between two existing congested east-west connectors (Ft. Eustis Blvd. and Denbigh Blvd.). In addition, Industrial Drive would still function as a 2-lane east-west connector under this alternative.
  - Alternatives C and D would only improve an existing 2 lane, east-west connector (Industrial Park Drive) to a four-lane facility providing only 2 new lanes of capacity.

- Improve Access and Reduce Congestion
  - Alternative B provides new, improved access and substantially reduces volumes along Denbigh Blvd. between Jefferson Avenue and Warwick Blvd. Alternatives C and D does not reduce volumes along Denbigh Blvd.

- Alternative B reduces congestion at the intersections with Denbigh Blvd. and Jefferson Avenue (No Build LOS is E and Build LOS is D). Alternatives C and D congestion does not improve above the LOS E at this intersection.

- Alternative B reduces congestion at the intersection with Denbigh Blvd. and Warwick Blvd. (No Build LOS is F and the Build LOS is D). Alternatives C and D congestion does not improve upon the LOS F at this intersection.

- Provide Adequate East-West Connectors
  - Alternative D requires a Design Exception for horizontal curves.

  - Alternative B provides a new four-lane facility located mid-way between existing east-west connectors.

SUMMARY

Alternative B meets the purpose of the project because:

- It increases mobility and capacity by providing a new four-lane east-west connector which provides for a new improved access and decreases congestion on the transportation network.

- It facilitates cross Peninsula traffic by increasing east-west connections in the roadway network.

Alternatives C and D do not meet the purpose of the project because:

- Capacity improvements do not improve mobility or reduce congestion in the transportation network.

- They do not provide an additional east-west connection to facilitate cross Peninsula traffic.

CONCLUSION

- Building upon the determination made in the 2006 Environmental Assessment (EA) and 2010 Revised EA and Finding of No Significant Impact (FONSI), the new information presented in this study confirms Alternatives C and D do not meet the purpose and need for the project.

- As discussed in the sections labeled Alternatives and Engineering Comparisons, Alternative B provides a better engineering solution to providing another east-west connector.
  - It is located approximately mid-way between Ft. Eustis Blvd. and Denbigh Blvd.
  - No design exceptions required
  - No impact to the traffic lanes of I-64
  - No required railroad improvements, and
  - Improved safety to traveling public

- Alternative B has more permanent wetland impacts (8.7 acres vs. 4.3 acres) as compared to Alternative C and D. However, neither Alternatives C nor D should be considered the Least Environmentally Damaging Practicable Alternative (LEDPA)
  - Alternative B has a lower cost than Alternatives C and D.
  - Alternative B has no required displacements of homes or businesses.
  - Alternative B has no potential social justice issues.
  - Alternative B is almost fully contained on existing City property, and
  - Alternative B has no potential Section 4(f) impacts.

- Alternative B increases capacity by providing a new four-lane east-west connection between Jefferson Ave. and Warwick Blvd. Alternative B provides the most relief to Denbigh Blvd.

ALTERNATIVES OVERVIEW

FEBRUARY 28, 2014

SCALE
0 300' 600'

ALTERNATIVE D ALIGNMENT

ALTERNATIVE C ALIGNMENT

ALTERNATIVE B ALIGNMENT

TO WILLIAMSBURG

TO HAMPTON

WARWICK BLVD.

CSX RAILROAD

JEFFERSON AVE.

I-64 EBL

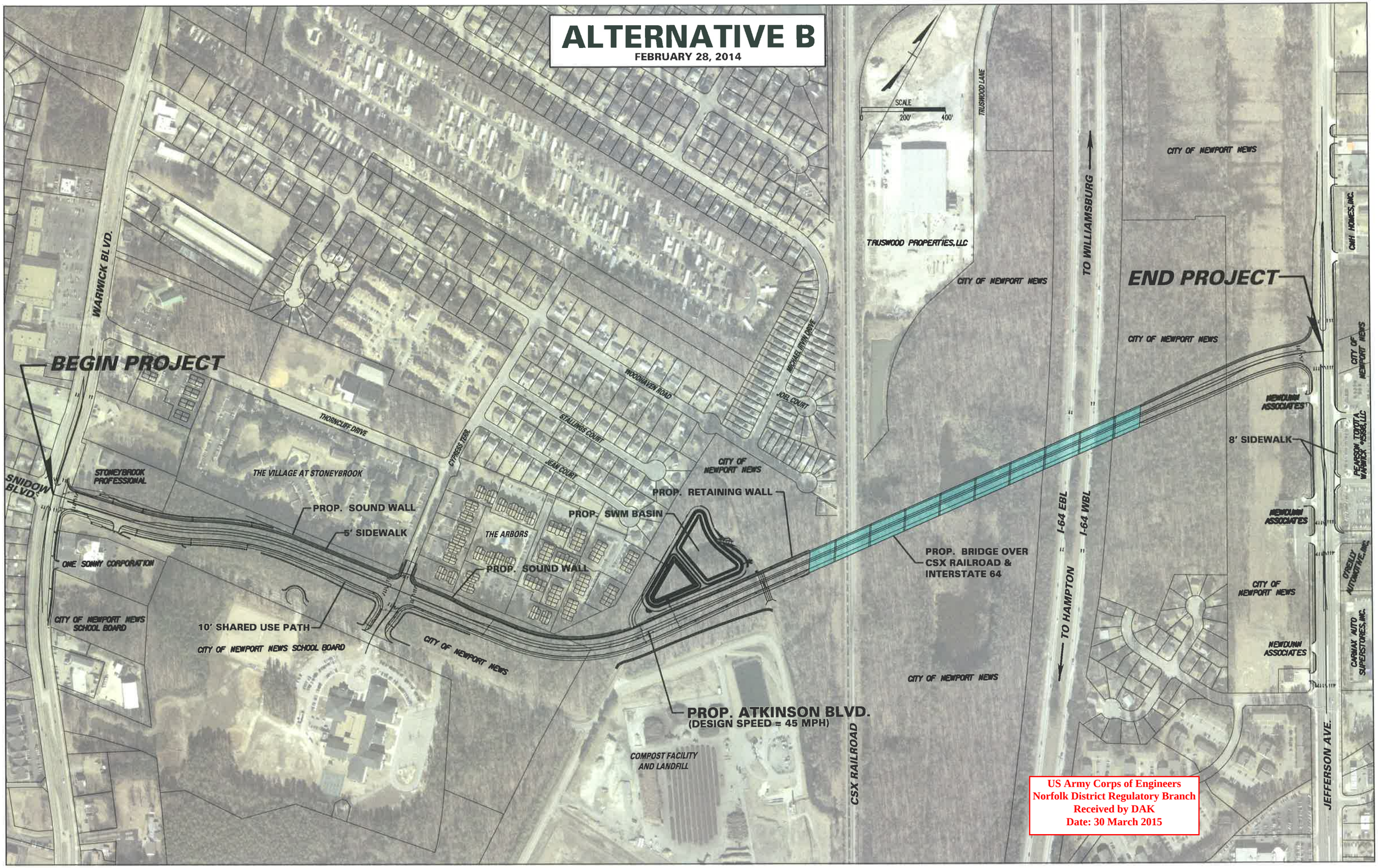
I-64 WBL

ATKINSON WAY

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by DAK
Date: 30 March 2015

ALTERNATIVE B

FEBRUARY 28, 2014



US Army Corps of Engineers
Norfolk District Regulatory Branch
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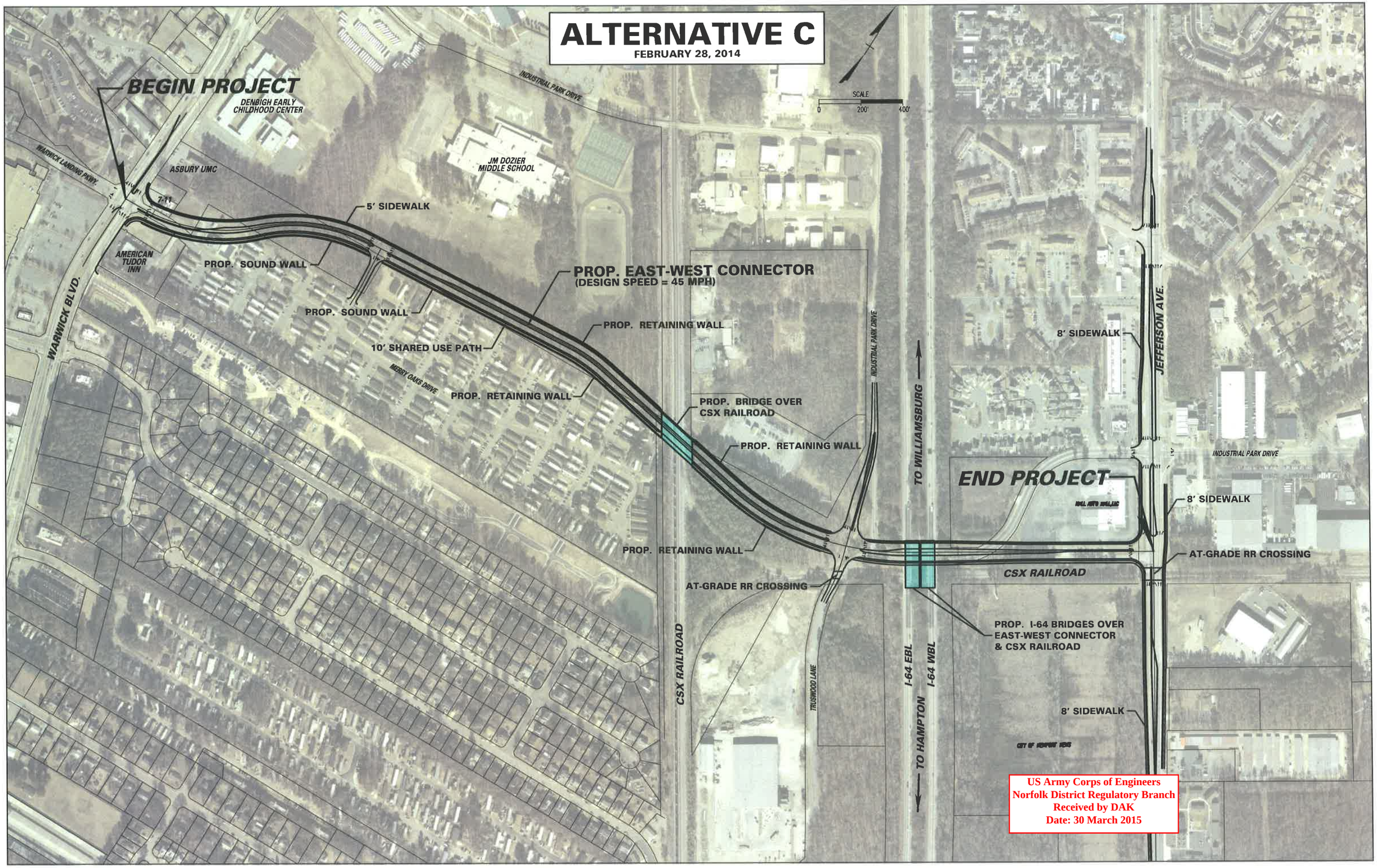
Date: 30 March 2015

ALTERNATIVE C

FEBRUARY 28, 2014



US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by DAK
Date: 30 March 2015

ALTERNATIVE D

FEBRUARY 28, 2014

SCALE
0 200' 400'

BEGIN PROJECT

DENBIGH EARLY CHILDHOOD CENTER

INDUSTRIAL PARK DRIVE

WARWICK LANDING PKWY.

ASBURY UMC

JM DOZIER MIDDLE SCHOOL

7-11

5' SIDEWALK

AMERICAN TUDOR INN

PROP. SOUND WALL

WARWICK BLVD.

PROP. EAST-WEST CONNECTOR
(DESIGN SPEED = 45 MPH)

PROP. SOUND WALL

PROP. RETAINING WALL

10' SHARED USE PATH

MERRY OAKS DRIVE

PROP. RETAINING WALL

PROP. BRIDGE OVER
CSX RAILROAD

PROP. RETAINING WALL

INDUSTRIAL PARK DRIVE

TO WILLIAMSBURG

JEFFERSON AVE.

END PROJECT

8' SIDEWALK

8' SIDEWALK

R = 510'
V = 35 MPH

INDUSTRIAL PARK DRIVE

PROP. RETAINING WALL

AT-GRADE RR CROSSING

CSX RAILROAD

AT-GRADE RR CROSSING
CSX RAILROAD

R = 510'
V = 35 MPH

PROP. I-64 BRIDGES OVER
EAST-WEST CONNECTOR
& CSX RAILROAD

TRUSWOOD LANE

I-64 EBL

I-64 WBL

8' SIDEWALK

8' SIDEWALK

TO HAMPTON

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by DAK
Date: 30 March 2015

WETLAND IMPACTS ALTERNATIVE B

FEBRUARY 28, 2014

The wetlands on this graphic were originally delineated by WR&A. Based on a field review by the COE (12/2013), additional wetlands have been added to the original delineation. Field work is continuing to complete revision based on COE review.

SCALE 0 200' 400'

WARWICK BLVD.

SNIDOW BLVD.

THORNCLIFF DRIVE

WOODHAVEN ROAD

STALLINGS COURT

JEAN COURT

CYPRESS FERN

MICHAEL JEWA DRIVE

JOEL COURT

TRUSWOOD LANE

TRUSWOOD PROPERTIES, LLC

TO WILLIAMSBURG

TO HAMPTON

I-64 EBL

I-64 WBL

CITY OF NEWPORT NEWS

STONEYBROOK PROFESSIONAL

THE VILLAGE AT STONEYBROOK

THE ARBORS

ONE SONNY CORPORATION

CITY OF NEWPORT NEWS SCHOOL BOARD

COMPOST FACILITY AND LANDFILL

CSX RAILROAD

NEWDUNN ASSOCIATES

CARMAX AUTO SUPERSTORES, INC.

O'REILLY AUTOMOTIVE, INC.

JEFFERSON AVE.

0.22 Acre Impact Wetland 18B

0.59 Acre Impact Wetland 16C

0.54 Acre Impact Wetland 16B

2.48 Acres Impact Wetland 16A

0.18 Acre Impact Wetland 16D

0.03 Acre Impact Wetland 6

0.30 Acre Impact Wetland 5

0.15 Acre Impact Wetland 400

0.26 Acre Impact Wetland 9

2.92 Acres Impact Wetland 8

0.01 Acre Impact Wetland 2

0.03 Acre Impact Wetland 2B

0.17 Acre Impact Wetland 2A

0.08 Acre Impact Wetland 3

1.40 Acres Impact Wetland 200

Wetlands Under Review

PROP. ATKINSON BLVD.
(DESIGN SPEED = 45 MPH)

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by DAK
Date: 30 March 2015

WETLAND IMPACTS
ALTERNATIVE C

FEBRUARY 28, 2014

The wetlands on this graphic were field identified by WR&A in 2/2014.
The wetlands have not been reviewed by the COE.

SCALE
0 200' 400'

WARWICK LANDING PKWY.

WARWICK BLVD.

PFO WETLAND A
0.05 ACRES

VERNAL POND

2.51 Acres Impact

PFO WETLAND B
5.9 ACRES

2.43 Acres Impact

INDUSTRIAL PARK DRIVE

TO WILLIAMSBURG

JEFFERSON AVE.

INDUSTRIAL PARK DRIVE

EMERGENT
WETLAND D
2.1 ACRES

PFO WETLAND C
5.4 ACRES
(VARIABLE WIDTH WITH
UPLAND AREAS)

CSX RAILROAD

CSX RAILROAD

I-64 EBL

I-64 WBL

PFO
WETLAND

ALTERNATIVE C
ALIGNMENT

TO HAMPTON

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by DAK
Date: 30 March 2015

WETLAND IMPACTS
ALTERNATIVE D

FEBRUARY 28, 2014

The wetlands on this graphic were field identified by WR&A in 2/2014.
The wetlands have not been reviewed by the COE.

SCALE
0 200' 400'

WARWICK BLVD.

HARWICK LANDING PKWY.

PFO WETLAND A
0.25 ACRES

VERNAL POND

2.51 Acres Impact

PFO WETLAND B
5.9 ACRES

2.43 Acres Impact

PFO WETLAND C
5.4 ACRES
(VARIABLE MOSAIC WITH
UPLAND AREAS)

CSX RAILROAD

INDUSTRIAL PARK DRIVE

TO WILLIAMSBURG

ALTERNATIVE D
ALIGNMENT

JEFFERSON AVE.

INDUSTRIAL PARK DRIVE

EMERGENT
WETLAND D
(0.1 ACRES)

0.08 Acres
Impact

CSX RAILROAD

I-64 EBL

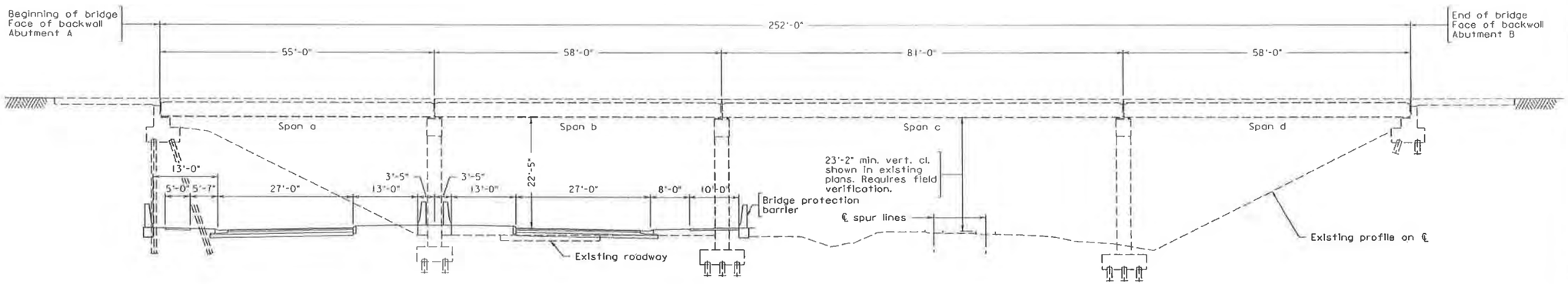
I-64 WBL

PFO
WETLAND

TO HAMPTON

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by DAK
Date: 30 March 2015

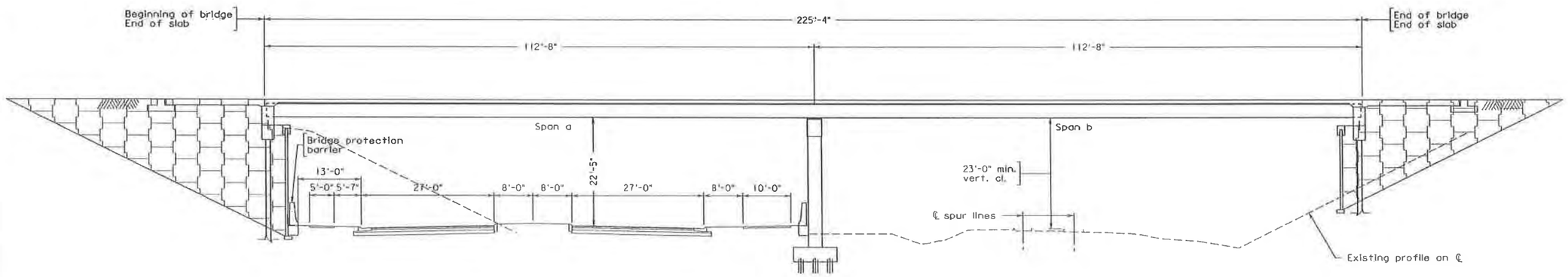
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—				



EXISTING SECTION ALONG ℄ I-64

(Showing proposed Alt. C/D Corridor superimposed)

EXHIBIT A



PROPOSED SECTION ALONG ℄ I-64

EXHIBIT B

US Army Corps of Engineers
Norfolk District Regulatory Branch
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Scale: "" " = 1'-0" unless otherwise noted.

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No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

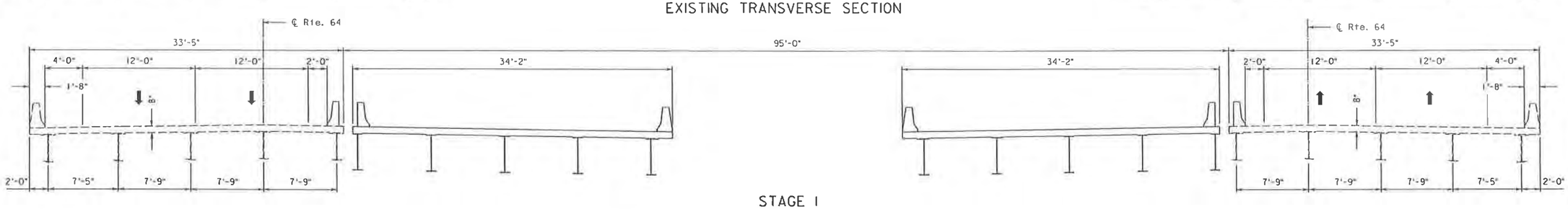
I-64 OVER ALT. C/D

Designed: W.R.A.	Date	Plan No.	Sheet No.
Drawn: W.R.A.			
Checked: W.R.A.			

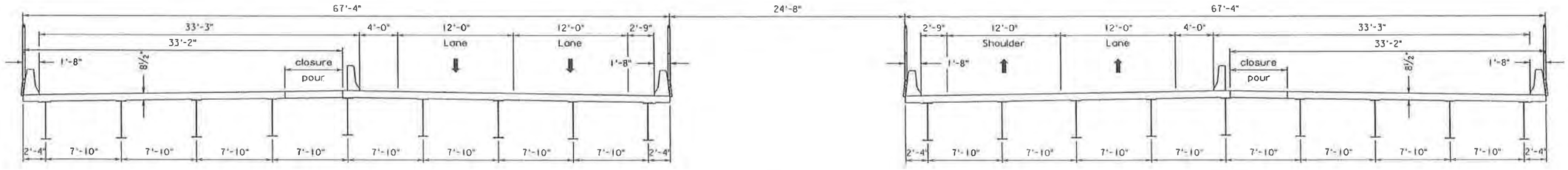
N:\45804-000\CADD\Bridge\Atkinson under I64.dgn

STATE	FEDERAL AID		STATE		SHEET
	ROUTE	PROJECT	ROUTE	PROJECT	NO.
VA.	—				

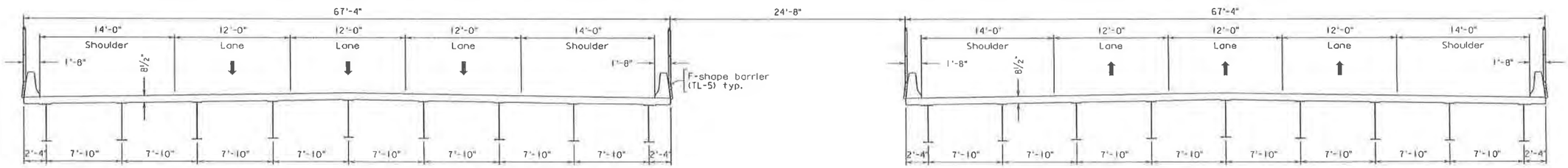
EXISTING TRANSVERSE SECTION



STAGE I



STAGE II



PROPOSED TRANSVERSE SECTION

EXHIBIT C

US Army Corps of Engineers
Norfolk District Regulatory Branch
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No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

I-64 WIDENING

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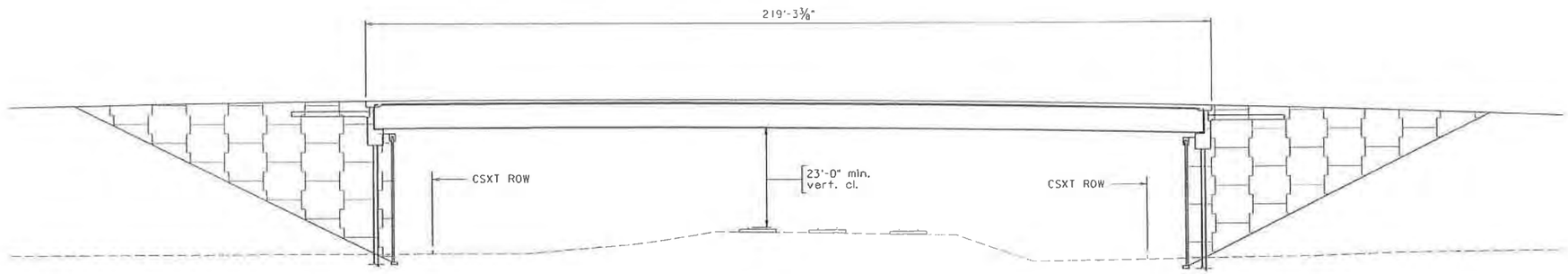
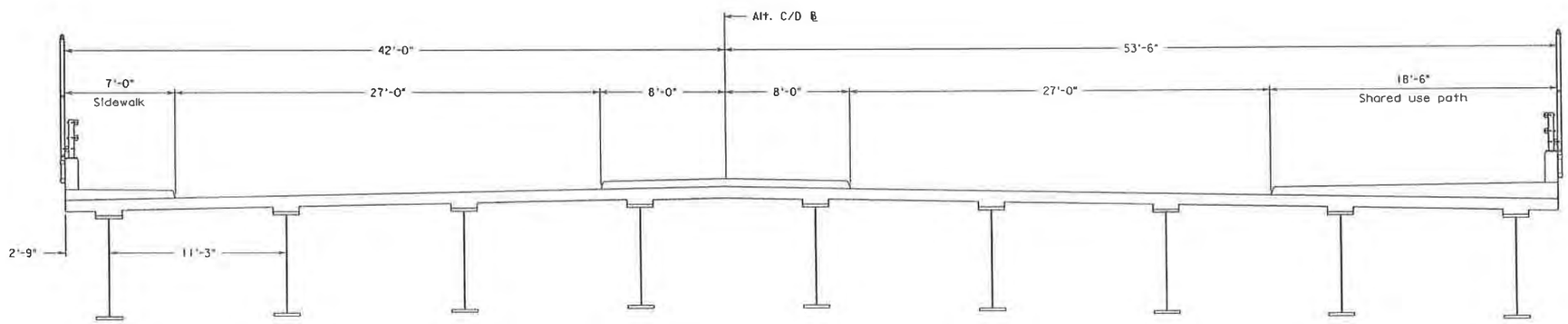
N:\45804-000\CADD\Bridge\I64 Widening.dgn

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—				



ALT. C/D OVER CSXT



TYPICAL TRANSVERSE SECTION OPTION A (95'-6")

EXHIBIT D

US Army Corps of Engineers
Norfolk District Regulatory Branch
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No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

ALT. C/D OVER CSXT

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Drawn: W.R.A.			
Checked: W.R.A.			

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N:\45804-000\CAD0\Bridge\Industrial Park Bridge over CSX.dgn